



ENERGY SYMPHONICS

A SYNCHRONIZED PATH

TO SUSTAINABLE ENERGY TRANSITION



ANNUAL REPORT **2024**

(56-1 One Report)

Banpu Public Company Limited

CONTENTS



FINANCIAL HIGHLIGHTS



OPERATIONAL RESULTS



THE BOARD OF DIRECTORS'S REVIEW



CHIEF EXECUTIVE OFFICER'S REVIEW

SECTION 1

BUSINESS AND OPERATIONAL RESULTS

18	Policy and Business Overview	143	Security
20	Banpu Group's Map of Operation	144	Debenture
22	Vision & Mission	151	Dividend Policy
23	Summary of Major Changes and Development in 2024 and Current Events	152	Risk Management
29	Banpu Information	170	Driving Business for Sustainability
30	Revenue Structure	174	Management of Stakeholder Impacts in Business Value Chain
32	Products and Services	178	Sustainability Management – Environmental Aspect
56	Market and Competition	183	Sustainability Management – Society Aspect
112	Business Assets	193	Corporate Social Responsibility (CSR)
122	Coal and Natural Gas Reserves	214	Management's Discussion and Analysis 2024
124	Banpu Group Structure	238	Financial Ratio
126	Detail of The Company, Its Subsidiaries, Associated Companies, Joint Ventures and Other Investment of Banpu Public Company Limited	239	Other References
142	Shareholders	240	Significant Litigation During the Year

SECTION 2

CORPORATE GOVERNANCE

244	Corporate Governance Policy
270	Corporate Governance Structure
299	Corporate Governance Performance
305	Report of the Corporate Governance and Nomination Committee
308	Report of the Compensation Committee
310	Report of the Audit Committee to Shareholders
314	Report of the Environment, Social, and Governance Committee
316	Internal Control and Connected Transactions

SECTION 3

CERTIFICATION OF INFORMATION AND DATA ACCURACY

324	Attachment 1: Details of the Board of Directors and Management
336	Attachment 2: Details of the Management and Controlling Parties of Banpu and Its Subsidiaries

In case this Annual Report (Form 56-1 One Report) reference information disclosed on the Company's website, the disclosed information shall be deemed to be part of Form 56-1 One Report. The Board of Directors certifies the correctness and completeness of disclosed information and annual information disclosure in Form 56-1 One Report.



ENERGY SYMPHONICS

A SYNCHRONIZED PATH

TO SUSTAINABLE ENERGY TRANSITION

Banpu, a versatile energy company, is advancing its business toward 2030 with its "Energy Symphonics" strategy, reflecting its commitment to addressing the energy trilemma: energy security, energy equity, and energy sustainability. The strategy is based on a synchronized approach to create new, and sustainable energy solutions to address the world's surging energy demand while simultaneously looking after the planet. Banpu's "Energy Symphonics" strategy prioritizes the following four key missions:

1. Net Zero by 2050 and Decarbonization

Achieve Net Zero emission
by 2050

Reduce Banpu Group's
greenhouse gas emissions
by at least 20% by 2030

Reduce consolidated EBITDA
from coal-related businesses
to less than 50% by 2030

2. Gas-Power-CCUS

Focus on growth through its "Winning Formula" of integrating gas upstream, gas-fired power, and CCUS to deliver low carbon gas solutions in the US, while generating strong cashflow.

3. Renewables+

Accelerate its renewable business across the Asia-Pacific region and beyond, such as investments in Battery Energy Storage System (BESS), related downstream businesses and carbon credits to solve intermittency of renewable while enhancing value.

4. Next-Gen Mining

Pursue the Intelligent Mining strategy, implementing an integration of smart solutions and AI to its mining operations to increase efficiency, reduce costs, and minimize environmental impacts. The Company will also invest in strategic minerals which are crucial for the energy transition.

Banpu's new strategy will ensure the Company's growth, delivering long-term value for shareholders, prioritizing all stakeholders, while looking after the planet. This underscores **Banpu's commitment to lead a responsible and sustainable energy transition.**



FINANCIAL HIGHLIGHTS

Sales Revenues

5,148

Million USD

▲
1%

EBITDA

1,330

Million USD

▼
11%

Net (Loss) Profit

(24)

Million USD

Total Assets

12,399

Million USD

▼
5%

Total Liabilities

7,698

Million USD

▼
6%

Total Equity

4,701

Million USD

▼
3%



Energy Resources

Mining Business

Sales Volume

37.2

Mt

Gas Business

Net Production

788

MMcfed

Energy Generation

Power Business

Total Committed
Capacity

4,581

MW

Committed Thermal
Equity-based
Capacity

3,935

MW

Committed Renewables
Equity-based
Capacity

646

MW

Energy Technology

Solar Rooftop & Floating Solutions Business

Equity-based
Capacity

272

MW

Energy Storage Systems Business

Total Production Capacity

3.0

Gwh

E-Mobility Business

EV Market Expansion Car Sharing Service

976

Units

Energy Efficiency Business

Operating
& Project development

37

Projects

Energy Trading Business

Electric Sales

2,816

Gwh

E-Bike Rentals

50

Units

Chargers

512

Units

		For the Year Ended		
		31 Dec 24	31 Dec 23	31 Dec 22
Financial Position				
Total Assets	(Million USD)	12,399	13,000	12,638
Total Liabilities	(Million USD)	7,698	8,172	8,229
Total Shareholders' Equity	(Million USD)	4,701	4,828	4,409
Issued and Paid-up Share Capital	(Million USD)	285	285	243
Operational Results				
Sale Revenues	(Million USD)	5,148	5,083	7,693
Cost of Sales	(Million USD)	(3,900)	(3,665)	(3,616)
Gross Profit	(Million USD)	1,248	1,418	4,077
Selling and Administration Expenses	(Million USD)	(615)	(556)	(674)
Royalty Fee	(Million USD)	(329)	(379)	(592)
Other Revenues	(Million USD)	245	219	441
Other Expenses	(Million USD)	(136)	(96)	(1,182)
Profit from Operation	(Million USD)	413	606	2,070
Share of Profit from Joint Ventures	(Million USD)	196	268	339
Interest Expenses	(Million USD)	(377)	(374)	(257)
Financial Expenses	(Million USD)	(24)	(10)	(8)
Corporate Income Tax	(Million USD)	(97)	(119)	(521)
Non-controlling Interests	(Million USD)	(135)	(212)	(461)
Net (Loss) Profit	(Million USD)	(24)	160	1,162
EBITDA	(Million USD)	1,330	1,487	3,916
Financial Ratios				
Gross Profit Margin	(%)	24.2	27.9	53.0
Net (Loss) Profits to Total Revenues	(%)	1.99	6.67	19.15
Returns on Assets	(%)	0.88	2.90	13.76
Returns on Equity	(%)	(0.66)	4.42	40.21
Interest Coverage Ratio	(Times)	3.53	3.98	15.24
Net Debt to Equity	(Times)	0.79	0.90	0.74
Data per Share				
Earnings per Share	(USD)	(0.002)	0.018	0.162
Book Value per Share	(USD)	0.47	0.48	0.52
Dividend per Share	(THB)	0.30*	0.45	1.20

* The Company announced a total dividend of THB 0.30 per share arising from its performance during the period from 1 January 2024 to 31 December 2024, of which THB 0.18 was paid on 26 September 2024. The remaining dividend of THB 0.12 per share for 2024 performance will be paid on 30 April 2025.

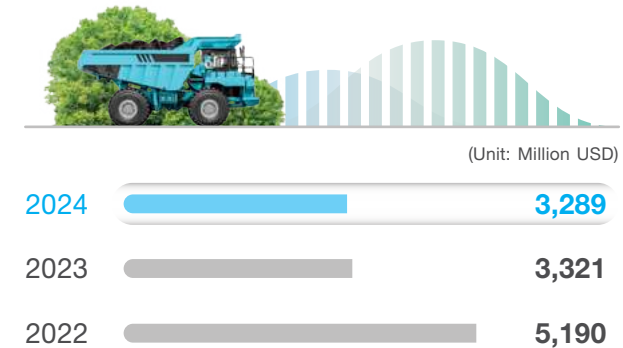
Remark: Financial figures are based on the consolidated financial statement.



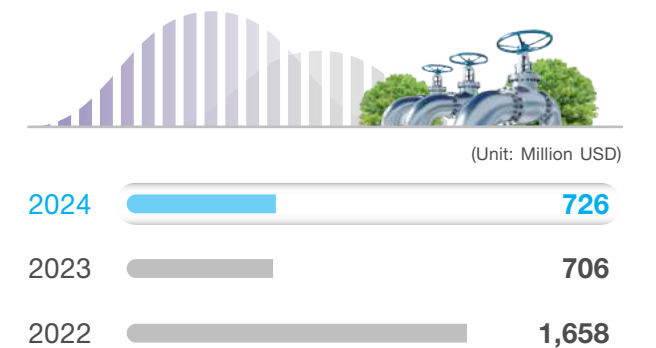
OPERATIONAL RESULTS

		For the Year Ended		
		2024	2023	2022
Coal Sales Volume (Million Tonnes)				
Sources - Indonesia		19.6	17.0	16.3
Other Sources		4.4	4.0	2.7
Total Sources - Indonesia		24.0	21.0	18.9
Sources - Australia		7.9	7.0	8.5
Sources - China (Traded Coal) and Others		0.9	1.9	3.5
Total Coal Sales Volume		32.8	29.9	31.0
Natural Gas Sales Volume (Billion Cubic Feet Equivalent)				
Natural gas sales volume - Marcellus		42.8	51.4	50.7
Natural gas sales volume - Barnett		245.6	262.3	229.3
Total Natural Gas Sales Volume		288.4	313.7	280.0
Total CCUS injection Volume (Tons CO ₂)		165.1	8.2	-
Revenue (Million USD)				
Revenue from Indonesia		2,294	2,398	3,650
Revenue from Australia		913	805	1,253
Revenue from China (Traded Coal) and Others		82	118	287
Revenue from Coal Business		3,289	3,321	5,190
Revenue from Gas Business		726	706	1,658
Revenue from Power Business		777	860	746
Revenue from Energy Technology Business		66	93	6
Revenue from Other Businesses		290	103	93
Total Revenues		5,148	5,083	7,693
Gross Profit Margin (%)				
Gross Profit Margin - Indonesia		42	46	66
Gross Profit Margin - Australia		5	1	38
Gross Profit Margin - China (Traded Coal) and Others		14	13	16
Gross Profit Margin - Coal Business		31	34	57
Gross Profit Margin - Gas Business		17	(1)	61
Gross Profit Margin - Power Business		10	31	12
Gross Profit Margin - Energy Technology Business		27	25	12
Gross Profit Margin - Other Businesses		7	8	24
Total Gross Profit Margin (%)		24	28	53

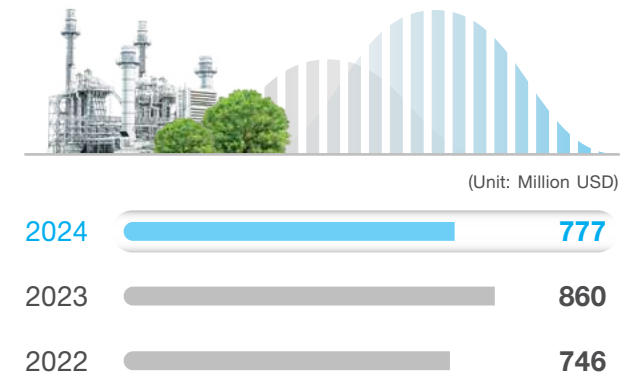
Revenue from Mining Business



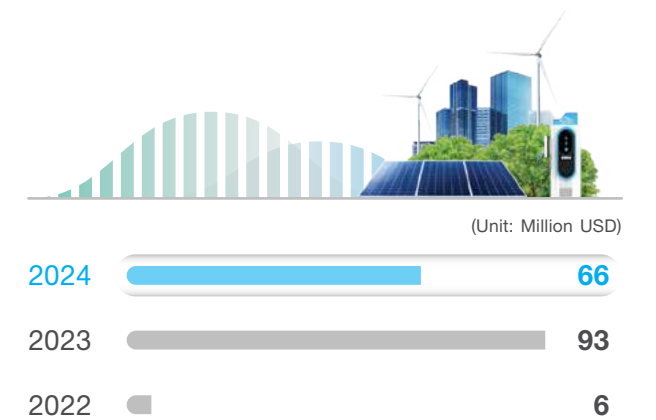
Revenue from Gas Business



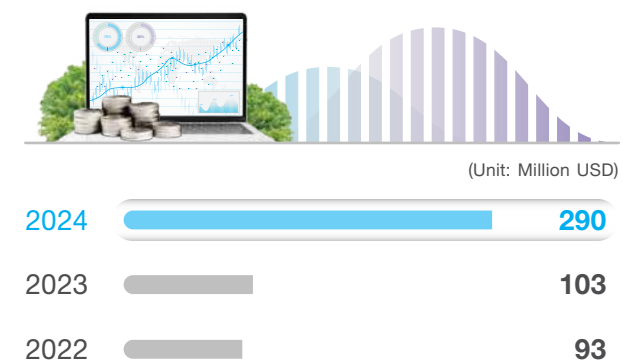
Revenue from Power Business



Revenue from Energy Technology Business



Revenue from Other Business



Total Revenues





THE BOARD OF DIRECTORS' REVIEW

“

The Board of Directors approved the Energy Symphonics strategy... We strongly believe that by taking this approach, Banpu can navigate the evolving global landscape and deliver sustainable long-term returns to shareholders.

”



Mr. Chanin Vongkusolkrit

Chairman of the Board of Directors

Over the past year, our world has faced unprecedented challenges and rapid change. Persistent inflation and high interest rates continue to weigh on the global economy, while geopolitical conflicts disrupt energy supply chains. Meanwhile, advancements in digital technologies, shifting government policies across various nations, and pressing sustainability concerns add to the complexity of the landscape. In response, the Board of Directors has carefully considered these factors in shaping Banpu's strategic direction and governance to create sustainable value for our shareholders and stakeholders.

In 2024, the Board of Directors approved the Energy Symphonics strategy proposed by the CEO to guide Banpu's direction through 2030. This strategy focuses on integrating diverse energy sources - from conventional energy to new energy solutions - to meet rising global energy demand while balancing environmental responsibility and business value. We strongly believe that by taking this approach, Banpu can navigate the evolving global landscape and deliver sustainable long-term returns to shareholders. Over the past year, the Board has supported the management in driving strategic growth, including the expansion of the battery business in collaboration with SVOLT and Durapower, investments in Amp Co., Ltd., a leading developer of renewable energy projects in Japan, and two energy storage projects which were awarded subsidies under Japan's Ministry of Economy, Trade, and Industry's program. Additionally, we advanced our commitment to sustainability by expanding our carbon capture and sequestration facility in Texas. For portfolio management, BKV Corporation, a Banpu subsidiary in the United States, successfully listed on the New York Stock Exchange. Meanwhile, we divested certain assets to realign our portfolio with our new strategic direction.

Banpu places great importance on internal auditing to ensure compliance with international regulations and effectively safeguard stakeholders' interests. In 2024, the Board closely monitored the effectiveness of the internal control system across key areas, including investments, operations, resource utilization, asset management, risk prevention and mitigation for damage and corruption, financial reporting reliability, and legal and regulatory compliance. Furthermore, we have reinforced IT governance with a strong focus on cybersecurity. The Audit Committee, responsible

for overseeing internal audits, has approved the Internal Audit Department's 3P strategic plan: Protect, Proactive, and Proper Governance (Protecting stakeholder interests, proactively providing internal control guidance to business units, and ensuring proper governance across Banpu Group and its subsidiaries). The Audit Committee has also approved a comprehensive annual audit plan, which addresses corporate risks and covers Banpu's new businesses.

As part of our ESG oversight on environmental stewardship in 2024, the Board approved Banpu's Net Zero target for 2050, focusing on concrete action plans to achieve this goal. We have also reviewed key ESG-related policies, including the Community Engagement Policy, Environmental Policy, and Waste Management Policy while reviewing operational targets and performance of the related areas such as water utilization, air quality, and occupational health and safety.

In 2025, global energy demand is expected to remain high, driven by economic growth across Asia and the expansion of AI and data centers in the U.S. and other regions amid ongoing geopolitical uncertainty. The Board will continue to provide rigorous oversight to ensure Banpu's business operations remain aligned with sustainable development principle. We extend our sincere gratitude to our shareholders, benefactors, and stakeholders both in Thailand and internationally for your continued support. The Board is committed to supporting the management team in driving the Energy Symphonics strategy, ensuring energy security, energy equity, and energy sustainability while creating sustainable value for shareholders, stakeholders, and the environment.



CHIEF EXECUTIVE OFFICER'S REVIEW

“

Energy Symphonics

Meeting the massive growth in electricity demand, while also ensuring that energy supplies are affordable, reliable and lower carbon, constitutes an Energy Trilemma of epic proportions. But it also represents a tremendous opportunity: one which Banpu is uniquely well positioned to benefit from

”

Mr. Sinon Vongkusolkrit

Chief Executive Officer



The world of 2024 is rapidly fading into the distance as the first months of 2025 bring seismic shifts in the geo-political, economic and technological landscape. Rarely in living memory have commentators and analysts found it so difficult to keep up with unfolding global events: radical new policies, breakthrough developments in technology and AI, multi-billion-dollar commitments to digital infrastructure, shifting supply-chains.

In a time of uncertainty and rapid change, investors must look to companies with strategic optionality, unorthodox thinking, and proven credentials in weathering previous periods of disruption. Banpu has all these attributes. Leading Banpu at such an exciting time, and as this great enterprise enters its fifth decade, is a great honor.

As the CEO, I reaffirm the Company's commitment to be key to deliver a sustainable energy transformation, with passion. As we look ahead, we see economic growth in the developing world being compounded by surging power demand from digital infrastructure expansion (data centers, telecoms, crypto, IoT, cloud computing) worldwide, and accelerating electrification of transport, industry and households.

The combined impact will drive a doubling of global electricity demand by 2050. Meeting the massive growth in electricity demand, while also ensuring that energy supplies are affordable, reliable and lower carbon, constitutes an Energy Trilemma of epic proportions. But it also represents a tremendous opportunity: one which Banpu is uniquely well positioned to benefit from.



Towards the end of last year, we launched a new strategic vision for Banpu, dubbed 'Energy Symphonics', around four key pillars designed to align the group's growth with these mega-trends:

1. Gas-Power-CCUS

Upstream gas production, integrated with carbon capture, utilization and storage (CCUS), and investment in gas-fired power generation represents a winning formula for addressing the Energy Trilemma in the US. We have capitalized on this strategy by successfully listing our gas-to-power subsidiary, BKV Corporation, on the New York Stock Exchange in September last year.

2. Renewables+

To solve the intermittency and grid stability issues which will come from the tripling in renewables capacity targeted at COP28 by 2030 will require

a parallel investment in battery energy storage systems (BESS) of even greater magnitude. With nearly 1GW of renewables capacity across Asia-Pacific, battery manufacturing, growing energy trading capabilities and a pipeline of BESS projects, this second pillar represents an exciting area for further growth and returns.

3. Next-Gen Mining

With the exacting power requirements of data centers and concerns about the reliability of renewables, Banpu's legacy mining operations in Asia can play a role in addressing this issue. We will use smart solutions and AI to reduce emissions and enhance efficiency. We are also working on diversifying into strategic minerals, essential for new energy technologies.

4. Net Zero 2050

Banpu continues to take real steps towards achieving Net Zero group emissions by 2050 and interim

milestones of reducing emissions by 20% and coal-related earnings to less than 50% of EBITDA by 2030.

Banpu's strong reputation as a leading Energy Transition player continued to be recognized on many fronts in 2024. We were listed on the Dow Jones Sustainability Indices (DJSI) for the 11th consecutive year. We were awarded with an 'AAA' ESG rating by the Stock Exchange of Thailand. Banpu has been ranked as one of the Fortune Southeast Asia 500 companies. And we maintain an A+ credit rating with Stable outlook from TRIS.

We continue to prioritize strong relationships with our host communities. In 2024, we launched the new CSR framework, Embracing Potential, Energizing People. Foster Human Empowerment: Banpu highly values individuals and believes in their ability to transform lives and create a positive impact on society.

Banpu is unique in its geographic positioning, with strong operating platforms and established stakeholder networks in the US, China, Indonesia, Australia, Japan, and other ASEAN countries. This combined with our versatility and integration across the energy transition spectrum, has established Banpu's reputation as one of the world's leading energy sector pioneers. These characteristics will continue to provide the basis for competitive advantage, synergy value and strong returns in the years ahead.

I have great confidence that Banpu has the right strategy, right culture and right people to ensure 2025 is a year of growth, transformation and success. I would like to extend my sincere gratitude to Banpu's Board of Directors, stakeholders and shareholders for their continued support.





SECTION 1

BUSINESS AND OPERATIONAL RESULTS



POLICY AND BUSINESS OVERVIEW

Banpu Public Company Limited, a versatile energy company was founded on 16 May 1983 as “Ban Pu Coal Company Limited” with a registered capital of THB 25 million to subcontract a coal mining operation at Banpu Mine (BP-1 Mine) in Li district, Lamphun province from the Department of Alternative Energy Development and Efficiency. On 4 May 1989, Banpu was listed on the Stock Exchange of Thailand (SET). The Company later changed its name on 29 July 1993 to **“Banpu Public Company Limited.”**

Currently, Banpu's business ecosystems have been bolstered through the synergy of its versatile energy portfolios, spanning nine strategic countries in the Asia-Pacific region: Thailand, Indonesia, China, Australia, Lao PDR, Mongolia, Japan, the United States of America, and Vietnam. Banpu's three core groups of businesses consist of Energy Resources, Energy Generation and Energy Technology.

Banpu is steering its business toward 2030 under the “Energy Symphonics” strategy, a synchronized path to sustainable energy transition.

The Company is committed to addressing the global surge in energy demand while prioritizing environmental stewardship by addressing the Energy Trilemma: Energy Security, Energy Equity, and Energy Sustainability.

The Company operates its businesses in adherence to Environmental, Social, and Governance (ESG) principles, ensuring the creation of long-term value for shareholders while prioritizing the best interests of all stakeholders, in alignment with its brand promise, **“OUR WAY IN ENERGY.”**

Energy Resources

Mining and gas including related operations such as marketing and trading, logistics, fuel procurement, and transmission

Energy Generation

Thermal and renewable power plants

Energy Technology

Solar rooftop and floating solar, Energy Storage Systems (ESS), energy trading, e-mobility, and smart city & energy management





BANPU GROUP'S MAP OF OPERATIONS

A synchronized path to sustainable energy transition



Thailand



Lao PDR



Mongolia



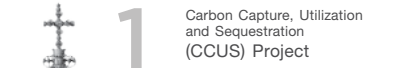
Japan



Australia



The United States of America



Vietnam



Indonesia



China



Note: The map excludes operations of solar rooftop and solar floating, Energy Storage Systems (ESS), Energy Trading, e-Mobility, and Smart City & Energy Management.

VISION & MISSION

VISION

The Asian energy company
at the heart of innovation,
technology, and sustainability

MISSION

Build sustainable value
for all our stakeholders as a trusted partner,
with emphasis on care for the earth and society

Promote innovation, synergy, sustainability,
and integration across the energy supply chain,
between thermal and new energy technologies

Foster our corporate values,
operational excellence, and uphold
Banpu's reputation for integrity,
professionalism and best practices



SUMMARY OF MAJOR CHANGES AND DEVELOPMENT IN 2024 AND CURRENT EVENTS

1 January
2024

Banpu announced the appointment of Mr. Smittipon Srethapramote as the Chief Executive Officer of Banpu NEXT.

21 February
2024

- The Board of Directors Meeting approved the Company's dividend payment at a rate of THB 0.45 per share for the operating results from 1 January to 31 December 2023. Previously, an interim dividend had been paid out to shareholders at a dividend rate of THB 0.25 per share on 29 September 2023 for the operating results from 1 January to 30 June 2023. The remaining dividend for the operating results from 1 July to 31 December 2023 was proposed to be paid to shareholders at THB 0.20 per share. The dividend payment was appropriated from the corporate income tax-exempt profit, on which shareholders are not entitled to tax credits. The dividend is scheduled to be paid on 30 April 2024.
- The Board of Directors Meeting approved to appoint Mr. Sinon Vongkusolkit to be Chief Executive Officer replacing Mrs. Somruedee Chaimongkol. This appointment was effective from April 2, 2024, onwards (The day after Annual General Meeting of 2024).

27 February
2024

Banpu NEXT Co., Ltd. (Banpu NEXT¹) has signed a Strategic Cooperation Agreement with SVOLT Energy Technology Co., Ltd. (SVOLT) to establish a strategic partnership in lithium battery assembly, energy storage systems, battery cell production, and other related businesses. The partnership also includes exploring the feasibility of establishing an energy storage system (ESS) production plant in Thailand and upgrading production lines from EV batteries to ESS. The collaboration will begin with a feasibility study on local battery cell production in Thailand to align with government policies and prepare for production starting in 2026. Additionally, the partnership aims to expand the scope of business cooperation by sharing resources and jointly developing energy storage projects to create new business opportunities. These initiatives will drive market expansion in Thailand, ASEAN, Japan, Australia, and North America.

¹ The subsidiary of Banpu and BPP by equally hold 50%.



28 February
2024

Banpu NEXT and SVOLT officially announced the official commencement of production at the SVOLT Thailand factory, located in Si Racha District, Chon Buri Province. The facility operates according to the company's automotive battery production standards, utilizing advanced technology and innovative processes from China, specifically designed for the battery industry. It integrates multiple AI-driven smart technologies, such as digital inspection and analysis systems, as well as comprehensive quality tracking and analysis systems. The factory will produce batteries for electric vehicles from Great Wall Motors and Hozon Motors, with the capacity to deliver over 20,000 battery units to customers in Thailand, meeting market demand in 2024.

2 April
2024

The Company has reduced its registered capital by THB 130,260,303 from the previous registered capital of THB 10,149,163,028 (par value of THB 1 per share) to THB 10,018,902,725 (par value of THB 1 per share). The capital reduction has been successfully registered with the Minister of Commerce on 2 April 2024.

10 May
2024

Banpu issued 5 tranches of unsubordinated and unsecured debentures with a debenture holders' representative in the name-registered certificate with a total value of THB 7,390 million. The 2-year 3 months, the 5-year 9 months, the 7-year, the 10-year and the 12-year debentures were offered to general and institutional investors at the interest rates of 3.10%, 3.50%, 3.76%, 4.08%, and 4.21% per annum, respectively. The principal is to be repaid at the maturity date.

14 June
2024

BKV Corporation ("BKV"), a subsidiary of BANPU completed the sale of BKV Chaffee Corners, LLC ("Chaffee"), in which Chaffee owns a non-operated interest, with 1P reserves of 122 billion cubic feet equivalent (Bcfe) (NYMEX case as of 31 December 2023) in 9,793 net acres and 116 gross (24 net equity ownership proportion) natural gas wells in Northeast Pennsylvania ("NEPA"). The transaction value is USD 105.0 million and the adjusted sale price upon transaction consummation is USD 106.7 million (equivalent to THB 3,917 million).

28 June
2024

BKV completed the divestment of non-operated upstream assets in Chelsea, LLC ("Chelsea"), with 1P reserves of 35 Bcfe (NYMEX case as of 31 December 2023), in 6,770 net acres and 214 gross (15 net equity ownership proportion) natural gas wells, also in NEPA. The transaction value and adjusted sale price is USD 25.0 million. (equivalent to THB 917 million).

19 August
2024

BKV-BPP Ponder Solar, LLC² a subsidiary of BANPU, has commenced commercial operations (COD) of the Ponder Solar Power Plant, with a capacity of 2.5 megawatts (MW), located in Denton, Texas. This initiative fosters synergies with the company's businesses within the U.S. and meets the needs of electricity consumers seeking power from clean energy sources.

28 August
2024

The Board of Directors Meeting approved the interim dividend payment from operating results during 1 January - 30 June 2024, at a rate of THB 0.18 per share. The dividend payment was appropriated from the corporate income tax-exempt profit, on which shareholders are not entitled to tax credits. The interim dividend was paid out on 26 September 2024.

16 September
2024

BKV has launched the initial public offering ("IPO") of 15,000,000 shares of its common stock. The IPO price is expected to be between USD19.00 - 21.00 per share. The shares have been approved for listing on the New York Stock Exchange (NYSE) under the ticker symbol "BKV". The underwriters will have a 30-day option to purchase an additional 2,250,000 shares from BKV at the IPO price, less underwriting discounts and commissions. Citigroup and Barclays are acting as lead book-running managers for the offering. Evercore ISI, Jefferies and Mizuho are acting as joint book-running managers. KeyBanc Capital Markets, Susquehanna Financial Group, LLP, TPH&Co., the energy business of Perella Weinberg Partners, and Truist Securities are acting as senior co-managers. Citizens JMP and SMBC Nikko are acting as co-managers for the offering.

26 September
2024

BKV has announced the IPO price at USD 18 per share. A registration statement relating to the offering was declared effective and the shares will begin trading on the NYSE on 26 September 2024 (New York Time).

27 September
2024

BKV has announced the closing of its IPO, raised USD 253.8 million of proceeds from the IPO, less underwriting discounts and commissions. BKV expects to use the proceeds from the IPO to repay certain indebtedness, which may include some or all of the USD50.0 million in aggregate principal amount outstanding under the loan agreement with Banpu North America Corporation, a subsidiary of BANPU, and the outstanding revolving borrowings under the Reserve-based lending (RBL) Credit Agreement, and the remainder for growth capital expenditures and for other general corporate purposes, which may include the expansion of BKV's carbon capture, utilization, and sequestration (CCUS) business.

² BKV-BPP Ponder Solar, LLC, a wholly owned subsidiary of BKV-BPP Power, LLC in which BKV and BPP equally hold 50%.



3 October
2024

Banpu NEXT has signed a Share Subscription Agreement (SSA) to acquire a 33.33% stake in Amp Co., Ltd. (Amp Japan) and AJFP, marking an investment in a leading energy transition platform in Japan. The total investment value under the agreement is USD 35 million.

15 November
2024

Mr. Sinon Vongkusolkit, CEO announced its new strategy “Energy Symphonics” to drive the Company’s business towards 2030 with an emphasis on a sustainable energy transition, addressing 3 critical goals: Energy Security, defined as reliable and consistent energy supply; Energy Equity, ensuring affordable and accessible energy for all; and Energy Sustainability, focused on minimizing environmental impact. The new strategy has 4 key missions:

1. Net Zero by 2050 and Decarbonization: to achieve Net Zero emissions by 2050, reduce greenhouse gas emissions by at least 20%, and reduce coal-related earnings to less than 50% of consolidated EBITDA by 2030.
2. Gas-Power-CCUS: focuses on growth in its “winning formula” of integrating gas upstream, gas-fired power, and CCUS to deliver low carbon gas solutions in the US, while generating strong cashflow.
3. Renewables+: accelerate its renewables business across Asia-Pacific region and beyond, with synergistic investments in BESS, downstream businesses, and utilizing carbon credits. This aims to solve intermittency of renewable, while enhancing business value.
4. Next-Gen Mining: pursuing an approach of Intelligent Mining, implementing an integration of smart solutions and AI to its mining operations to increase efficiency, reduce costs, and minimize environmental impact. The Company will also invest in strategic minerals which are crucial for energy transition.

22 November
2024

Banpu NEXT and Durapower Holdings Pte. Ltd. (Durapower) officially announced the opening of the DP NEXT Battery Assembly Plant. Operated under a joint venture (JV) between Banpu NEXT, holding 70% and Durapower, holding 30%. The facility is located in Amata City Industrial Estate, Chonburi Province, Thailand.

24 December
2024

The plant aims to deliver high-performance batteries tailored to the region's needs using semi-automated intelligent production technology, the same cutting-edge technology used in Durapower's battery factories. The facility is capable of assembling over 15,000 battery units annually, meeting the specific demands of electric buses, electric trucks, and large commercial vehicles. Plans are in place to scale production capacity to 1 gigawatt-hour in the future to cater to the rapidly growing demand for electric vehicles in the region. Of the total batteries produced, 80% will be sold domestically, while the remaining 20% will be exported to markets in Southeast Asia, India, and the United States.

25 December
2024

TRIS Rating affirms the company rating on Banpu PLC (BANPU) and the ratings on BANPU's senior unsecured debentures at “A+” with a “stable” outlook. The ratings reflect the company's significant market presence in the Asia-Pacific energy upstream industry, underpinned by its extensive operational scale, established customer base, and cost efficiency. Additionally, the company's strategic diversification towards the natural gas, power, and energy technology businesses helps reduce reliance on coal business and supports long-term earnings. However, the ratings are constrained by its moderately high leverage, volatility in coal and natural gas prices, higher exposure to the electricity merchant market, and potential long-term decline in coal demand due to environmental concerns.

Banpu Power Public Company Limited (“BPP”) had been notified that Banpu Power Investment Co., Ltd. (“BPIC”), a 100%-owned subsidiary of BPP, completed the divestment of its equity interest in Nakoso IGCC Power Plant G.K. (“Nakoso”) through its joint venture, Nakoso IGCC Management Co., Ltd. (“NIMCO”), in which it had a 33.5% shareholding. NIMCO divests its 40% equity interest in Nakoso, with BPIC's share of the transaction valued at approximately 1,186 million baht. Nakoso operates a 543 MW Integrated Gasification Combined Cycle (IGCC) power plant located in Fukushima Prefecture, Japan. This transaction represents the divestment of BPIC's 13.4% equity interest in Nakoso, equivalent to 73 MW.

<div> <div>27</div> <div>December 2024</div> </div>	<p>Banpu has issued unsubordinated and unsecured Thai Baht-denominated debentures, registered in the name of the holders and without a debenture holders' representative. The total issuance amounts to THB 2,500 million with a tenure of 2 years, 11 months, and 27 days. These zero-coupon debentures, offered to institutional investors, carry a discount rate equivalent to 2.98% per annum. The principal will be fully repaid on the maturity date.</p>
<div> <div>18</div> <div>February 2025</div> </div>	<p>BKV announced a strategic partnership of a new Carbon Capture, Utilization, and Storage (CCUS) project with a leading diversified midstream energy company at a currently operating natural gas plant in Eagle Ford Shale, Texas. This project reaffirms BKV's commitment to greenhouse gas (GHG) emissions through CCUS while generating revenue and supporting its innovation and sustainability goals. The facility will capture CO₂ from production and storing it in BKV's nearby gas fields, with an expected storage capacity of 90,000 tons per year. BKV has secured the rights to manage the project's Environmental Attributes, approved by the Texas Railroad Commission and verified through the MRV process under the oversight of the U.S. Environmental Protection Agency (EPA). This project reached FID in December 2024 and expected to commercially operate in the first quarter of 2026.</p>
<div> <div>26</div> <div>February 2025</div> </div>	<p>The Board of Directors Meeting approved the Company's dividend payment at a rate of THB 0.30 per share for the operating results from 1 January to 31 December 2024. Previously, an interim dividend had been paid out to shareholders at a dividend rate of THB 0.18 per share on 26 September 2024 for the operating results from 1 January to 30 June 2024. The remaining dividend was proposed to be paid from retain earnings as of 31 December 2024 to shareholders at THB 0.12 per share. The dividend payment was appropriated from the corporate income tax-exempt profit, on which shareholders are not entitled to tax credits. The dividend is scheduled to be paid on 30 April 2025.</p>

BANPU INFORMATION

Name and Location of Banpu Public Company Limited	
<div> <div>Name (Thai)</div> <div>บริษัท บานปู จำกัด (มหาชน)</div> </div>	
<div> <div>Name (English)</div> <div>Banpu Public Company Limited</div> </div>	
<div> <div>Major Business</div> <div>Energy</div> </div>	
<div> <div>Registration Number</div> <div>BorMorJor. 152</div> </div>	
<div> <div>Authorized Capital</div> <div>THB 10,018,902,725</div> </div>	
<div> <div>Paid-up Capital</div> <div>THB 10,018,902,725</div> </div>	
<div> <div>No. of Shares</div> <div>10,018,902,725 shares</div> </div>	
<div> <div>Par Value</div> <div>THB 1</div> </div>	
	<div> <div>Headquarters</div> <div>27th Floor, Thanapoom Tower, 1550, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand</div> </div>
	<div> <div>Telephone</div> <div>+66 2 694 6600</div> </div>
	<div> <div>Website</div> <div>www.banpu.com</div> </div>
	<div> <div>Company Secretary</div> <div>Telephone : +66 2 694 6859</div> <div>e-mail : bodsec@banpu.co.th</div> </div>
	<div> <div>Investor Relations</div> <div>Telephone : +66 2 694 6684</div> <div>e-mail : investor_relations@banpu.co.th</div> </div>
	<div> <div>Corporate Communications</div> <div>Telephone : +66 2 694 6680</div> <div>e-mail : cc@banpu.co.th</div> </div>



REVENUE STRUCTURE

For the previous 3 years ended 31 December 2024

Banpu Public Company Limited

			2024		2023		2022		
			Revenue (USD Million)	%	Revenue (USD Million)	%	Revenue (USD Million)	%	
Sales Revenues:									
1.	Imported Coal	Banpu	-	59.07	99.80	60.72	97.57	57.47	97.49
2.	Other Revenues	Banpu	-	0.12	0.20	1.50	2.43	1.48	2.51
Total Sales Revenues				59.19	100.00	62.22	100.00	58.95	100.00

Banpu Public Company Limited and its Subsidiaries

			2024		2023		2022		
Products/Services		Conduct by	% of Shareholding	Revenue (USD Million)	%	Revenue (USD Million)	%	Revenue (USD Million)	%
Sales Revenues - Domestic:									
1.	Domestic Coal in Thailand	Banpu	-	59.07	1.15	60.72	1.19	57.47	0.75
		BMC	100.00	52.82	1.03	80.17	1.58	96.70	1.25
2.	Domestic Coal in Indonesia	Indominco	65.14	120.35	2.34	105.83	2.08	106.99	1.39
		Bharinto	65.14	191.74	3.72	189.06	3.72	310.15	4.03
		Trubaindo	65.14	120.30	2.34	122.75	2.41	229.66	2.98
		Jorong	65.14	2.53	0.05	9.62	0.19	16.59	0.22
		GPK	65.14	11.24	0.22	-	-	-	-
3.	Domestic Coal in Australia	CEY	100.00	684.77	13.30	404.65	7.96	332.19	4.32
4.	Coal Trading in China	BBET	100.00	40.60	0.79	84.45	1.66	200.52	2.61
5.	Power in China	BIC	78.57	173.72	3.37	186.23	3.66	200.13	2.60
		BPPRIC	100.00	23.96	0.47	26.28	0.52	27.50	0.36
6.	Power in Japan	BPPTGK	100.00	284.23	5.52	98.35	1.93	65.12	0.85

Products/Services	Conduct by	% of Shareholding	2024		2023		2022	
			Revenue		Revenue		Revenue	
			(USD Million)	%	(USD Million)	%	(USD Million)	%
7. Power in the U.S.*	BKV-BPP	100.00	557.51	10.83	621.85	12.23	501.92	6.52
8. Power in Australia	BEN	100.00	10.39	0.20	12.43	0.24	10.27	0.13
9. Power in Vietnam	ELMD	100.00	6.96	0.14	8.39	0.17	6.55	0.09
10. Gas**	BKV	75.51	726.01	14.10	706.35	13.90	1,657.73	21.55
11. Battery	DPH	65.10	54.17	1.05	81.23	1.60	-	-
12. Other Revenues			21.99	0.43	25.99	0.51	12.75	0.16
Total Sales Revenues - Domestic			3,142.36	61.03	2,824.34	55.56	3,832.24	49.81
Sales Revenues - Overseas:								
1. Coal - International Trade	Indominco	65.14	493.19	9.58	530.02	10.43	834.96	10.85
	Bharinto	65.14	744.42	14.46	741.84	14.59	1,153.74	15.00
	Trubaindo***	65.14	414.20	8.05	497.58	9.79	843.46	10.96
	Energi	65.14	109.86	2.13	86.41	1.70	48.4	0.63
	CEY	100.00	228.93	4.45	400.60	7.88	921.08	11.98
	BMS	100.00	15.49	0.30	2.22	0.04	59.34	0.77
Total Sales Revenues - Overseas			2,006.09	38.97	2,258.67	44.44	3,860.98	50.19
Total Sales Revenues								
Total Sales Revenues			5,148.45	100.00	5,083.01	100.00	7,693.22	100.00
Participating Profit (Loss) from Investment in Associated Companies (Equity Method)			196.03	-	268.29	-	339.36	-
Total Revenues			5,344.48	-	5,351.30	-	8,032.58	-

Notes:

- Other revenues consist of other services.
- The Company did not realize sales revenue from its power business in Thailand as its shareholding is not more than 50%
- BBET means Banpu (Beijing) Energy Trading Co., Ltd.
- BEN means Banpu Energy Australia Pty Ltd.
- ELMD means El Wind Mui Dinh Ltd.
- DPH means Durapower Holdings Pte. Ltd.
- GPK means PT Graha Panca Karca
- BKV means BKV Corporation
- The preparation of the information presented above is based on the generally accepted accounting principles which eliminate intercompany transactions. The amounts shown should not be reconciled with the statutory accounts of each territory.

* Sales revenue from power in 2023, operated by BKV-BPP, has been reclassified for comparative figures.

** Sales revenue from natural gas in 2023, operated by BKV Corporation, has been reclassified for comparative figures and calculated based on the company's 100% shareholding.

*** Sales revenue from coal - International trade in 2023, operated by Trubaindo, has reclassified comparative figures.



PRODUCTS AND SERVICES

Energy Resources Group



Mining Business

Coal is a solid fuel, varying in color from dark brown to jet-black. The coal mining process starts with an exploration of a potentially economic coal seam, production (excavation and transportation), coal selection, coal pulverization to attain the size and quality as required by the customers, and stockpiling to be delivered to the customers.

Coal Mines in the Republic of Indonesia

The total coal production in 2024 was 20.24 million tonnes from the following mines:



1. Indominco Mine

The mine is operated by PT. Indominco Mandiri, a wholly-owned subsidiary of PT. Indo Tambangraya Megah Tbk (ITM). Located in Bontang, East Kalimantan Province, this open-pit mine has 34.89 million tonnes of coal reserves. The production capacity in 2024 was 7.35 million tonnes. The Bontang Coal Terminal is utilized for loading its coal to be exported from Indonesia.

2. Trubaindo Mine

The mine is operated by PT. Trubaindo Coal Mining, a wholly-owned subsidiary of ITM. Located in West Kutai, East Kalimantan Province, this open-pit mine has 54.71 million tonnes of coal reserves. Its production capacity in 2024 was 2.94 million tonnes.

3. Bharinto Mine

The mine is operated by PT. Bharinto Ekatama, a wholly-owned subsidiary of ITM. The mine is located in North Barito, Central Kalimantan Province, and West Kutai, East Kalimantan Province, adjacent to the Trubaindo mine. This open-pit mine has coal reserves of 98.55 million tonnes, and its production capacity in 2024 was 8.50 million tonnes.



4. Jorong Mine

The mine is operated by PT. Jorong Barutama Greston, a wholly-owned subsidiary of ITM. Located in Tanah Laut, South Kalimantan Province, this open-pit mine has 2.17 million tonnes of coal reserves. Its production capacity in 2024 was 0.18 million tonnes.



5. Graha Panca Karsa Mine (GPK)

The mine is operated by PT. Graha Panca Karsa, a 70% owned subsidiary of ITM. Located in East Kalimantan Province, this open-pit mine has 63.39 million tonnes of coal reserves. Its production capacity in 2024 was 1.09 million tonnes.

6. TIS Mine

The mine is operated by PT. Tepian Indah Sukses, a wholly-owned subsidiary of ITM. Located in East Kalimantan Province, this open-pit mine has 2.88 million tonnes of coal reserves. Its production capacity in 2024 was 0.17 million tonnes.

7. NPR Mine Project

The mine is operated by PT. Nusa Persada Resources, a wholly-owned subsidiary of ITM. Located in Central Kalimantan Province, this open-pit mine has 77.40 million tonnes of coal reserves.



Coal Mines in Australia

Centennial Coal Co. Pty Ltd. (Centennial), a subsidiary of Banpu and one of the underground coal mining operators in New South Wales, produces and supplies coal used as fuel for coal-fired power plants in the state. Its main assets consist of the possessions to operate coal mining business in Northern and Western parts of New South Wales. The total production capacity in 2024 was 7.55 million tonnes with the share of production from the following mines:



1. Airly Mine

The mine is wholly owned and operated by Centennial. Located near Lithgow in the Western Coalfields of New South Wales, Airly is an underground mine using a continuous mining method. It has 14.13 million tonnes of coal reserves, with a production capacity of 0.90 million tonnes in 2024.



2. Angus Place Mine

The mine is wholly owned and operated by Centennial. Located in the Western Coalfields of New South Wales, Angus Place has 36.20 million tonnes of coal reserves. Since the end of February 2015, the production has been suspended under care and maintenance. Its staff and machinery were relocated to the Springvale mine to expand production and will return when Angus Place resumes its operation.



3. Springvale Mine

The mine is wholly owned and operated by Centennial. Located in the Western Coalfields of New South Wales, Springvale deploys the longwall mining technology. It has 7.45 million tonnes of coal reserves, with a production capacity of 2.81 million tonnes in 2024.

Angus Place and Springvale mines produce and supply thermal coal for domestic and international markets. They also have conveyor belts to transport coal to the power plants that are their domestic customers. The Lidsdale Sliding Coal Loader has been expanded to support the transportation of increasing volumes of coal exports.

4. Clarence Mine

The mine is a wholly owned and operated by Centennial. Located near Lithgow, in the Western Coalfields of New South Wales, it is an underground mine using a highly efficient continuous mining method. Clarence has 25.84 million tonnes of coal reserves, with a production capacity of 0.93 million tonnes in 2024. The mine exports its coal mainly through Port Kembla.



5. Mandalong Mine

The mine is wholly owned and operated by Centennial. Located near Morisset, New South Wales, Mandalong is an underground longwall mine. Its production capacity is high as it can excavate coal seams with a thickness of over 5 meters. The mine has 45.78 million tonnes of coal reserves, with a production capacity of 2.0 million tonnes in 2024. Its coal is distributed in domestic markets and exported through the Port of Newcastle.



6. Myuna Mine

The mine is wholly owned and operated by Centennial. Located near Lake Macquarie, in the Newcastle Coalfields, New South Wales, Myuna is an underground mine using a continuous mining method. The mine has 12.50 million tonnes of coal reserves, with a production capacity of 0.90 million tonnes in 2024. Coal from Myuna is transported to major customers nearby using a conveyor system.





7. Northern Coal Services (NCS)

It is a coal-washing plant located in the Newcastle Coalfield, New South Wales. Since it is in the Port of Newcastle, NCS processes thermal and semi-soft coking coal excavated from various mines and prepares them for delivery to domestic and international markets. The connection with double-track railways enables effective and fast coal uploading to the Port of Newcastle. Northern Coal Services' capacity is approximately 4 million tonnes per year, and it has specific routes for exporting and transporting coal to domestic customers.

Future Projects

1. Newstan Extension Mine Project

The project explores and studies the feasibility of utilizing existing mining infrastructure to expand the coal reserves and production capacity. The coal reserves is 51.50 million tons.

2. Mandalong Southern Extension Mine Project

The project is an extension of the Mandalong mine. Currently, it is effectively designed to connect with the Mandalong mine.

3. Neubecks Mine Project

The project is located in the Western Coalfields of New South Wales near its domestic power plants, which are its customers. Neubecks produces quality coal to supply domestic markets and export to international markets through Port Kembla. The coal reserves is 7.50 million tons.

4. Wallarah Mine Project

Located in New South Wales, adjacent to the Mandalong mine, with coal reserves of 20.79 million tonnes. The project is currently under development with the potential to utilize existing infrastructure of the Mandalong mine.

Coal Mines in the People's Republic of China

The total coal production in 2024 was 9.95 million tonnes from the following mines:

1. Gaohe Mine

The mine is operated by BP Overseas Development Co., Ltd., a subsidiary of Banpu, which wholly owns Asia American Coal Inc. (AACI). AACI was established to develop and conduct business as well as invest in a joint venture in the coal business in China with Shanxi Lu'an Mining Industry (Group) Co., Ltd., a major coal producer in China. Each holds 45% and 55% shares, respectively, of Shanxi Gaohe Energy Co., Ltd. Gaohe mine is an underground longwall mine in Shanxi Province, with 81.95 million tonnes of coal reserves and a production capacity of 8.83 million tonnes in 2024.



2. Hebi Mine

The mine is operated by Banpu Minerals Co., Ltd., a subsidiary of Banpu, which entered a joint venture with Hebi Coal and Electricity Co., Ltd to establish Hebi Zhong Tai Mining Co., Ltd. (HZTM) with each holding 40% and 60% of shares, respectively. HZTM was established to produce and distribute coal from the Hebi mine in Henan Province. This underground longwall mine has 10.92 million tonnes of coal reserves, and its production capacity in 2024 was 1.12 million tonnes.





Coal Mines in Mongolia

Banpu has been steadily advancing its coal mining projects in Mongolia, progressing through geological surveys, feasibility drilling, and the application of technology and innovation to enhance product value. The company has also undertaken trial production in preparation for commercial operations. These efforts aim to maximize the potential of Mongolia's coal resources while meeting market demands in both Mongolia and China.

1. Tsant Uul Mine

Located in the South Gobi Province in southern Mongolia, bordering to China, the company is continuously advancing its efforts and conducting feasibility studies to enhance the value of coal. As part of this initiative, a pilot plant was installed to implement the coal-to-coal tar process, which has demonstrated promising results in efficiently extracting tar from coal at the Tsant Uul site. The company has conducted in-depth studies to explore the feasibility of increasing the value of tar, charcoal, and gas derived from the production process. These studies include research into production engineering, advanced technology, and a comprehensive analysis of the chemical and physical properties of tar and charcoal. The goal is to develop these into high-value chemical products capable of effectively meeting market demand. In June 2024, the project commenced trial coal production, achieving a total output of 169,000 tonnes, which was delivered to power plants in China to assess market potential. These efforts are part of the company's preparation for commercial operations and its continued commitment to enhancing the value of coal through ongoing feasibility studies.

2. Unst Khudag project

Located in the Central Gobi Province, in central Mongolia, the company has received approval from relevant government agencies to conduct a feasibility study for the continuous development of the project. This study includes an assessment of water reserves for development, an evaluation of appropriate engineering and production technologies, and an analysis of production costs for converting coal into chemical products and electricity. The company has also conducted market research for chemical products in both Mongolia and China. In 2024, the company explored technologies to enhance the value of products derived from low-calorific coal. The study revealed that low-calorific coal contains humic acid, a chemical that can be utilized to improve soil quality for agricultural purposes. The company aims to export these products to the Chinese market.

Gas Business

Banpu emphasize its business operations in the U.S. as a strategic country, through BKV Corporation (BKV), which plays a key role in advancing natural gas business. BKV invests in, develops, and operates natural gas and liquefied natural gas (LNG) production in the U.S., including natural gas from the Marcellus Shale, located in northeastern Pennsylvania (NEPA) and the Barnett Shale in the Fort Worth Basin, Texas. Additionally, BKV expanded into carbon capture, utilization, and storage (CCUS) business and develops premium-quality carbon-sequestered gas (CSG), which is carbon-neutral natural gas.

Recently, BKV successfully completed an initial public offering (IPO) of newly issued shares and listed the shares on the New York Stock Exchange (NYSE). Trading on the NYSE commenced on 26 September 2024. Currently, Banpu holds a 75.51% stake in BKV's registered capital.

With efficient work standards and international professionalism, BKV has become one of the top 20 natural gas business leaders in the U.S. Its total acreage position is approximately 477,520 net acres, and its net average daily production is 788 million cubic feet per day (MMcfed) in 2024. As of 31 December 2024, BKV had 5.28 trillion cubic feet equivalent (Tcfe) of proved reserves

Marcellus Shale in Pennsylvania

In 2016, the Company began investing in U.S. natural gas, focusing on assets with low-risk that generate good-returns in the future. The first investment was in shale gas located in Northeastern of Marcellus Shale in Pennsylvania, which has low production costs and the largest natural gas reserves in the U.S.

BKV has implemented a strategy to optimize and maximize the value of its portfolio by managing and divesting non-core and non-operated assets. On 14 June 2024, BKV completed the sale of BKV Chaffee Corners, LLC, which holds a non-operated interest with 1P reserves of 122 Bcfe across 9,793 net acres and 116 gross (24 net equity ownership proportion)



natural gas wells in Northeast Pennsylvania ("NEPA"). Subsequently, on 28 June 2024, BKV finalized the divestment of non-operated upstream assets in BKV Chelsea, LLC, which include 1P reserves of 35 Bcfe, spanning 6,770 net acres and 214 gross (15 net equity ownership proportion) natural gas wells, also located in NEPA.



As of 31 December 2024, BKV holds a total acreage position in Marcellus Shale of approximately 19,480 net acres, including gas reserves from NEPA Corners-4 to NEPA Corners-5.

Barnette Shale in Texas



On 17 December 2019, Banpu North America Corporation (BNAC), a subsidiary of Banpu, entered into a Purchase and Sales Agreement to acquire a stake in the Barnett Shale, Texas and become the production operator, with an investment value of USD 770 million. Then, on 15 April 2020, BNAC amended the term of the Purchase and Sales Agreement to acquire a stake in the Barnett Shale. The acquisition price was changed to USD 570 million, with contingent payments of up to USD 260 million over a period of 4 years starting from 1 January 2021 to 31 December 2024. The value of contingent payments was based on the annual average Henry Hub natural gas price beginning at 2.75 USD/MMBtu or the annual average price of West Texas Intermediate crude oil beginning at 50 USD/BBL. The acquisition of a stake in the Barnett Shale was completed on 1 October 2020. Barnett Shale is ideal for natural gas production, with its existing infrastructure and transportation system. It is also

a significant natural gas production source that has fulfilled the demands of the Mexico Gulf Coast states of the U.S. for more than 20 years, with a total acreage position of approximately 289,000 net acres and 3,850 production wells.

On 18 May 2022, BKV expanded its investment in the Barnett Shale by acquiring stakes in natural gas upstream to midstream assets with the transaction of USD 750 million and contingent payments of up to USD 50 million. The acquired assets recognized income from their operations from 1 July 2022 onward. This Barnett Shale asset is a large natural gas reservoir with low production risk owing to its existing infrastructure and transportation system. Its acreage position is approximately 165,000 net acres at the heart of the Barnett Shale, with over 2,100 production wells. BKV is the operator of Barnett, managing natural gas compression, 778 miles of gas gathering pipeline system, and 65 gas compressor stations. This natural gas field has access to high-demand markets supported by existing infrastructure. Since the Barnett Shale is already operating, it can generate cash flow instantly from its various products, including natural gas and natural gas liquids (NGLs). Moreover, BKV's familiarity with the region enables the creation of synergy and facilitates the transfer of knowledge and technology from its operations at existing production sites, leading to new investment opportunities for long-term growth.



Carbon Capture, Utilization, and Sequestration (CCUS) Project

BKV aims to achieve a net-zero target for its natural gas business by 2030s, and has established BKV dCarbon Ventures, LLC to study investment opportunities and develop commercialized carbon capture, utilization, and sequestration (CCUS) technology. The Barnett Zero project located in Texas, commenced commercial operations on 13 November 2023, to capture and permanently sequester carbon dioxide (CO₂) underground for the first time. The project has a carbon dioxide storage capacity of 183,000 tonnes per year. In 2024, it successfully sequestered a total of 165,069 tonnes of (CO₂)-equivalent. The Cotton Cove project, BKV's 2nd CCUS project aims to achieve commercial operations by the 1st half of 2026, expect to have an average sequestration rate of up to 32,000 tonnes of carbon dioxide (CO₂)-equivalent annually. In December 2024, BKV announced Final investment Decision (FID) on new CCUS with a leading diversified midstream energy company at a currently operating natural gas plant in Eagle Ford Shale, Texas. The facility will capture CO₂ from production and storing it in BKV's nearby gas fields, with an expected storage capacity of 90,000 tons per year. BKV has secured the rights to manage the project's Environmental Attributes, approved by the Texas Railroad Commission and verified through the MRV process under the oversight of the U.S. Environmental Protection Agency (EPA), expected to commercially operate in the first quarter of 2026. In addition, ongoing feasibility studies of investment and development are being conducted for additional projects aimed at reducing greenhouse gas emissions in business operations and their environmental impact. This also presents a potential opportunity to generate income through the sale of carbon credits in the future.



Energy Generation Group

Thermal Power Business

Combined Heat and Power Plant (CHP)

Banpu Power Public Company Limited (BPP), a 78.66% owned subsidiary of Banpu, holds 100% of the paid-up capital in Banpu Power Investment Co., Ltd. (BPIC), which was registered in Singapore through Banpu Power International Ltd. (BPPI). BPIC invested in three CHPs in northern China with a total installed capacity of 618 MWe (equity-based capacity of 548 MWe), comprising a power capacity of 348 MW and a steam production capacity of 1,508 tonnes per hour. Details are as follows:



1. Luannan Combined Heat and Power Plant

The power plant is located in Luannan County, Tangshan City, Hebei Province. The coal-fired power plant generates power and steam with a combined installed capacity of 246 MWe, comprising a power capacity of 150 MW and a steam production capacity of 538 tonnes per hour.



2. Zhengding Combined Heat and Power Plant

The power plant is located in Zhengding County, Shijiazhuang City, Hebei Province. The coal-fired power plant generates power and steam with a total installed capacity of 139 MWe, comprising a power capacity of 73 MW and a steam production capacity of 370 tonnes per hour.

3. Zouping Combined Heat and Power Plant

The power plant is located in Zouping County, Binzhou City, Shandong Province. The coal-fired power plant generates power and steam with a total installed capacity of 233 MWe, comprising a power capacity of 125 MW and a steam production capacity of 600 tonnes per hour. However, as BPIC holds 70% shares of this power plant, its equity-based capacity is 163 MWe.



BLCP Power Plant

BPP holds 50% shares of BLCP Power Ltd. (BLCP), an independent power producer (IPP) with a 1,434 MW thermal power capacity. BLCP consists of two production units with an installed capacity of 717 MW each. Both units are fueled by high-quality bituminous coal. Located in Map Ta Phut Industrial Estate,



Rayong Province, BLCP has secured a Power Purchase Agreement (PPA) with the Electricity Generating Authority of Thailand for 25 years, starting from the Commercial Operation Date (COD) of the second production unit. The construction of the BLCP began in August 2003. Its first unit and second unit achieved COD in October 2006 and February 2007, respectively. Both units have been fully operational for 18 years.

HPC Power Plant

BPP entered into a joint venture with a subsidiary of Ratch Group Pcl. (RATCH) and Lao Holding State Enterprise (LHSE), a state enterprise of the Government of Lao PDR, to establish Hongsa Power Co., Ltd. (HPC) and Phu Fai Mining Co., Ltd. (PFMC). The headquarters of the two companies are in Vientiane, Lao PDR, and they have an objective to operate the HPC power plant in Lao PDR under the following joint venture's terms and conditions:



- HPC was granted a concession from the Lao PDR government to develop, construct, and operate the HPC power plant. The concession is valid from November 2009 until its expiration or 25 years from the COD of the third production unit in March 2016. The shareholding percentage of each company is BPP 40%, RATCH 40%, and LHSE 20%.



- PFMC was granted a concession to operate a lignite coal mine. The shareholding percentage of each company is BPP 37.5%, RATCH 37.5%, and LHSE 25%.

HPC is a mine-mouth power plant fueled by lignite coal with a total installed capacity of 1,878 MW from three power production units, whose capacity is 626 MW each. The first, second, and third production units achieved their COD on 2 June 2015, 2 November 2015, and 2 March 2016, respectively.

Shanxi Lu Guang Power Plant

BPIC, a wholly-owned subsidiary of BPP, entered into a joint venture agreement to develop the Shanxi Lu Guang power plant, a 1,320 MW coal-fired power plant that deploys the Ultra-Supercritical (USC) technology. It is located in Changzhi City, Shanxi Province, China, three kilometers away from the Gaohe mine. BPIC holds 30% shares of the power plant, while Gemeng International Energy Co., Ltd. (Gemeng) and Anhui Province Wenergy Co., Ltd. each holds 35% of its shares. The first and second production units achieved their COD in June 2021 and October 2021, respectively.



Temple I and Temple II CCGT Power Plants

BKV, a 75.51% owned subsidiary of Banpu, and Banpu Power US Corporation (BPPUS) - a wholly-owned subsidiary of BPP, jointly established BKV-BPP Power, LLC (BKV-BPP) in which BKV and BPPUS equally hold 50% ownership.

On 10 August 2021, BKV-BPP acquired 100% shares in Temple Generation Intermediate Holdings II, LLC, which wholly owns the Temple I CCGT power plant in Texas in the U.S. The 768-MW gas-fired power plant achieved its commercial operation date in July 2014. Later, on 10 July 2023, the Temple Generation Intermediate Holdings II, LLC acquired 100% shares in the Temple Generation II, LLC (formerly CXA Temple 2, LLC), which operates the Temple II CCGT power plant located adjacent to Temple I CCGT power plant. The 755 MW Temple II power plant achieved COD in August 2015. In addition, BKV-BPP founded BKV-BPP Retail, LLC, to operate an electricity retail business in Texas, one of the U.S. states with a fast-growing economy and population.



Both power plants are natural gas-fired power plant and deploy combined cycle gas turbines (CCGT) technology – an advanced High Efficiency, Low Emissions (HELE) technology. Their flexibility in priority dispatch according to Merit Order to serve the dynamic demand pattern in the merchant power market enables them to compete in the Electric Reliability Council of Texas (ERCOT) market.

Renewable Power Business

Solar Power Plants in China

Banpu NEXT Co., Ltd. (Banpu NEXT), a subsidiary in which Banpu and BPP equally hold 50% ownership, holds 100% shares of BPP Renewable Investment (China) Co., Ltd. (BPPRIC). BPPRIC invested in seven solar power plants in China that are eligible for a Feed-in Tariff (FIT) of a 20-year term. As of 31 December 2024, BPPRIC's total generation capacity was 177.32 MW, as detailed below.



Solar Power Plants	Shareholding (%)	Capacity (MW)	Location (Province)	Commercial Operation Date
1. Huineng	100.00	21.51	Shandong	July 2016
2. Jinshan	100.00	28.95	Shandong	September 2016
3. Haoyuan	100.00	20.00	Shandong	October 2016
4. Hui'en	100.00	19.70	Shandong	January 2017
5. Deyuan	100.00	51.64	Zhejiang	February 2017
6. Xingyu	100.00	10.30	Shandong	October 2017
7. Jixin	100.00	25.22	Jiangsu	June 2016
Total Generation Capacity		177.32		



Solar Power Plants and Projects in Japan

Banpu NEXT has invested in several solar power plants and projects in Japan through subsidiaries. As of 31 December 2024, the Company’s total equity-based capacity was 145.89 MW, as detailed below.



Solar Power Plants and Projects	Shareholding (%)	Capacity (MW)		Location (Province)	Commercial Operation Date
		100%	Equity-based		
1. Olympia - Hitachi Omiya No.1	40.00	2.00	0.80	Ibaraki	July 2013
2. Olympia - Hitachi Omiya No.2	40.00	2.00	0.80	Ibaraki	January 2015
3. Olympia - Ozenosato-Katashina	40.00	2.00	0.80	Gunma	January 2015
4. Olympia - Sakura No.1	40.00	2.00	0.80	Toshigi	December 2015
5. Olympia - Sakura No.2	40.00	2.00	0.80	Toshigi	October 2015
6. Hino	100.00	3.50	3.50	Shiga	May 2016
7. Awaji	100.00	7.90	7.90	Hyogo	May 2017
8. Mukawa	93.00	17.00	15.81	Hokkaido	August 2018
9. Nari Aizu	100.00	20.46	20.46	Fukushima	December 2018
10. Kurokawa	100.00	18.90	18.90	Miyagi	December 2019
11. Tenzan	100.00	1.96	1.96	Saga	October 2017
12. Muroran 1	100.00	1.73	1.73	Hokkaido	August 2018
13. Muroran 2	100.00	1.63	1.63	Hokkaido	January 2018
14. Takeo 2	100.00	1.00	1.00	Saga	October 2018
15. Yamagata	100.00	20.00	20.00	Yamagata	November 2020
16. Yabuki	100.00	7.00	7.00	Fukushima	December 2020
17. Kesenuma	100.00	20.00	20.00	Miyagi	November 2021
18. Nihonmatsu	100.00	12.00	12.00	Fukushima	November 2021
19. Shirakawa	100.00	10.00	10.00	Fukushima	January 2022
Total Generation Capacity		145.89			

In addition, Banpu NEXT has invested in Amp Co., Ltd. (Amp Japan), a leading energy transition platform in Japan and developer of renewable energy projects from an early stage until commercialization, with the Asia Pacific Sustainable & Decarbonisation and Infrastructure Eguity (SDIEF), a fund sponsored by Aravest and the SMBC Group, this joint investment contributes to the development of 800 MW of solar and wind energy assets in Japan. Amp Japan's objective is to create a 2 GW platform before the turn of the decade.

Solar Farms in Australia

Banpu acquired two operating solar farms in New South Wales, Australia, through Banpu Energy Hold Trust, jointly established by Banpu Energy Australia Pty Ltd. (BEN), a subsidiary of Banpu, and Banpu Renewable Australia Pty Ltd. (BREA), a subsidiary of Banpu NEXT. BEN's and BREA's shareholding percentage in Banpu Energy Hold Trust is 80% and 20%, respectively. Banpu Energy Hold Trust acquired 100% shares of both Beryl Solar Farm (Beryl or BSF) and Manildra Solar Farm (Manildra or MSF), which are Banpu's first two utility-scale solar farms in Australia, as detailed below:

1. Beryl Solar Farm

Beryl is a 110.9 MW solar farm located in New South Wales. It achieved COD in June 2019.



These two solar farms are driven by growing electricity demand and consumption as well as the government policy to promote electricity generation from renewable energy. They supply electricity through the National Electricity Market (NEM) under the long-term Power Purchase Agreement (PPA). This acquisition paved the way for investment in a renewable business in Australia under the Wholesale Electricity Market with an advanced trading system.

2. Manildra Solar Farm

Manildra is a 55.9 MW solar farm located in New South Wales. It achieved COD in December 2018.



Solar and Wind Power Plants and Projects in Vietnam

Banpu NEXT has expanded its investment and development of solar and wind power plants and projects in Vietnam. Currently, it owns three solar and wind power plants and projects, one of which is during the submission of documents for COD approval and feasibility study phase, while the other two projects have already achieved commercial operation. These operating plants have secured long-term power purchase agreements with Vietnam Electricity (EVN) under the Feed-in Tariff (FiT) scheme for a 20-year period to supply electricity through the national grid system. As of 31 December 2024, the Company's total capacity was 152.60 MW, as detailed below:



Solar Power Plant	Shareholding %	Capacity (MW)		Location (State)	Commercial Operation Date
		100%	Equity-based		
Wind Power Plants/Projects					
1. El Wind Mui Dinh	100.00	37.60	37.60	Ninh Thuan	June 2019
2. Vinh Chau - Phase 1	100.00	30.00	30.00	Soc Trang	During the submission of documents for COD approval
Vinh Chau - Phase 2 & 3	100.00	50.00	50.00	Soc Trang	During the feasibility study phase
Solar Power Plant					
3. Nhon Hai	100.00	35.00	35.00	Ninh Thuan	July 2020
Total Generation Capacity			152.60		

Solar Power Plants in the U.S.

BKV-BPP has invested in and developed a 2.5 MW solar power plant, which is commercially operational, located in Denton, Texas, U.S. The plant generates and supplies electricity to Denton County Electric Cooperative, Inc. (CoServ), which serves eight counties in North Texas with electricity and natural gas.

Solar Power Plant	Shareholding %	Capacity (MW)		Location (State)	Commercial Operation Date
		100%	Equity-based		
1. Ponder	100.00	2.50	2.50	Texas	August 2024
Total Generation Capacity		2.50			

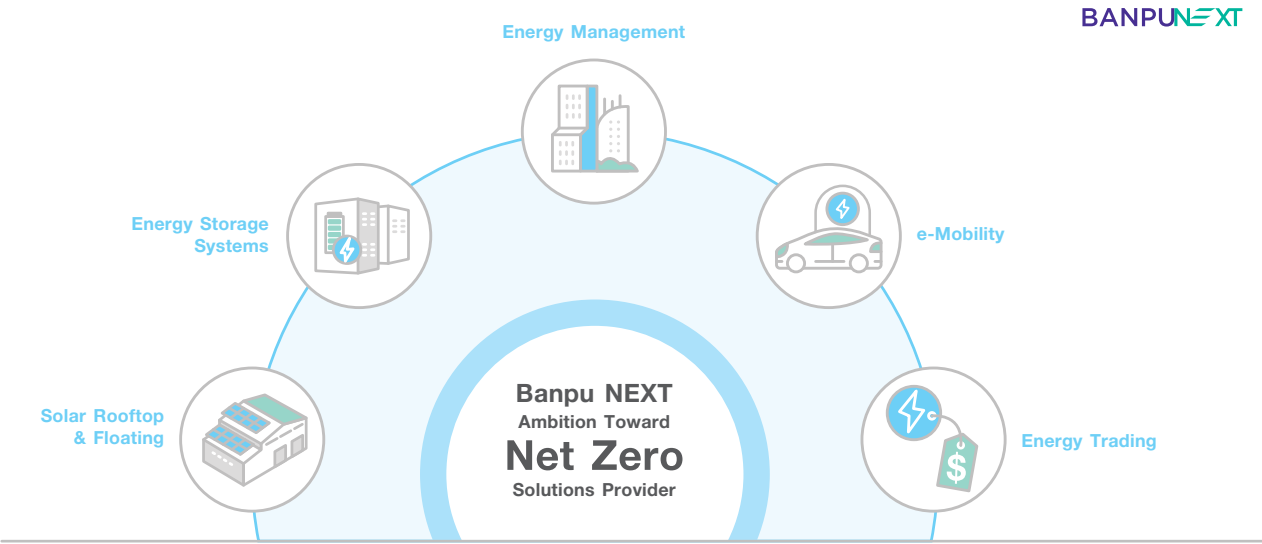


Energy Technology Business



Banpu is moving forward to becoming a versatile energy company, integrating diverse technologies and demonstrating a strong commitment to energy sustainability. With over four decades of experience in the energy sector, both domestically and internationally, and expertise in managing large-scale solar power businesses as well as in energy trading platforms and virtual power plants, Banpu is advancing the renewable energy technology business to meet Thailand’s future needs through its subsidiary, Banpu NEXT.

Banpu NEXT, a leading Net Zero Solutions provider in the Asia-Pacific region, operates under Banpu Group’s strategy with a commitment to driving the transition toward a net zero society. Dedicated to becoming a Net Zero Solutions Provider and a long-term partner for enterprises, the company offers Total Smart Energy Solutions by leveraging advanced technology and digital platforms powered by its energy expertise. These solutions are designed and tailored to meet the needs of every business, empowering businesses to tap into the infinite potential of clean energy, accelerate smart business transformation, and achieve their ESG, SDGs, and Net Zero goals while facilitating sustainable growth and contributing to the betterment of our end-users’ lives and society at large. The Company is engaged in the following core businesses:





Solar Rooftop and Floating

Banpu NEXT operates a power generation and distribution business specializing in solar rooftop and floating. The Company focuses on solar power system installations and building strategic partnerships, expanding its solar energy portfolio across strategic markets in the Asia-Pacific region, including Thailand, China, Japan, Vietnam, and Indonesia. Currently, Banpu NEXT's combined capacity has reached 272 MW. Key highlights are as follows:

In Thailand, Banpu NEXT has a total committed capacity of approximately 106.1 MW and has secured new agreements to generate and supply electricity to partners across various industries.

In China, the total committed capacity stands at 66.1 MW, comprising a solar rooftop at the Zhengding Combined Heat and Power Plant (Zhengding CHP) with a current operating capacity of 22.7 MW.

In Vietnam, the total committed capacity is 53.1 MW, consisting of solar rooftop projects under Solar Esco, where the Company holds a 49.1% stake. The current operating capacity stands at 39 MW.

In Indonesia, the total committed capacity is 43.2 MW. IBP, a subsidiary of Banpu, operates with a current operating capacity of approximately 10.3 MW.

In Japan, the total committed capacity is 3.6 MW, comprising solar rooftop and carport with a current operating capacity of 800 KW.

Energy Storage Systems

Banpu NEXT holds a 65.1% stake in its subsidiary, Durapower, a global leader in performance lithium-ion battery storage solutions with a manufacturing plant in China with a current production capacity of 1 GWh. Additionally, Banpu NEXT and Durapower jointly operated the DP NEXT, a battery assembly plant in Thailand at the end of 2024 for e-buses, e-trucks, and heavy-duty commercial vehicles. With a production capacity of more than 15,000 battery packs per year to meet market demand, the plant also has long-term plans to expand to a maximum capacity of 1 GWh.



Banpu NEXT holds a 40% stake in SVOLT Thailand, a manufacturer and distributor of lithium-ion batteries for electric vehicles. In early 2024, the Company and SVOLT Thailand jointly established and operated a battery manufacturing factory in Thailand for EV passenger cars, with a target production capacity of 2 GWh by 2025.

The construction of Banpu NEXT's large-scale battery farm with a capacity of 58 MW in Tono, Iwate Prefecture, Japan, is nearing completion. The installation of high-voltage utilities and substation construction in phase 2 is currently underway and the battery farm is expected to achieve the commercial operation date (COD) in the second quarter of 2025.

E-Mobility

Banpu NEXT offers EV fleet management solutions integrated with a digital platform and energy services for electric vehicles to support customers in the transportation and logistics businesses through Mobility as a Service (MaaS).

1. Vehicle-as-a-Service (VaaS) offers tailored EV fleet and charging station management solutions designed to meet the specific needs of customers' businesses.
2. Energy-as-a-Service (EaaS) delivers EV energy solutions, including batteries and EV charging stations to reduce expenses and enhance operational efficiency.



3. Platform-as-a-Service (PaaS) provides a user-friendly digital platform to improve fleet management efficiency, carbon tracking optimization, and cost saving.

The Company has expanded its ride-sharing service with Muvmi electric tuk-tuks, now operating in 12 major areas in Bangkok and serving passengers with over 14 million rides.

The Company has scaled up the potential of its e-Mobility business by establishing a joint venture company with Marubeni Corporation (Marubeni), a major Japanese integrated trading and investment business conglomerate, and Fuyo General Lease Co., Ltd. (Fuyo), a leasing and financing services provider for corporate clients, to deliver comprehensive commercial electric vehicle (EV) fleet services in Thailand.





Additionally, Banpu NEXT is developing charging stations to support large-scale commercial EV fleet services and personal electric vehicles and expanding its service areas.

Energy Management



Banpu NEXT offers total energy management solutions ranging from energy monitoring and feasibility studies, equipment procurement, installation and maintenance, chiller to district cooling systems. The services also include smart utility management solutions, both energy consumption analytics and waste management. Currently, Banpu NEXT manages 37 projects encompassing energy management systems and smart utility systems.

The installation of a district cooling system at Thai Government Complex Center, Zone C, Chaengwattana, Bangkok, has been successfully completed and operated by the end of 2024.

In addition, Banpu NEXT has entered into a Memorandum of Understanding (MoU) with Koh Samui Municipality to conduct a feasibility study and develop a master plan aimed at transitioning Koh Samui into a low-carbon destination. The project is intended to boost capabilities and increase opportunities to support eco-friendly tourism. By leveraging renewable energy and high-efficiency energy storage systems, the project aligns with Thailand's goals of achieving carbon neutrality by 2050 and net zero by 2065.

Energy Trading

Banpu NEXT sells electricity to customers in Japan and generate profit from arbitrage. It aims to expand into merchant power markets with high growth potential by leveraging marketing strategies and market-based energy trading. Currently, the Company's energy trading capacity stands at 2,816 GWh.

Additionally, the company has generated income from Congestion Revenue Right Trading (CRR Trading) in the ERCOT electricity market in the United States. This income is derived from congestion in the electricity system, caused by price differences across areas due to limitations in the transmission system. This business is managed by BPPUS, a subsidiary of Banpu Power (BPP), and commenced its first CRR trading in Q4 2024.

Banpu NEXT has collaborated with renewable energy partners and adopted AI technology to optimize business operations and build a robust business ecosystem. The Company has also invested in enspired, a trading-as-a-service business that provides real-time information on energy assets through its automated platform. This investment aims to enhance Banpu NEXT's AI capabilities, further strengthening its battery and energy trading businesses.

In addition to driving growth in the clean energy business, Banpu NEXT is committed to transitioning Thailand to achieve its carbon neutrality and net zero carbon emissions goals. In 2023, Banpu NEXT and its Thai subsidiaries operated on renewable energy, offsetting their carbon emissions through the International REC Standard (I-REC). The Company has been also certified for the Carbon Footprint for Organization (CFO) by the Thailand Greenhouse Gas Management Organization (TGO). These certifications mark a significant milestone in Banpu NEXT's carbon footprint management journey and pave the way for achieving its net zero target in the future.



MARKET AND COMPETITION

Mining Business

Market and Competition

Market

1. Global Thermal Coal Market

Global seaborne thermal coal trade set to hit new highs in 2024, driven by energy needs in developing countries, particularly in Asia. However, there was a decline in demand from developed nations due to the shift towards renewable energy sources and stricter environmental regulations.

We enter 2024 with warm winter which reduced coal burn in the north hemisphere countries. Most of these countries exited winter with high inventories which limited spot demand in the market amid steady supply. However, seaborne thermal coal demand was recovered in the second quarter due to strong import demand from China.

In China, domestic coal production came down during the first half of 2024 due to a series of fatal mine accidents, forced government to implement safety inspections. On 2 February 2024, The State Council published revised coal mine safety regulations, commencing on 1 May 2024. This round of regulations will be stricter than previous measures as the government seeks safety over production, but the other motive is to rein in supply. This helped to ramp up thermal coal import into the country.

Domestic coal production picked up in the second half of 2024 as there was not any major accidents that triggered safety checks, while miners ramped up production to meet full year target and offset low production in the first half. The country's overall coal production reached 4.76 billion tonnes in 2024, up by 1.3% from the previous year, raising concerns about a growing supply glut in the market.

On the demand side, although Chinese economic growth reached government target at 5% in 2024, but coal demand growth was slowed due to sluggish consumption by energy-intensive sectors, strong hydro and renewable generations. Several typhoons landed on China's eastern coast in the third quarter, bringing heavy rain and lower temperatures. This has curbed power demand for cooling purposes. The typhoon also supported hydropower and offshore wind power, curbing thermal power demand.

Despite weak power demand growth, but government still emphasized coal-fired power plants to build sufficient coal stocks for security reason which kept inventories at coastal utilities were at high levels.

However, thermal coal imports into China remained strong throughout the year despite weak economic outlook and high inventories, as seaborne products remain cost competitive.

With the latest election in the United States, Trump's second administration will be supportive of US energy production, including coal, natural gas, and oil. Trump campaigned with the promise to raise tariffs on imported goods, which many believe will be met with retaliatory tariffs on US goods exported into other countries. The risk of a US-China trade war created uncertainty about macro-economic outlook which hit the coal prices throughout the end of the year amid low coal demand due to weak economic growth and warm winter.

In India, low consumer spending pushed down GDP growth in 2024, subsequently affecting the demand for industrial coal.

In 2024, India's electricity demand increased 4.8% on the year to 1,557 TWh, lower than anticipated due to slow economic activity and prolonged monsoon. Coal-fired generation accounted for 86.1% of India's generation mix in 2024, compared to 85.1% in 2023. Strong hydro, nuclear and renewables generation continued trim thermal demand output.

India's investment in domestic coal-based projects is expected to increase by 10% in 2024, potentially reaching \$15 billion. This is part of India's strategy to reduce dependency on seaborne coal by boosting domestic production through state-owned and commercial mines. India's coal production performed

strongly, with total domestic coal production volume in 2024 reached an all-time-peak of 1.04 billion tons, up by 7.28% from 969.07 million tons in 2023. Besides, the coal shipping volume in 2024 also marked an all-time peak and 1.01 billion tons were shipped. This represents an increase of 6.56% versus 950.39 million tons in 2023.

India's strong domestic coal production and slow economic recovery were reducing its import demand. However, the Indian government gave the mandate for all the power Generation Companies (GENCOs) to import 6% of their coal requirement for blend with domestic coal until 30 June 2024 to prevent coal supply shortage during harsher summers and extended the mandate to 15 October 2024 but easing the imported coal blend requirement from 6% to 4%. The Indian government also asked asking imported coal-fired utilities to boost generation until 28 February 2025. These provided some support to seaborne demand.

However, slowdown in import demand from industrial sectors, which is facing headwinds in the form of poor steel margins, the delayed withdrawal of the monsoon, and a temporary construction ban in northern India as part of efforts to curb pollution in the fourth quarter, reduced necessity for buyers to tap the import market.

Japan continued to rely heavily on thermal coal for electricity generation in 2024, although there was a gradual shift towards renewable energy sources. The demand for thermal coal remained relatively stable, driven by the need to ensure energy security and manage costs.

Japan continued to sanction Russian coal imports in 2024; however, small buyers still purchased Russian coal due to high discounts, while power



utilities switched to buying coal from other sources. Mild weather conditions and increased nuclear availability weighed on thermal power generation.

The decline in thermal coal imports was partly due to increased competition from low-cost nuclear energy and grid congestion, which displaced coal-fired power generation in certain regions. Rising renewables were also putting pressure on coal-fired generation in the country throughout the year.

South Korea restricted coal burn during December to March to reduce air pollution during winter period, by capping coal-fired output 46 coal-fired units and turn off a maximum 15 units over the restricted period, which mostly similar to a year ago when the country restricted the output at 47 units and shut down as many as 15 units. This measure has limited thermal coal imports during that period.

Despite a decline in import, South Korea remained a major importer of thermal coal, sourcing primarily from countries like Indonesia, Australia, and Russia. Although state-controlled utilities have been asked by the government to cut the imports of Russian coal, but low price of Russian coal continued attract buyers in South Korea including state-controlled utilities.

Taiwan continued to rely on thermal coal for a substantial portion of its electricity generation. However, there was a gradual shift towards renewable energy sources and natural gas to diversify the energy mix and reduce carbon emissions.

Taiwan remained heavily dependent on imported thermal coal, primarily sourcing from countries like Australia, Indonesia, and Russia. The import patterns were influenced by global market dynamics,

geopolitical factors, and efforts to ensure energy security.

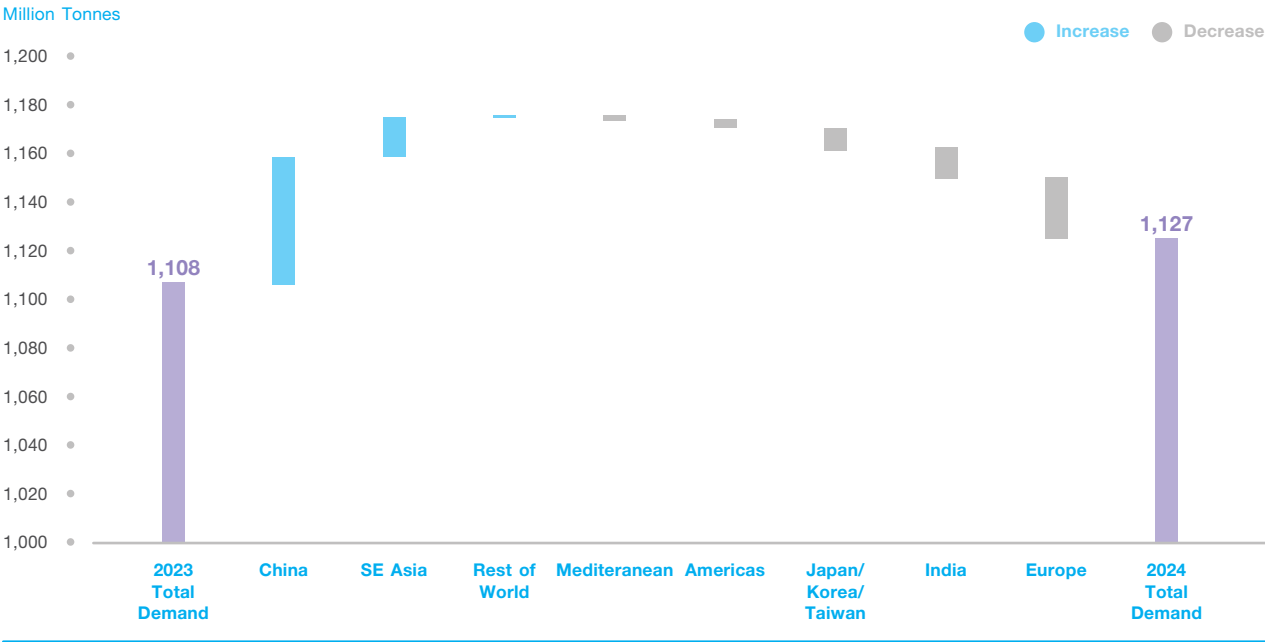
Taiwan Power Company, a major buyer of Russian coal before the Ukraine conflict, ceased buying Russian coal in 2022. However, private companies have increased Russian coal imports due to its lower cost and quality compared to Australian coal.

In Southeast Asian markets, Vietnam, the Philippines, Thailand, and Malaysia remain a key source of coal demand growth, and Vietnam in particular has been arguably the biggest bright-spot in the market these last few years given its growing coal-fired generation capacity, which is expected to bring coal imports up to 55 million tonnes in 2025, from a record 52 million tonnes in 2024.

The heatwave across Asia last summer showed how these markets have few options but to turn to coal-fired power under high-temperature-driven demand, because outside of coal the only key generation source is often hydropower, which cannot operate when heatwave push reservoir levels too low.

In Europe, demand for thermal coal continued to decline as countries pursued aggressive decarbonization goals. Many European nations increased their investments in renewable energy sources such as wind, solar, and hydroelectric power, reducing their reliance on coal for electricity generation.

2023/2024 Thermal Coal Import Demand Changes



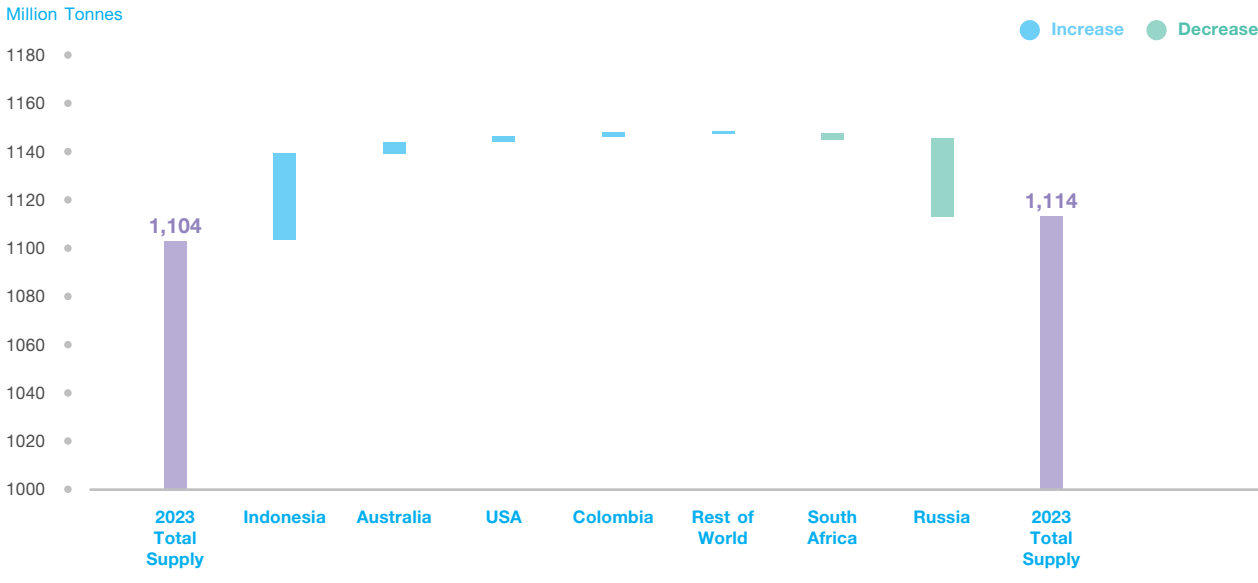
Source: Marketing, Sales and Logistic Analyst, Banpu Plc.

Thermal coal import into Europe fell sharply in 2024, attributed to an oversupplied power market, strong renewables, mild winter, and coal phaseout. Countries like Germany, the Netherlands, and Poland, which have historically been significant consumers of thermal coal, continued to diversify their energy sources and reduce coal imports.

On the supply side, despite the robust growth in seaborne demand, supply outpaced demand growth, led to an oversupply in 2024, despite sanction on Russia remain in place. Global thermal coal production remained relatively stable, with major producers like Indonesia, Australia, and Russia continuing to dominate the market. Strong domestic coal production in China and India also weighed on global demand. However, the global thermal coal supply chain faced challenges such as logistical disruptions, transportation bottlenecks, and labor issues. These factors occasionally impacted the availability and cost of thermal coal in various regions.



2023/2024 Thermal Coal Export Supply Changes



Source: Marketing, Sales and Logistic Analyst, Banpu Plc.

Indonesia's thermal coal exports experienced a strong growth in 2024 as producers intensified production and exports to capitalize on high coal prices. Dry weather supported robust production in Indonesia. Export volumes were influenced by global demand, trade agreements, and geopolitical factors. Indonesia's strategic location and abundant coal reserves made it a key player in the global coal market.

Australia's thermal coal exports in 2024 have been supported by strong demand from key markets like China and Japan, although there are challenges related to market competition and potential supply disruptions. Robust China's demand offset reduction to other markets especially north Asia and India, helped to sustain exports, despite limited manpower, rail maintenances, protests, and storms disrupted operations from time to time.

Australia faces challenges in maintaining competitiveness in certain markets, such as India, where lower prices of South African coal are attracting buyers.

A lack of demand from Europe has prompted the main suppliers of Colombia thermal coal to push their material to the Asian markets. However, Colombia faced several rail and road blockades by indigenous groups in 2024. The blockades disrupted coal transport from mine, mainly Cerrejon, to port. However, the full-year shipments remain above last year's levels driven by higher demand in the Pacific and a deficit of Russian coal due to higher delivery prices.

Colombian President Gustavo Petro signed a decree banning thermal coal sales from the country to Israel from 19 August 2024, in protest to the war in the Gaza strip. Over the past 5 years, Israel has been importing an average of 4.2 million tonnes of Colombian coal. This has not significant impact to the global market as it free up Colombian tonnage into the wider market and open opportunity for South Africa, Russia, Kazakhstan and the US to ramp up their exports to Israel.

Russian coal exporters have faced lower demand in several major markets due to sanctions and increased competition from other suppliers like Colombia, South Africa, and the U.S. The competitiveness of Russian coal has been further impacted by a 13.8% freight tariff hike by Russian Railways, effective 1 December 2024, which is expected to increase logistics costs and reduce price competitiveness.

Russia had to divert coal to Asia due to sanctions from Western countries and Japan in response to Russia-Ukraine war. China remains a significant market for Russian thermal coal. Exports to other markets like South Korea and India have been affected by logistical challenges and higher costs.

The US government extended sanction has implemented a new round of sanctions against Russia's mining sector in 2024 by adding more coal producers and ports and transportation companies to the list. The tightening restrictions on coal miners are expected to further complicate securing transaction financing. Exporters are already facing payment delays and a shrinking pool of banks willing to engage with Russian companies due to previous sanctions. Additionally, miners may now incur higher costs as they navigate financing difficulties and the potential need to establish new entities in different jurisdictions, further squeezing the already narrow margins of exporters.

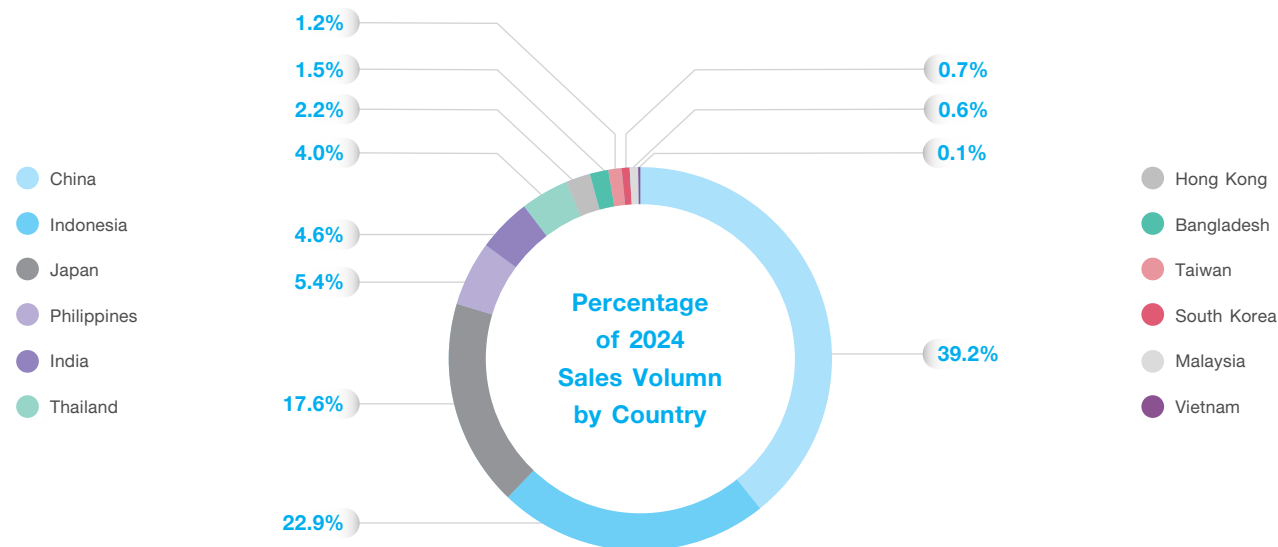
However, the new US administration could alter current policies on Russian sanctions, potentially reopening Russian coal to the broader market.

U.S. thermal coal exports remained robust, with a notable increase in exports to Asia and a resurgence in exports to Europe despite the region's move away from coal. Although the new US president, Donald Trump, supports coal production, but we expect the availability of US coals to the seaborne market would remain unchanged due to logistic constraints.

The Company sold 24.5 million tonnes of Indonesian coal in 2024, a 16.4% year-on-year increase, including coal purchased from third party coal suppliers. The Company shipped 19.7 million tonnes of own produced coal, up by 16.1% year-on-year, and 4.8 million tonnes of third-party coal, up by 17.7% year-on-year. The majority of third-party coal was used for blending with Banpu's owned coal to improve quality.

China was the largest market accounted 39% of Banpu's total sales volume from Indonesia in 2024, up 37.3% year-on-year. Indonesia was the second-largest market, accounting for 23% of the total sales volume, growing by 10.0% year-on-year due to the government assignment as per Domestic Market Obligation (DMO) rule and strong demand from metal smelter industry. Japan is the third largest market, with sales volumes accounted for 18% of the total sales volume, up by 51.8% from a year earlier. Sanction on Russian coal import and higher availability of high-quality coal supported sales to Japan.

Banpu increased sales to South Korea and Hong Kong due to high availability of suitable products to these markets, with the sales volume increases of 108.9% and 16.8% year-on-year, respectively. Sales to India surged by 44.1% year-on-year in 2024. Tight South African supply and Indian domestic supply constraints coupled with an expectation of strong summer demand supported Indian buying.

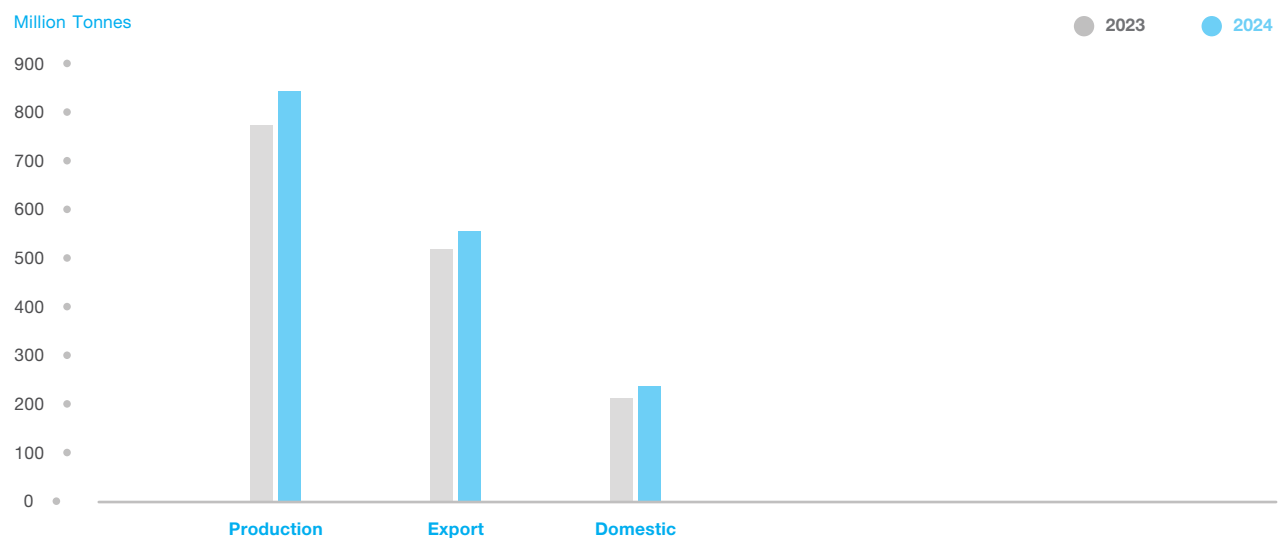


2. Coal Market in the Republic of Indonesia

Indonesia's coal production continued to see a strong growth in 2024, increasing 8.3% to 835 million tonnes following on a robust growth of 12.4% in the previous year. Higher coal prices incentivized the growth in output while dry weather condition has further supported the growth. But in a falling market in the later part of the year, coal producers continued to maintain robust output to manage cost efficiencies.

Indonesia's coal exports were estimated to reach 550 million tonnes in 2024, reflecting a 7.0% year-on-year increase. The growth was fueled by strong demand from China and Southeast Asia and supply chain disruption due to continued Russia-Ukraine conflict.

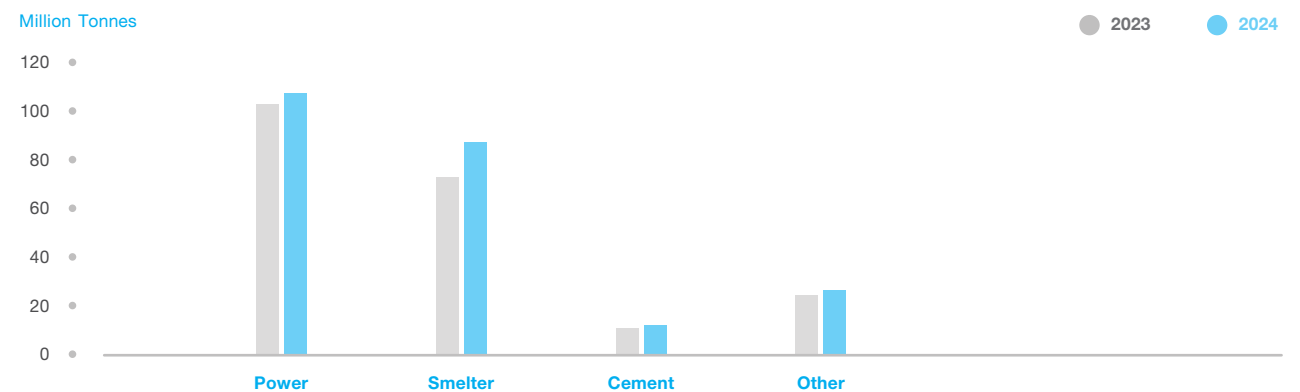
Indonesian Coal Production, Export and Domestic Consumption



Source: Provisional data from directorate General fo Mineral and Coal and estimated by Maketing, Sale and Logistics Analyst, Banpu Plc.

Domestic coal consumption in 2024 was estimated at 230 million tonnes, a 10.4% increase from the previous year. In terms of sector-wise coal consumption, 46% was attributed to power generation, 37% to the metal smelting industry, 6% to the cement industry, and the remaining 11% to other industries. Coal consumption in metal smelting industry rose strongly during the past few years due to the completion of several nickel smelter plants construction following Indonesian government policy to shift from export ore to export higher value products.

Indonesian Coal Consumption



Source: Provisional data from directorate General fo Mineral and Coal and estimated by Maketing, Sale and Logistics Analyst, Banpu Plc.

Indonesia continues to maintain its status as swing supplier for the thermal coal. We estimate that the growth was majorly driven by mid to low energy coal, while high quality coals are on a decline due to depleting reserves and logistics challenges.

In 2024, the Indonesian government has approved 3 years RKAB (Work and Budget Plan) allowed mining and sales volumes for 2024-2026. This is the first time of 3 years RKAB approval after the regulation implemented in 2023. According to the approval, coal miners allowed to produce up to 922 Mt in 2024, 917 Mt in 2025 and 902 Mt in 2026. However, production volume in 2024 was estimated at 835 million tonnes, lower than the production volume approved by the government, partly because of insufficient demand growth to absorb supply growth.

With increasing ESG concerns, Indonesian coal miners are taking steps to diversify their business

to hedge against a steeply falling demand for low to mid grade coal in the long term. This has left only a handful of pure-play companies in Indonesia still targeting growth. Producers are eyeing a mix of downstream options, renewables opportunities, or investments in alternate commodities. There is a growing interest in the carbon market through the development of carbon sinks so as to reduce their carbon footprint and also participate in carbon trading. Some companies are also venturing into bio energy as a means of diversification. We believe changes in strategy underway will contribute to tighter supply as capital is increasingly allocated elsewhere, despite record-high coal prices.

There is a strong push from the Indonesian government towards coal downstream projects, but all major projects have faced roadblocks. Miners have raised concerns about the economic feasibility of such projects, and we have seen JV partners

pulling out of some coal gasification projects. While some major coal producers are carrying out feasibility study for gasification project with end product being methanol and/or di-methyl ether (DME).

In 2024, Banpu sold 5.6 million tonnes of coal in Indonesia, constituting 23% of the Company's total Indonesian coal sales and about 2.4% of Indonesian coal consumption. Major customers are coal-fired power plants (50% of total coal sales volume), the metal smelting industry (46%), the cement industry (3%), and other industries (1%).

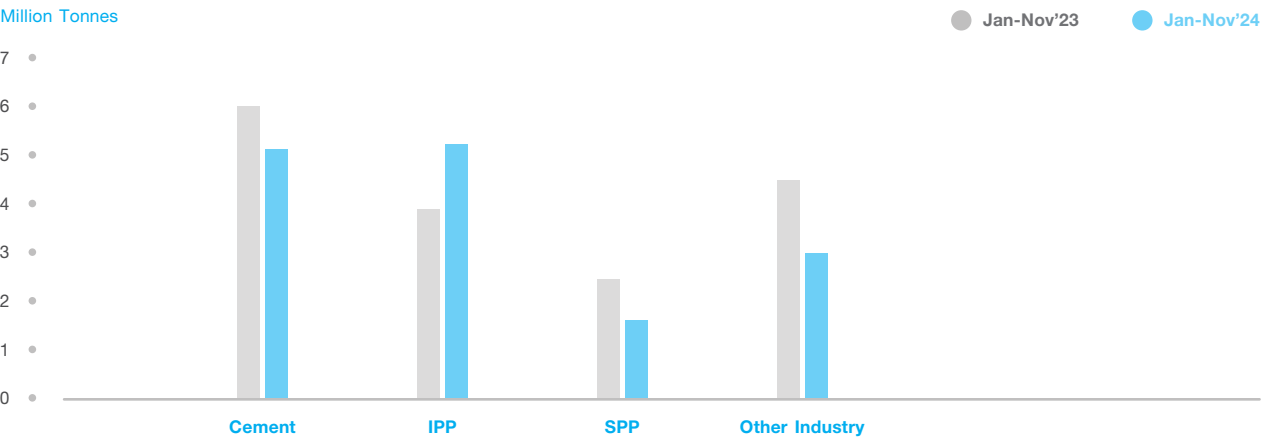
3. Coal Market in Thailand

Total coal consumption of the private sector in Thailand in the first eleven months of 2024 was approximately 15.0 million tonnes, dropped by 1.8 million tonnes or 10.4% from the same period last year due to sluggish economy. Coal consumption in cement industry, the largest coal consumption sector, dropped to about 5.2 million tonnes, a decrease of 13.6% from the same period last year as cement demand is expected to be muted due to a number of factors, including: slower economic growth, high household debt, delays in government budget approval, and weak residential construction. The independent power producers (IPP) sector is the only growth sector in 2024 as the halted power plant due to high coal price resumed its operation.

IPPs' coal consumption rose to 5.2 million tonnes during first eleven months of 2024, an increase of 36.0% from the same period last year. Coal consumption in the small power producers (SPP) group declined significantly due to sluggish economy. The consumption in the first eleven months of 2024 was 1.6 million tonnes, a drop of 37.4% year-on-year.

Coal consumption in the other industries, including paper, petrochemicals, textiles, and food, amounted to approximately 3.0 million tonnes for the first eleven months of 2024, reflecting a significant drop of 32.9% year-on-year. The decline was attributed to a weak economy and the use of alternative fuels to reduce costs. Some plants have stopped using coal due to environmental concerns such as food industry.

Coal Consumption by Sector



Source: Marketing, Sales and Logistic Analyst, Banpu Plc.

Competitions

1. Competition in the Coal Industry

Overall, the global thermal coal market in 2024 was marked by intense competition, particularly in the Pacific region, with major exporters like Indonesia and Australia vying for market share amid shifting demand patterns and a gradual transition away from coal in several regions. Economic, geopolitical tensions, government policy, environmental, and technological factors were the key factors reshaped the competition in the global thermal coal market in 2024.

The overall thermal coal imports in 2024 reached approximately 1,127 million tonnes, marking an increase around 18 million tonnes year-on-year or 1.6%. The import growth was driven by China and Southeast Asia.

The competition in China's thermal coal market is characterized by a balance between increasing domestic production and the need for imports to meet demand. The market is influenced by international suppliers, particularly from Australia and Indonesia, and the growing emphasis on renewable energy.

Despite China is the world's largest producer of coal, China also imports coal, primarily from Indonesia, Australia, and Russia. The competition among these countries to supply coal to China is intense, driven by price, quality, and reliability of supply. Chinese government policies on coal production, imports, and environmental regulations significantly impact the market. Efforts to reduce carbon emissions and promote cleaner energy sources are influencing the competitive landscape.

China's thermal coal imports hit a new record in 2024 at about 406 million tonnes, increased 52 million tonnes year-on-year or 14.8%, despite strong hydropower generation and weakness in the property sector. China is the largest thermal coal importer in 2024, capturing a 36% share of the seaborne market. Constraints in domestic coal supply during the first half of 2024 as Chinese government strengthened mine safety inspections due to a series of mine accidents, leading to production suspensions in certain mines. But the domestic coal production was recovered in the second half of 2024 and turned Chinese coal market into oversupply. However, competitive of imported coal against domestic coal helped to keep thermal coal import at high level throughout the year.

The Indian thermal coal market in 2024 is characterized by intense competition among domestic producers and international suppliers. Major Indian coal companies like Coal India Limited (CIL) continued to dominate the market. These companies are focusing on increasing production to meet the growing demand for thermal coal. Although domestic coal production showed robust growth, but it could not meet the demand growth. India still required imports to fill supply gap.

India remains the second largest importers of thermal coal in 2024. The estimated total import volume was 152 million tonnes of thermal coal, down by 7.3% from the previous year, as domestic output hit an all-time high of 1.04bn tonnes in 2024 and coal-fired generation rose at a slower pace, compared with a year earlier. Countries like Indonesia, Australia, and South Africa are significant suppliers. The competition among these countries to secure a larger share of the Indian

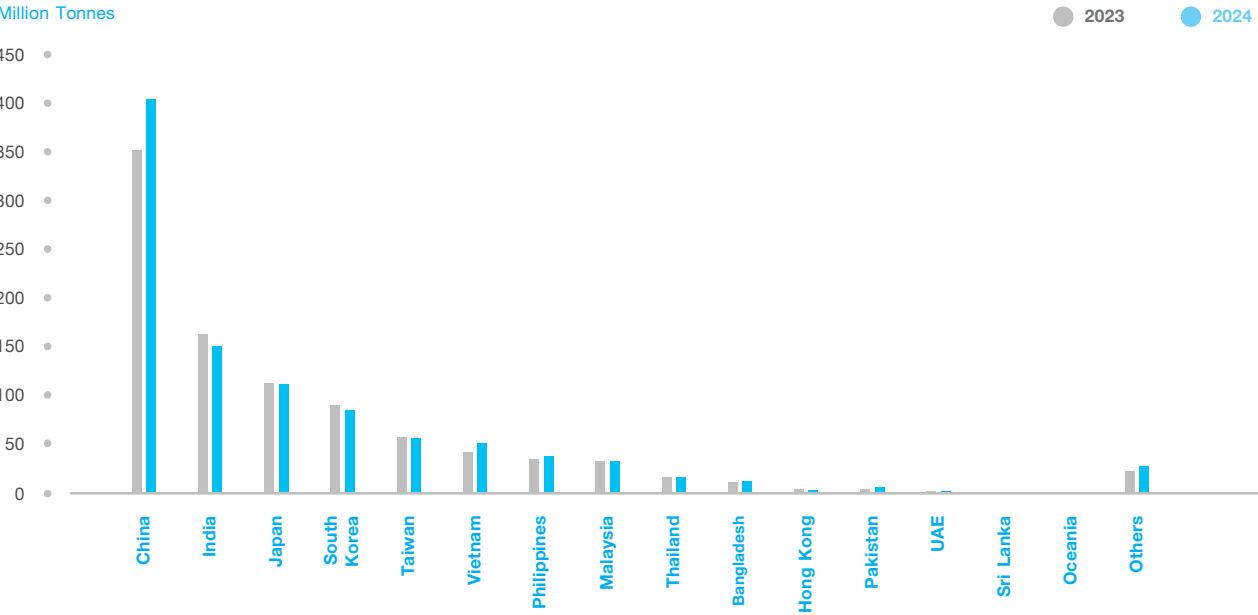


market is fierce, driven by price competitiveness and supply reliability. Global coal price volatility also affects the competitiveness of both domestic and international players.

The competition in thermal coal market in north Asian countries, including Japan, South Korea, and Taiwan, in 2024 is influenced by several factors, including global supply and demand dynamics, geopolitical events, and environmental regulations.

These countries were heavily reliance on imports, with collectively imported approximately 257 million tonnes of thermal coal in 2024, marking an 3.4% year-on-year decrease. The imports most of its thermal coal from countries like Australia, Indonesia, Russia, the United States and South Africa. The competition among these suppliers is intense, with Australia and Indonesia being the dominant players due to their proximity and established trade relationships. Political relationships and trade agreements also play a significant role. For example, sanctions on Russia affected the availability and price of thermal coal, impacting competition.

Asian Thermal Coal Import by Country



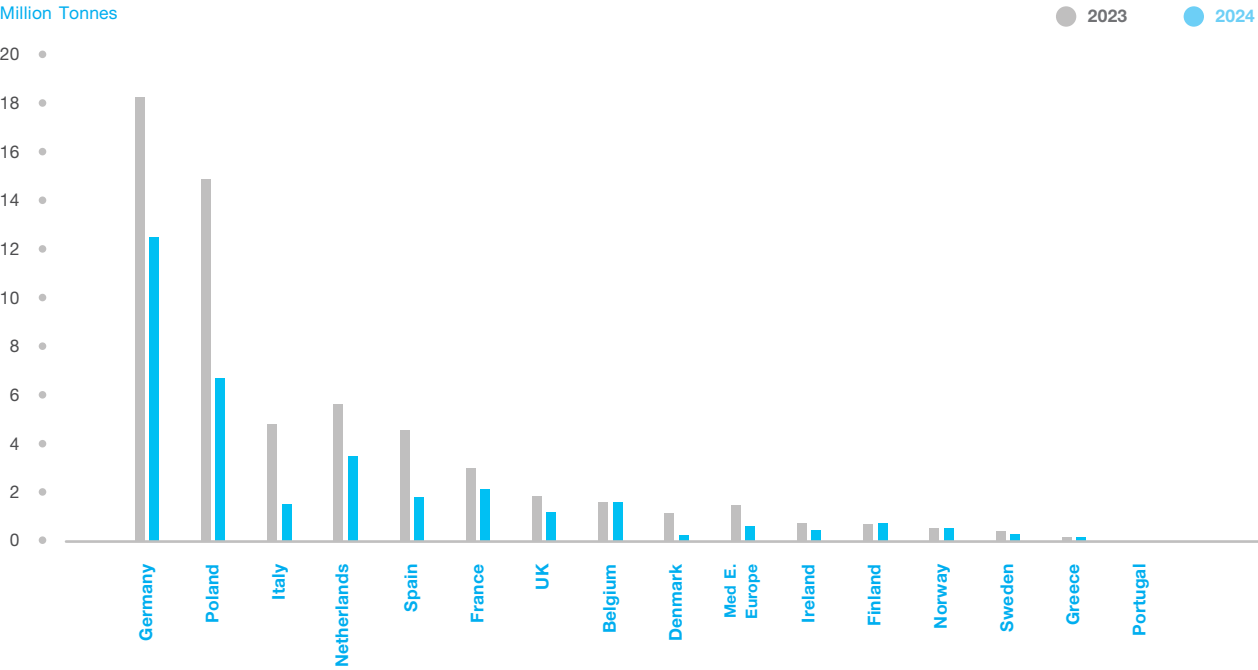
Source: Marketing, Sales ans Logistic Analyst, Banpu Plc.

The competition in thermal coal market in these countries is also influenced by the increasing use of nuclear and renewable energy sources, leading to a reduced demand for coal. While environmental regulations are also impacted coal demand in this region, for example, South Korea and Taiwan restricted coal burn during winter to control air pollution. Warm winter also further reduced coal burn in the region. These factors helped to reduce coal demand and increased competition in this region.

Overall competition in Southeast Asia's thermal coal market in 2024 is driven by the region's significant energy demand growth, reliance on coal-fired power, and import dependency, alongside the gradual shift towards renewable energy sources. The thermal coal imports into this region in 2024 increased by 11.1% from the previous year, totaling 169 million tonnes, driven by strong demand from Vietnam and the Philippines. This increasing demand intensified competition among suppliers as it attracts more sellers amid plenty supply.

The competition in the European thermal coal market in 2024 is influenced by several key factors including weak economy, energy policies, geopolitical tensions, rising gas prices and market dynamics. The volume of thermal coal imports into Europe in 2024 was approximately 35 million tonnes, reflecting a sharp decrease of 42.2% compared to the previous year. Strong competition from renewable energy, nuclear power, and hydropower, led to reduced demand and lower import levels. Major exporters to Europe in 2024 were the United States, Colombia, and South Africa, while the imports from Russia have been sanctioned due to the geopolitical conflict. The competition among these suppliers is intense, with each aiming to secure a larger share of the market.

European Thermal Coal Import by Country



Source: Marketing, Sales ans Logistic Analyst, Banpu Plc.

Global Thermal Coal Export

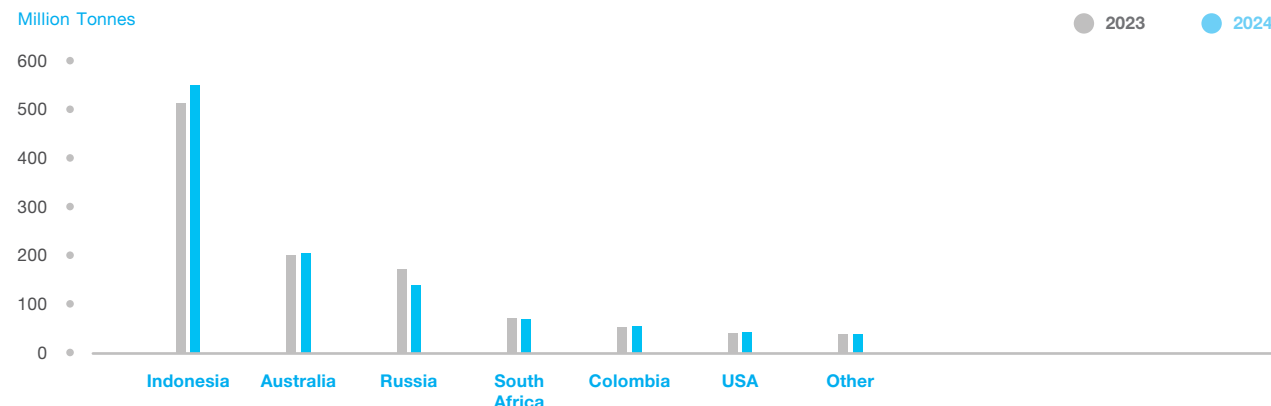
Global thermal coal exports in 2024 reached approximately 1,114 million tonnes, up 0.9% from the previous year. The growth was primarily driven by Indonesia. About 96% of the global seaborne thermal coal trade originated from six major coal exporting nations: Indonesia, Australia, Russia, South Africa, Colombia, and the U.S. Indonesia and Australia are particularly dominant due to their large reserves and established trade relationships. Russia's position is influenced by geopolitical tensions and sanctions, which can impact its export capacity.



Indonesian coal exports remained robust and continued maintain its position as the world's largest thermal coal exporter, shipping around 550 million tonnes in 2024, reflecting a 7.0% increase from the previous year. Producers in Indonesia ramped up coal production to capitalize on high coal prices and dry weather conditions further supported their efforts. With a significant production growth, the competition was intensified among producers, particularly in the lower calorific value market, as the majority of the production increase was in the lower calorific value category.

Australia's thermal coal exports were benefiting from strong demand in Asia and continued to maintain its position as the world's second-largest thermal coal exporter, exporting approximately 207 million tonnes in 2024, an increase of 2.4% compared to the previous year. Australia faces competition from other major thermal coal exporters such as Indonesia, Russia, the U.S., and South Africa. Indonesia is a particularly strong competitor due to its proximity to key Asian markets and its large coal reserves. However, Australia's ability to maintain competitive pricing and secure long-term contracts is crucial. Competition among Australian producers remained moderate, aided by strong China's imports which helped to relieved pressure from lower demand north Asia.

Global Thermal Coal Export by Country



Source: Marketing, Sales and Logistic Analyst, Banpu Plc.

In 2024, Russia's coal exports have been affected by geopolitical tensions, particularly with the EU, which has imposed sanctions and trade restrictions. These measures have impacted Russia's ability to export coal to traditional markets in Europe. Logistical challenges, such as inclement weather and infrastructure issues, have also affected coal exports. For instance, exports were disrupted at the start of 2024 due to bad weather and drone attacks on energy infrastructure.

Russian thermal coal exports reached approximately 141 million tonnes in 2024, down by 18.7% from the previous year. Russian producers continued divert coal to Asia particularly go to China, India and South Korea. However, increased trade sanctions and logistical constraints reduced the export volume significantly in 2024 even Russian coal prices remained competitive in several key markets.

South Africa's thermal coal exports in 2024 total approximately 71 million tonnes, marking a 3.3% decrease from the previous year. South African coal faced competition primarily from other major coal-exporting countries such as Indonesia, Australia, the U.S. and Russia. Rail line closures and infrastructure challenges have limited export coal movement. These challenges have impacted the competitiveness of South African coal in the global market.

Colombian thermal coal exports in 2024 reached approximately 58 million tonnes, representing a 2.0% increase from the previous year. Colombia faced intense competition from major coal-exporting countries such as Indonesia, Australia, and South Africa, as Colombian coal was increasingly moving to Asian market because of weakened European thermal coal imports.

In 2024, the U.S. exported 46 million tonnes of thermal coal, an increase of 6.2% from previous year. The U.S. thermal coal exports in 2024 were competing in a challenging environment characterized by logistical disruptions, competition from major coal-exporting countries, and fluctuating demand dynamics in key markets. Limited rail and infrastructure capacity prevent the U.S. export growth.

Thermal Coal Prices

Thermal coal prices experienced moderate fluctuations throughout 2024. Prices were influenced by factors such as geopolitical tensions, changes in energy policies, and supply chain disruptions.

Mild weather throughout the year led to decreased coal burn in several key importing countries, particularly for high-quality coal. Alongside sluggish economic performance, gas prices volatility, and stable supply, this contributed to the volatility of the coal prices particularly high-quality coal prices. Russian coal producers continued diverted more coal to Asia, leveraging lower coal prices, which added further downward pressure to high-quality coal price in the Asia market.

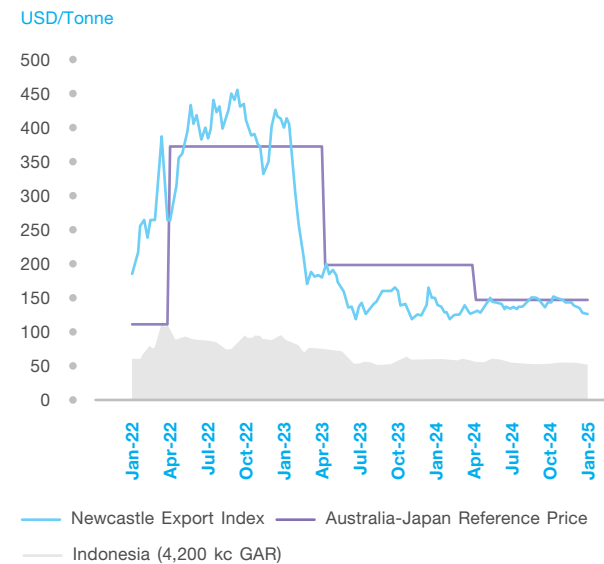
Thermal coal prices across major market have been tightly rangebound for all of 2024, particularly when compared to the record volatility of recent years.

High-calorific coal prices, particularly FOB Newcastle, were relatively stayed at firm premium to the other products, trending around USD130-145 per tonne for most of 2024, as concerns over the supply risk from the potential escalation of Russia-Ukraine war and the middle east conflict, briefly lifted prices in the wider energy complex. Rising LNG prices also supported high-calorific coal prices both in Asia and Europe. However, the high-calorific coal prices declined in late 2024 due to warm winter and sluggish economy which led to lower coal demand, while end-users prepared for severe winter following the forecast of El Nino weather pattern. Weak demand amid steady supply resulted in high stocks at end-users which limited spot demand in the global market, led to falling coal prices.



In Europe, delivered European coal prices for high-calorific coal trended mostly between USD100-120 per tonne in 2024, save for brief period in February where pricing dipped to the low USD90 per tonne following lower coal generation and high stockpiles as the market exited the winter heating demand.

Thermal Coal Export Price, FOB



Source: McCloskey

In the lower-calorific value market, the spot prices were largely stable to slightly declined in 2024 supported by strong China's demand amid significant oversupply from Indonesia.

In 2024, the traditional lead player in the Japanese Reference Price (JRP) negotiation for an April term contract could not reach agreement with leading Australian coal producer due to wide bid-offer gap. However, a leading Australian coal producer has concluded the term contract price with a Japanese General Industry (JGI) end-user at USD145.95 per tonne, FOB Newcastle, based on 6,322 kcal/kg GAR, and several Japanese buyers and major buyers outside Japan appeared to adopt this price as an JRP.

The price of USD145.95 per tonne for the April 2024 contract price settlements represents a 27% decline on April 2023's Japanese financial year price of USD199.95 per tonne, same basis, that was settled around 12 April 2023.

Looking ahead to 2025, the demand for thermal coal is expected to remain stable or slightly decline, driven by the energy needs of major consumers like China, India, and Southeast Asian countries. However, the global shift towards renewable energy sources and stricter environmental regulations may gradually reduce reliance on coal. In mainland China, coal consumption is likely to continue to rise in the coming year, but it may not lead to rising coal imports as renewable power and coal production will continue ramp up. We expect China's thermal coal import to remain flat next year. North Asia demand is expected to decline slightly due to higher nuclear and renewables generation. South and Southeast Asia will be the region to remain growth in 2025. European thermal coal demand is expected to be flat as the remaining coal-fired power plants are mostly must-run units amid the forecast of high natural gas prices.

On the supply side, exports from most key suppliers are expected to perform well in 2025 because of fading rain-related risks associated with La Nina climate patterns. And major producers in Indonesia, Australia, South Africa and the US are generally planning on maintaining strong production in 2025,

caused the global thermal coal market continued oversupply. Russian suppliers are likely to offer more aggressively to maintain share in non-sanction markets and likely to drag down coal price in 2025, partly enable by a weaker Rouble.

2. Competition in Thailand

Overall, the competition in Thailand's coal market in 2024 was shaped by a combination of import dynamics, price sensitivity, environmental regulations, and the shift towards renewable energy. The market faced challenges with declining industrial demand and a competitive pricing environment, impacting the overall value of imports.

Coal consumers in the private sector in Thailand are now reliance on imported coal due to the depletion of private domestic coal reserve. There was no domestic coal consumption during the first eleven months of 2024, compared to 0.05 million tonnes in the same period of 2023.

Total coal imports into Thailand reached 17.1 million tonnes during the first eleven months of 2024, increased 4.1% from the same period of 2023. The imports were primarily dominated by Indonesia and Australia, which accounted 75% and 22% of total coal imports in the first eleven months of 2024, respectively.

Coal supplies to the independent power producers (IPP) typically adhered to long-term contracts, excluding them from participating in spot business. Conversely, other sectors opened their doors to spot transactions, created a highly competitive environment among local and international suppliers. These suppliers competed to secure contracts and maintained their market share in Thailand. Small buyers generally purchased small quantity from stock and sales business, which limited their suppliers' options to local players with available coal stocks. Despite this limitation, competition in this market remains robust due to the abundant overseas supply accessible to local traders.

Fluctuations in international coal prices impacted the competitiveness of different suppliers. Thai buyers were sensitive to price changes, leading to competition based on pricing strategies and cost efficiency.

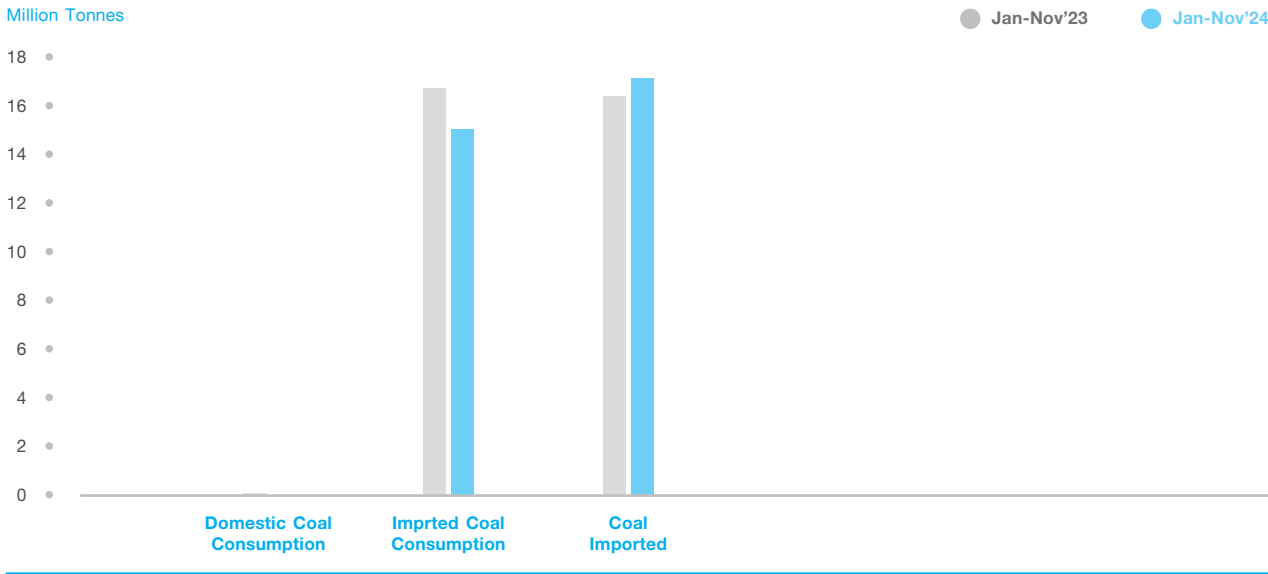
Stricter environmental regulations and policies aimed at reducing emissions from coal plants influenced the market. Companies that invested in cleaner technologies and compliance with regulations gained a competitive edge. Some consumers have converted their plants to use cleaner fuels such as oil and gas in order to comply with environmental standard of some industry such as food. While some consumers aimed to use alternative fuels such as wood chip blended with coal to reduce carbon dioxide emissions.

The Thai government's push towards diversifying energy sources, including increased investment in renewable energy, added competitive pressure on the coal market. Coal suppliers faced competition from alternative energy sources like solar and wind.



Although coal imports grew by 4.1% on the year during the first eleven months of 2024, but coal consumption was declined 10.2% year-on-year to 15.0 million tonnes during the same period due to sluggish economy. The excess tonnage was shipped to coal storage at stock and sales and major coal consumers such as power plants and cement plants.

Thailand Coal Consumption and Import



Source: Marketing, Sales and Logistic Analyst, Banpu Plc.

In 2025, Thailand's coal market is expected to maintain high competition due to the oversupply market especially supply from Indonesia. While uncertainty of economic outlook will affect energy demand and will play a role in determining coal consumption. Changes in global coal prices and demand can impact Thailand's coal imports also. Factors such as geopolitical events and international trade policies will play a significant role to the coal price volatility and increase competition amongst coal suppliers.

Competitive Strategies

In a challenging market environment in 2024, Banpu has adapted its key strategies below to maintain a competitive edge in the global thermal coal market.

● **Focus on Premium Markets**

The Company continued shifting product to high calorific value segment through product optimization, and prioritized sales to premium markets to attain higher prices. By focusing on premium markets, the Company can achieve higher profitability, build stronger customer relationships, and enhance our market position.

● **Market Diversification**

The Company expands the range of markets covered all key importing countries in Asia to help reduce dependency on a few key markets and spreads risk across a broader customer base. The company adapt to changing demand patterns and adjust products to meet with customer requirement in each market and focusing on high growth market. By implementing a market diversification strategy, the company can enhance our market presence, reduce risks, and achieve more stable and sustainable growth.

● **Supply Chain Management**

The Company optimizes the entire process of producing and delivering a product through collaboration and communication with all stakeholders, including mine operations, short-term supply chain, quality control, shipping and scheduling, suppliers, customers to ensure that everyone is aligned and working towards common goals. By implementing a robust

supply chain management strategy, the company can enhance our operational efficiency, reduce costs, and improve customer satisfaction.

● **Maintaining Customer Relations**

Banpu emphasizes the importance of long-term relationships with customers and trade partners through regular visits by sales representatives, while strengthening relationships and address customer issues through continuous communication and quarterly performance updates by emails to ensure the Company's commitments delivered.

● **Coal Trading Business**

The Company strengthens the coal trading business through alliances with other coal suppliers to expand the Company's portfolio and increase sales volume, while utilizing the supply chain management system for efficient transportation, quality control, and stability of supply.

Major Competitors

In the global thermal coal market, major competitors remained unchanged as new players have limited access to the resources due to high market entry barriers and high regulatory burdens. Major competitors normally are large coal producers like Glencore, Yancoal, BHP, Whitehaven and key Indonesian producers such as PT. Bumi Resources, PT. Bukit Asam, PT. Adaro Energy, PT. Kideco Jaya Agung, PT. Bayan Resources, and PT. Golden Energy Mines. Russian coal producers were aggressively sold to Asian buyers such as China, India and South Korea. Additionally, there are other players in the form of coal traders, including Noble Energy, Trafigura, Vitol, and numerous small producers particularly from Indonesia.

In Thailand coal market, major competitors predominant by imported coal traders mostly are domestic companies. These competitors mainly procured coal from small Indonesian producers due to competitive price although take risk on the supply and inconsistency of quality. Some operated stocks and sales to cater to smaller users within the country. Only few competitors owned coal resources such as Lanna Resources Plc., while most competitors are trading companies such as SCG Trading Co., Ltd., Asia Green Energy Plc., Eastern Pearl Co., Ltd., and small coal traders.



Pricing Policy

For export market, Banpu's pricing policy continue to track market price with most of our sales based on index-linked basis. The coal prices are determined by using international coal price indexes when the coal was delivered to customers. Reliable supply and quality consistency have provided some premium to our products on top of the market prices and used coal derivative to protect the price risks.

For Indonesian market, the coal prices have been set following the Indonesian government policy which cap coal prices for power sector at USD 70 per tonne for coal with a calorific value of 6,322 kcal/kg GAR, while the coal price to for other industries, except metal smelting, was set at USD 90 per tonne with the same quality. The coal prices to the metal smelting industry have been set at the market price similar to the export market.

Customer Characteristics

Major customers for Banpu still be large-scale coal-fired power plants, characterized by substantial coal purchase volumes with high financial stability and reliability. Transparent bidding processes are used for both short-term and long-term contracts. Banpu also sells coal to industrial buyers such as cement, pulp and paper, metal smelting, and brick-making industries. Although customers in these group need less coal than large-scale power plants, but it is large companies with high credit ratings.

Customers are also spread across various countries, including China, India, Japan, South Korea, Malaysia, Philippines, Thailand, Bangladesh, and Indonesia. Reputation for reliable product delivery and quality control are crucial for maintaining long-term customer relationships with these customers.

Trading and Trading Channels

Banpu manages coal marketing and trading activities for coal produced in Indonesia and Australia, as well as coal procured from other sources. Direct sales to coal users facilitate a better understanding of customer needs and the establishment of long-term customer relationships. The Company engages in identifying market opportunities, making sales offers, bidding and negotiating contracts, and coordinating with customers for coal delivery, ensuring comprehensive after-sales services.

Natural Gas Business

Market and Competition

Market

1. Global Natural Gas Market

The natural gas market in 2024 continued to navigate shifting supply patterns, weather variations, regional demand disparities, and the impacts of geopolitical upheavals. Europe has significantly reduced its reliance on Russian gas through efficiency measures and increased imports from alternative suppliers, including LNG from the United States. While natural gas demand in advanced economies has moderated with efficiency gains and renewables, growth opportunities remain in LNG liquefaction for exports and power generation. Although renewables gain market share, the need for reliable backup, such as natural gas, is increasingly recognized. Meanwhile, emerging markets—particularly in Asia and the Middle East—are driving demand growth to meet rising industrial and electricity needs.

According to International Energy Agency (IEA), global natural gas demand grew at a stronger pace in 2024 compared to the previous two years, which were marked by the turmoil of the global energy crisis. However, new gas supplies remained limited due to the relatively slow growth of LNG production, while geopolitical tensions continued to fuel price volatility. Global demand increased by over 2.5% in 2024, driven by robust consumption in Asia's industrial and power sectors, North America's power sector, and the construction and industrial sectors in the Middle East. These gains were partially offset by a 7% decline in Europe, following a 13% reduction

in 2022, bringing European gas consumption to its lowest levels since the early 1990s.

On the supply side, global natural gas production is expanding, with over 270 billion cubic meters (Bcm) of LNG export capacity under construction, projected to increase global LNG capacity by 50%. Upstream developments are expected to add 200 Bcm annually, with a focus on regional markets. The Middle East, led by Qatar and neighboring countries, is driving production growth, while Sub-Saharan Africa is emerging as a promising production region. Conversely, Russian natural gas output remains constrained, projected to stay 20% below pre-2022 levels due to sanctions and the loss of European markets. These dynamics highlight the growing importance of infrastructure, particularly in regasification and storage, to support rising demand in developing economies.

Key benchmarks in East Asia (JKM TM) and Europe (TTF) in 2024 dropped by more than 50% compared to 2022 and over 15% compared to 2023. In Europe, the extension of EU's natural gas reduction policy—mandating a 15% cut compared to the 2017-2022 average—led to a 15% decline in gas consumption in both 2023 and 2024. While surplus supply exerted downward pressure on prices for most of the year, prices began recovering toward the end of 2024 as winter weather trends pointed toward colder conditions.



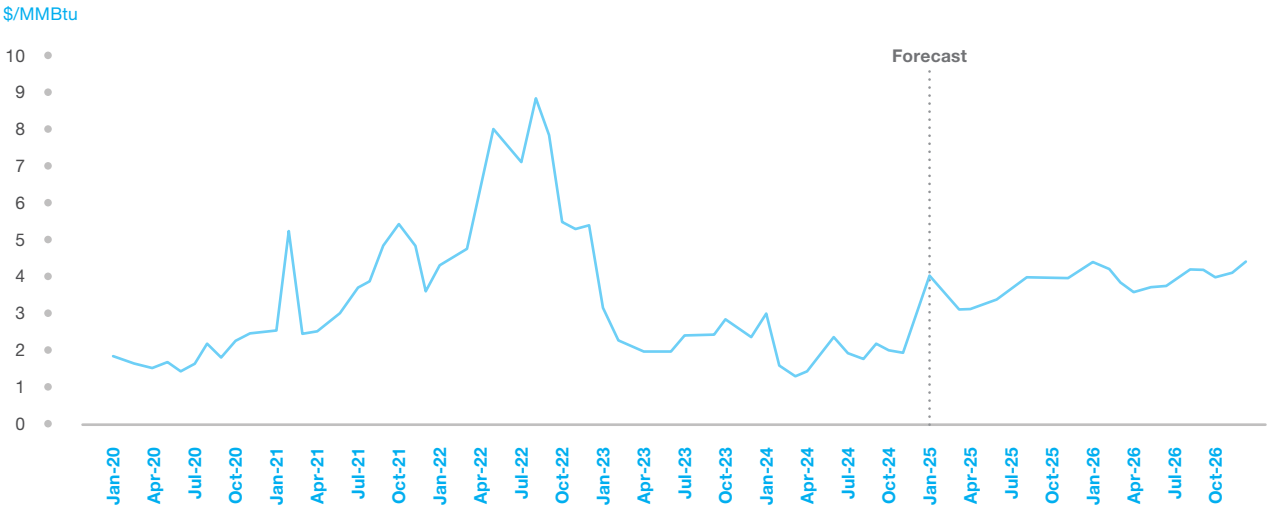
Looking ahead, the IEA projects that global energy demand will grow by nearly 1% annually from 2023 to 2035 under its Stated Policies Scenario. Natural gas is expected to grow at a similar annual rate of approximately 1%, driven primarily by rising demand in emerging markets, especially in Asia and the Middle East.

2. The U.S. Natural Gas Market

In 2024, the U.S. natural gas market experienced significant shifts in pricing, limited demand growth, surplus inventory levels, and evolving export dynamics. The market performance was influenced by a combination of weather-driven demand fluctuations, supply-side adjustments, and the continued expansion of LNG export infrastructure, setting the stage for a mixed yet promising outlook in 2025.

The year began under bearish conditions, with a cold snap followed by warmer winter temperatures and surplus supplies, leading to a sharp drop in prices. However, by year-end, Henry Hub spot prices gradually rebounded to approximately \$3/MMBtu, reflecting stronger-than-expected demand driven by a colder-than-anticipated winter and the continued ramp-up of new LNG facilities.

Monthly Henry Hub Natural Gas Spot Price



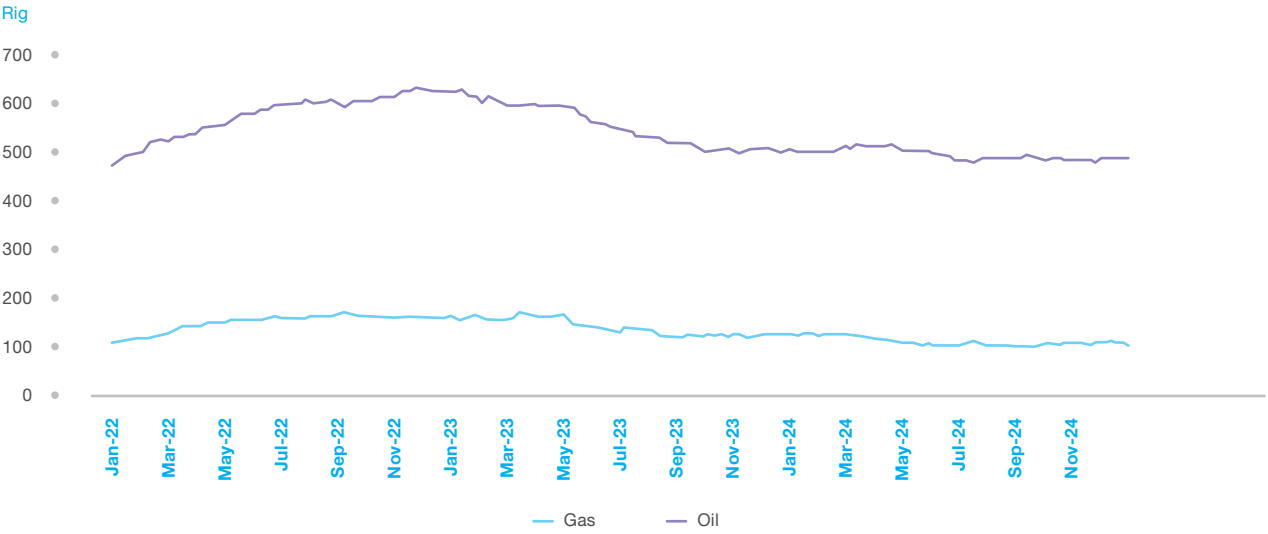
Data Source: EIA

According to U.S. Energy Information Administration (EIA), natural gas consumption in the U.S. averaged 90 Bcf/d in 2024, reflecting a modest increase compared to the previous year. This growth was primarily driven by heightened demand in the power sector, particularly during the mid-year heatwave.

However, overall consumption was tempered by a mild winter in the early months, which reduced heating demand in the residential and commercial sectors, alongside intermittent disruptions along the Gulf Coast due to the heightened hurricane activity.

On the supply side, total dry gas production remained stable, averaging 103 Bcf/d, consistent with 2023 levels. Production curtailments and reduced investments, particularly in the Haynesville region, were implemented by many producers due to economic pressures. However, this was offset by increased associated gas production in the Permian Basin. Drilling activity, as reflected in rig counts, declined to an average of around 100 rigs for the year, down from approximately 135 rigs in 2023. Storage dynamics showed a surplus early in the year, with inventories 39% above the five-year average in March. However, as production slowed and the injection rate remained modest in the latter half of the year, storage levels gradually aligned more closely with the five-year average.

U.S. Natural Gas Oil Rig Count 2022-2024



Data Source: Baker Hughes

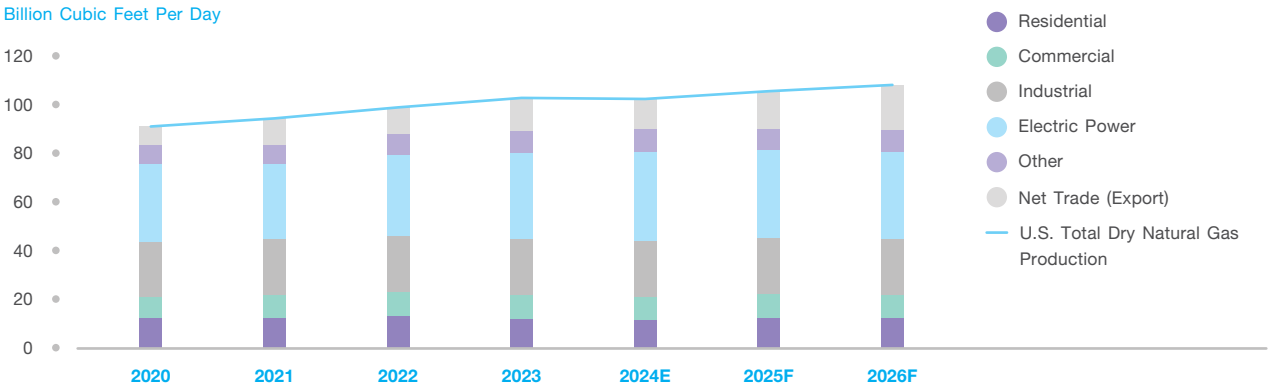
Looking ahead, the U.S. natural gas market maintains a positive long-term outlook. Key factors driving this outlook include a tightening supply-demand balance given favorable market fundamentals, supported by, strong global LNG demand, particularly from Asia and Europe, which will be supplied by new domestic export terminals. Geopolitical instability in other major producing regions could further drive demand for U.S. exports. Additionally, supportive energy policies and infrastructure development under the new presidential administration are expected to further strengthen the market outlook for producers.

In summary, 2024 was a year marked by both challenges and resilience for the U.S. natural gas market. Despite market volatility and relatively lower pricing levels, producers responded to the environment with varying degrees of effectiveness, sustaining profitability through diverse levels of operational efficiency and capital flexibility. The market was shaped by a mix of domestic and global factors, including demand fluctuations, supply-side adjustments, and the growing integration of LNG exports. As the sector continues to evolve, the combination of strong LNG export and domestic natural gas-fired power generation demand coupled with continued infrastructure development, sets the stage for continued growth and transformation into 2025.



U.S. Annual Supply-Demand

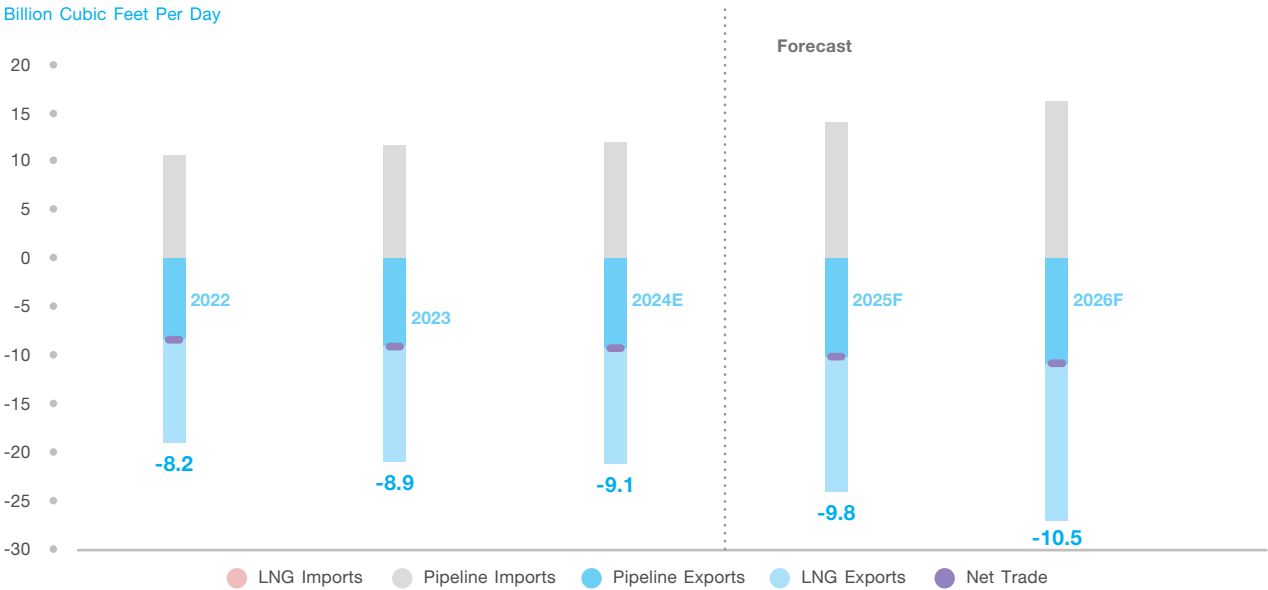
Billion Cubic Feet Per Day



Data Source: EIA, Short-Term Energy Outlook

U.S. Annual Natural Gas Trade

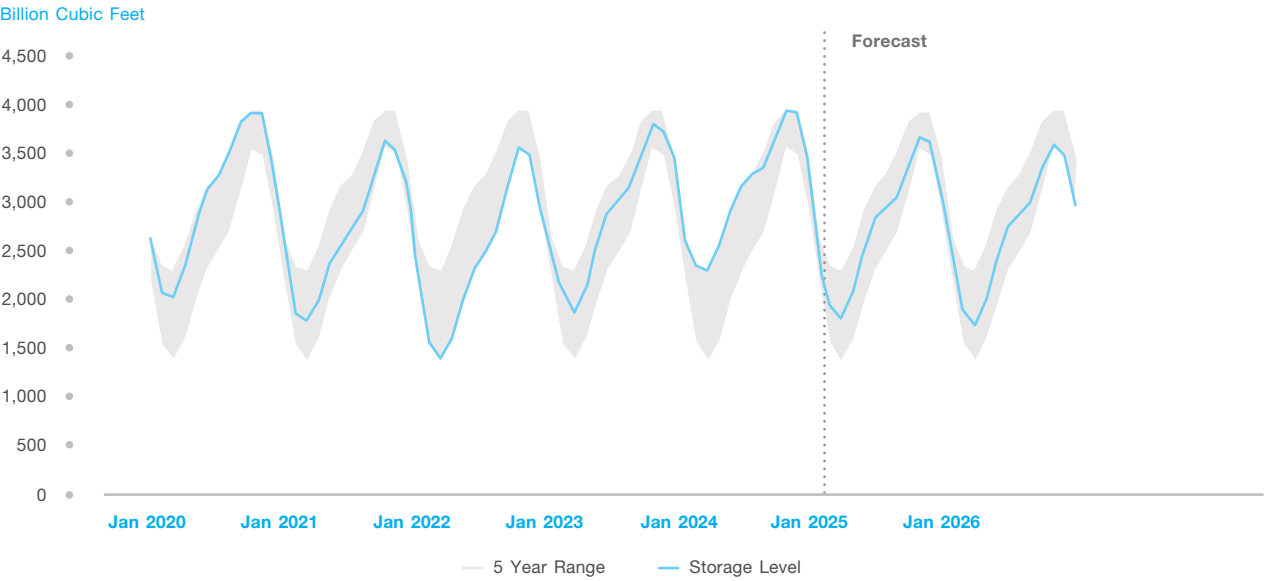
Billion Cubic Feet Per Day



Data Source: EIA, Short-Term Energy Outlook

U.S. Natural Gas Storage Level

Billion Cubic Feet



Data Source: EIA, Short-Term Energy Outlook

3. Other Key U.S. Industries

Carbon Capture, Utilization, and Sequestration (CCUS)

CCUS involves the capture of CO₂ emissions and the processing of such emissions for reuse or permanent storage in subsurface geological formations and is recognized as a primary means of reducing CO₂ emissions from large-scale energy and industry sources.

According to the Global Status of CCS 2024 Report, as of July 2024, the worldwide CCUS facilities pipeline had expanded to 628 projects, reflecting a remarkable 60% year-over-year growth. This highlights the ongoing momentum in the development of CCUS initiatives. Additionally, the Global CCS Institute noted that 50 CCUS facilities are currently operational, with a total capture capacity of 51 Mtpa. Furthermore, CO₂ capture capacity under construction continues to grow, showing a 57% year-on-year increase, reaching approximately 51 Mtpa across 44 facilities.

To stimulate investment in CCUS, the U.S. Energy Act of 2020 provided over \$6 billion for CCUS research and development programs, and in 2021, the U.S. Treasury and the Internal Revenue Service ("IRS") issued critical guidance on Section 45Q tax credits for carbon capture and storage, expanding its applications to a wider range of CCUS activities. In addition, the Inflation Reduction Act of 2022 authorized approximately USD 370 billion for clean energy and climate change spending and provides significant incentives for CCUS investment. Key incentives include increasing the value of Section 45Q credits, extending construction deadlines for Section 45Q eligible projects, and adding a direct pay feature or transferability.

In the U.S., CCUS policy development has increasingly shifted from the federal level to individual states. In December 2023, Louisiana became the third state, after North Dakota and Wyoming, to be granted primacy over Class VI wells used for CO₂ injection. Other states, including Alaska, Arizona, Texas, and West Virginia, are seeking primacy from the U.S. Environmental Protection Agency. Securing primacy enables state agencies to expedite CO₂ injection well permit approvals, tailor regulations to regional conditions, and attract investment, collectively facilitating the rapid deployment of CCUS technologies.

The current CCUS industry can be described as highly fragmented with a wide range of technologies and processes being evaluated for long-term viability across the value chain including capture, separation, compression, liquefaction, transportation, storage and utilization. Despite this fragmentation, the market is steadily maturing and has become increasingly commercial and competitive in many countries. CCUS networks that utilize shared transport and storage infrastructure are becoming the predominant method of deployment, benefiting smaller projects that lack vertical integration. Developing CCUS hubs with shared infrastructure can make it feasible to capture CO₂ at smaller industrial facilities, for which dedicated CO₂ transport and storage infrastructure may be both impractical and uneconomic.

Liquified Natural Gas (LNG)

LNG is natural gas in its liquid phase after being super-cooled to -260°F. LNG is primarily used to store and transport gas between markets that have limited natural gas pipeline connectivity. Once natural gas is delivered to an LNG facility, the gas is liquified and shrunk to approximately 1/600th of its original volume. Then, LNG is loaded onto carriers with large cryogenic tanks onboard for maritime transport. LNG is transitioned back into its original gaseous state at receiving terminals. From there, the regasified gas is either stored or transported via pipeline to end-consumers like power plants, industrial facilities, and residential communities.

Since the Russia-Ukraine conflict, global LNG markets have undergone significant shifts. The disruption has heightened competition for LNG cargoes and driven up prices, impacting global energy affordability. Europe, which once relied on Russian piped natural gas for nearly 40% of its demand, has increasingly turned to LNG imports from alternative suppliers, particularly United States. In Asia, traditional importers like Japan and South Korea are facing competition

for LNG supplies, while China has emerged as the largest importer due to its expanding energy needs. According to LSEG (London Stock Exchange Group), in 2024, Europe accounted for 55% of total U.S. LNG exports, Asia received 34%, and the remaining 11% went to Latin America and other regions.

The current market dynamics position LNG export facilities for significant growth, particularly in the U.S. Gulf Coast region, where about 90% of U.S. LNG development is planned. The Barnett region, located about 300 miles from the Gulf Coast LNG market, stands to directly benefit from this trend. Producers are increasingly securing supply agreements that offer flexible LNG liquefaction fee structures, ensuring efficient access to global LNG and natural gas markets. Many Producers are also seeking to diversify their sales portfolio by gaining exposure to international LNG price indices. Given the potential for favorable pricing arbitrage opportunities, exposure to global LNG indexed markets could help support those natural gas producers with direct pipeline connectivity to the Gulf Coast.

EIA reports that U.S. LNG exports remained strong in 2024, with an expected average of 12.0 Bcf/d. The baseline LNG export capacity is projected at approximately 13 Bcf/d for 2024, following the completion of Plaquemines LNG Phase I and Corpus Christi LNG Stage III by year-end. Additionally, LNG export projects with a combined baseline capacity of 7 Bcf/d are under construction and on track for completion by 2028.

Competition

Within the U.S. natural gas production market, there are three primary sources of competition.

1. Competitive Natural Gas Producers

The U.S. Natural Gas Producer Benchmarking

	BKV	Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Peer 7
Average Production (Mmcfe/day)	788	1,056	1,071	1,487	1,518	2,177	3,418	4,380
Free Cash Flow Margin	15%	14%	16%	-34%	12%	18%	-7%	0%
Reinvestment Rate	43%	69%	42%	137%	56%	47%	92%	94%
Capex per Production (\$/mcfe)	\$0.35	\$1.28	\$1.47	\$2.12	\$0.98	\$0.71	\$0.66	\$1.17

Data Source: Internal analysis based on peer company GAAP public company filing (Trailing Twelve Months) as of 30 September 2024 and BKV IFRS financials as of 31 December 2024; Free Cash Flow Margin = Free Cash Flow/Total Revenue; Reinvestment rate = Capex/Adjusted Earnings before Interest, Taxes, Depreciation, Amortization and Exploration Expense (EBITDAX); Capex per Production = Capex/Total Production

BKV competes with other onshore unconventional natural gas producers to deliver its products to the marketplace. Besides environmental, social, and governance (ESG) principles, natural gas producers typically compete on their efficiency and ability to access key markets. These measures are best quantified by financial metrics, excluding the effects of hedging. The chart above illustrates BKV's competitive position vis-a-vis seven peers that operate in the same or similar natural gas basins. The data shows that despite its smaller size, BKV can compete on efficiency and margin metrics with leading U.S. public peers.

2. Associated Gas Production

Secondary competition for natural gas producers is from associated gas, in which oil producers generate natural gas as a by-product of oil producing operations. Since oil is the primary economic driver for these operators, the marginal costs of their natural gas are extremely low, and they can displace existing

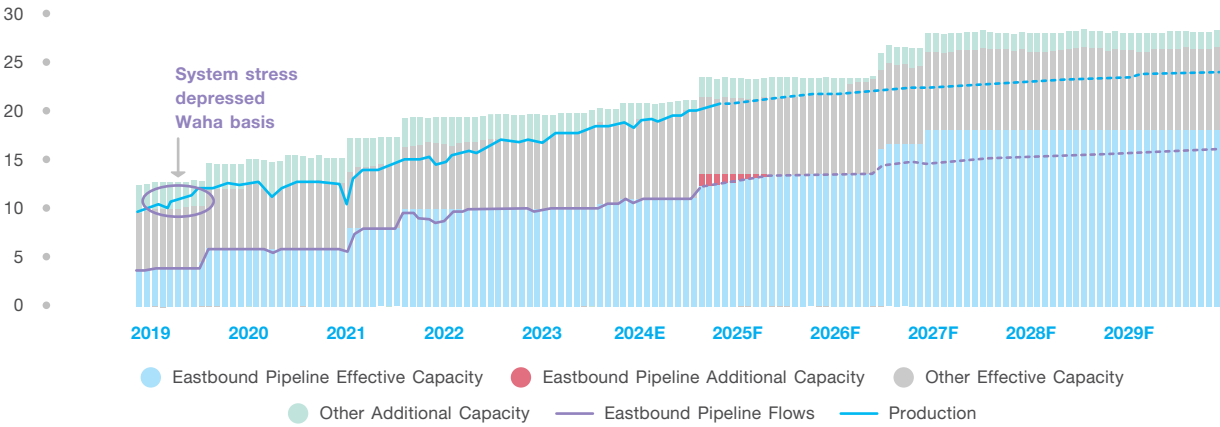
natural gas demand. The key for associated natural gas producers is getting their natural gas to market through economic pipeline infrastructure to monetize their by-products. While the Permian Basin continues to produce substantial volumes of associated gas, pipeline constraints from the Permian to key demand markets along the Gulf Coast in Texas and Louisiana limit the competition from this supply. Despite



the addition of some pipeline capacity in 2024, the overall impact is expected to remain constrained by the pace of future infrastructure expansions. The chart below projects the total potential associated natural gas supply from the Permian basin, assuming supply is constrained by anticipated future pipeline infrastructure builds.

Permian Production Uses and Ceiling

Billion Cubic Feet Per Day



Data compiled 13 December 2024

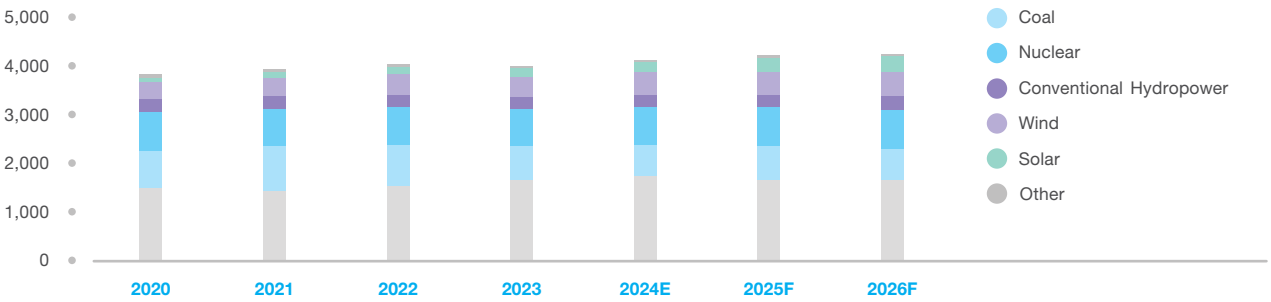
Data Source: S&P Global Commodity Insights; EIA

3. Alternative Sources of Primary Energy

The third source of competition is from natural gas substitution sources; this is particularly focused on renewable energy penetration in the power sector and the commercial and residential sectors. The past five years have seen respectable increases in renewables net power generation across the U.S. However, the base of renewable power generation is small; therefore, the overall impact on demand substitution has been muted. Going forward, policies around future power generation remain uncertain in the U.S. but have a significant impact on the outlook for future demand substitution and must be watched closely.

U.S. Electricity Generation by Sources, All Sectors

Billion Kilowatthours



Data Source: EIA, Short-Term Energy Outlook

Competitive Strategies

BKV's strategy is to create value for its stockholders by managing and growing its integrated asset base and focusing on the net zero objectives. The company believes the following strategic priorities will help drive value creation and long-term success.

1. Deliver robust returns to stockholders

BKV intends to prioritize delivering strong returns to its stockholders through the focus on creating stockholder value. The company believes that its operational expertise in successfully drilling and refracturing wells, acquiring and integrating assets purchased at attractive valuations, and maintaining financial discipline will underpin its ability to meet the stockholder return goals.

2. Optimize the value of core businesses

BKV utilizes technology and data analysis to enhance its assets and operations, which it believes improves operational efficiencies, reduces its emissions, and helps realize its operational and financial goals as it continues to scale its business. The "Pad of the Future" program, which includes conversion of natural gas-powered instrument pneumatics to

compressed air or electric power instruments on existing pads, combined with emission and leak surveys, is expected to significantly reduce our annual GHG emissions and improve pad efficiencies and operating revenue. BKV has also improved pad efficiencies and reduced lease operating costs through improvements including leveraging of data analytics to coordinate the workforce, prioritize high-value activity, and assess individual well profitability; automating critical plunger set points; in-sourcing key services such as slick-line, value re-builds, compression overhaul, and location repair and maintenance; and entering water share arrangements to reduce disposal and trucking cost. By combining its reserves into a growing asset base with vertically integrated components, BKV believes it can enhance margins and create a "closed loop" emissions reduction strategy that reduces Scope 1 and 2 emissions from its owned and operated upstream and natural gas midstream businesses and captures margin across its value chain.

3. Grow through opportunistic and synergistic acquisitions

A significant element of BKV's business strategy is gaining scale through accretive acquisitions. BKV believes its business model, management team

experience, and the application of technology enable the company to quickly and efficiently integrate additional upstream, midstream, power, and CCUS assets into the business.

4. Maintain a disciplined financial strategy

BKV believes that it can execute on its business plan and grow the business while continuing to generate substantial Adjusted Free Cash Flow. The company believes its capital efficient project inventory, low-decline natural gas production, and multiple, integrated business lines will provide consistent returns through varying business cycles. BKV intends to apply cash flows to manage the indebtedness in line with its leverage target, fund the capital expenditure program, enhance stockholder value, and execute opportunistic acquisitions across its four business lines.

5. Focus on net zero objectives

BKV seeks to apply its integrated business model, CCUS projects, and carbon-negative initiatives to realize Scope 1 and 2 net zero emissions from its owned and operated upstream and natural gas midstream businesses by the early 2030s. The company believes it can achieve this through reductions in and offsets to the owned and operated upstream and natural gas midstream

emissions from the “Pad of the Future” emissions reductions program and emissions monitoring and leak surveys, the retirement of SRECs generated by the BKV-BPP Power Joint Venture’s solar facility, and executing CCUS projects. BKV believes that carbon emissions within the United States can be reduced substantially through carbon capture on natural gas production, power plants, processing facilities, and other energy and industrial infrastructure. As such, in addition to lowering emissions in its owned and operated upstream and natural gas midstream businesses, CCUS for third parties has become a focus of BKV’s business plan.

6. Encourage innovation

BKV’s distinctive culture encourages innovation with a value-driven focus that helps build its competitive advantage. For example, its emphasis on the efficient application of modern technology led to the development of the “Pad of the Future” program, advancements in Barnett refracturing, and other operational improvements. The company intends to continue to develop, retain and add to its already talented, experienced, and forward-thinking employees. The unified team and mantra of “Being a force for good” underpin BKV’s core values and contribute to the company’s ability to drive business growth successfully.

Energy Generation

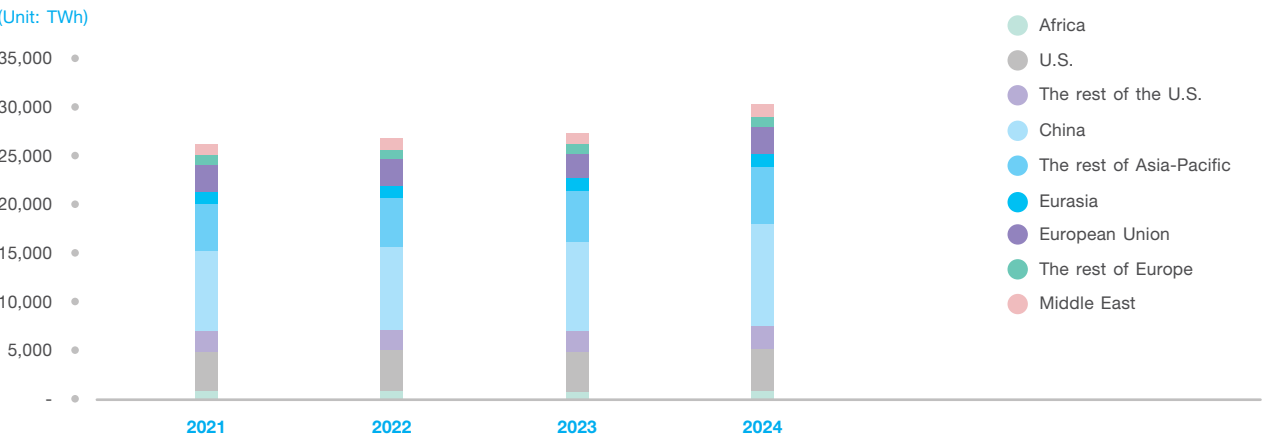
Market and Competition

Market

1. Thermal and Renewable Power Businesses

1.1 Global Electricity Consumption

Global Electricity Demand 2021-2026



Source: IEA (2024), Electricity 2024, IEA, Paris <https://www.iea.org/reports/electricity-2024>, Licence: CC BY 4.0

The International Energy Agency (IEA) reported that global electricity demand grew by 2.2% in 2023, slightly declining from 2.4% in 2022. This was primarily driven by weaker economic growth in several developed countries, coupled with persistent inflation and a sluggish recovery in Europe’s industrial sector. Despite these challenges, demand remained strong in Asia, with China and India continuing to serve as key growth engines. The IEA projected that global electricity demand will increase at an average of 3.4% annually between 2024 and 2026.

In China, electricity demand grew by 6.4% in 2023 thanks to the growth in the services and industrial sectors, such as solar panel manufacturing and electric vehicles (EVs). In India, demand is projected to rise at an average annual rate of 6.5% from 2024 to 2026, driven by robust economic growth and increasing air conditioning usage, reflecting the ongoing urbanization of Indian society.

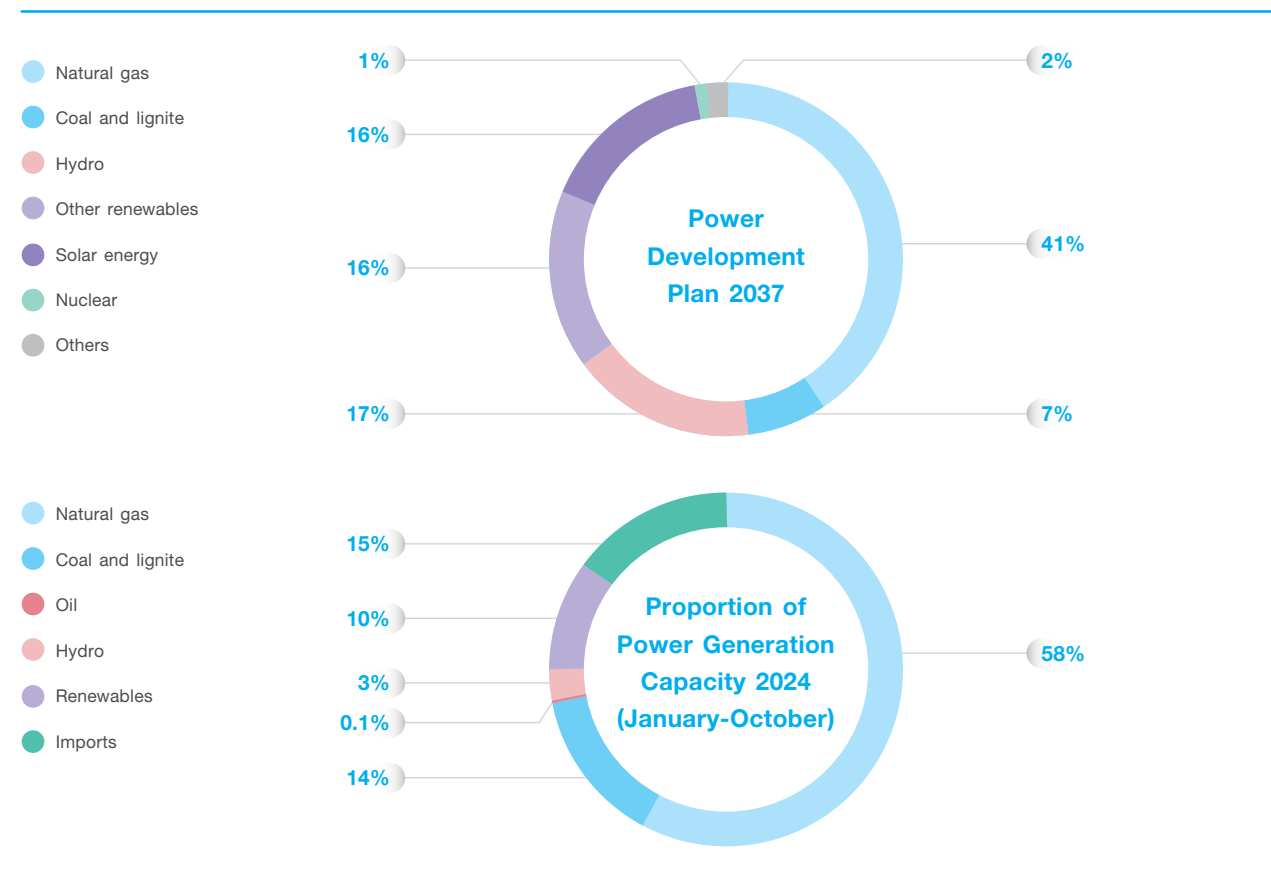


In the European Union, electricity demand declined for the second consecutive year in 2023. However, growth is anticipated to return to 1.8% in 2024 and averaging 2.3% annually from 2025 to 2026. Meanwhile, in the United States, electricity demand was expected to decline by 1.6% in 2023 but is projected to grow by 2.5% in 2024, primarily driven by the expansion of data centers and growing electricity consumption in the transportation sector.

Overall, the IEA forecasted that Asia will account for 50% of global electricity demand by 2026, with China alone contributing more than one-third of total consumption.

1.2 Market and Competition in Thailand

Comparison of Power Development Plan and Current Proportion of Power Generation Capacity by Energy Source in Thailand

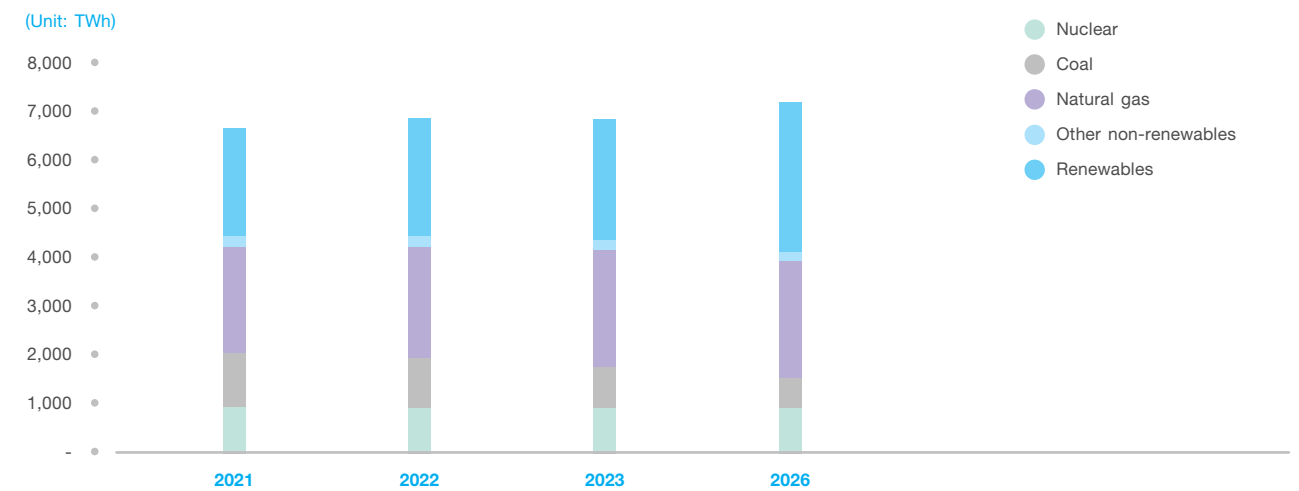


Source: Energy Policy and Planning Office (EPPO), Ministry of Energy

In 2024, Thailand's power generation capacity was mainly fueled by natural gas, accounting for 58%, followed by coal and lignite at 14%, renewables at 10%, and hydropower at 3%. However, under the Power Development Plan 2037, Thailand aims to reduce its reliance on natural gas to 41% and coal to 7% while increasing the share of clean energy to 51%. The plan also includes the integration of nuclear power and energy storage systems into the grid. This shift reflects Thailand's decarbonization efforts and transition to cleaner energy sources, supporting its goals of carbon neutrality and sustainable development.

1.3 Market and Competition in the United States of America

U.S. Electricity Generation by Energy Source 2021-2026



Source: IEA (2024), Electricity 2024, IEA, Paris <https://www.iea.org/reports/electricity-2024>, Licence: CC BY 4.0

The IEA forecasted that U.S. electricity demand would grow at an average annual rate of 1.7% from 2024 to 2026, following a 1.6% decline in 2023, primarily due to milder weather conditions and a slowdown in the manufacturing sector. However, electricity demand is expected to recover in 2024, with a growth rate of 2.5% driven by the expansion of data centers, which are projected to account for more than one-third of the additional demand through 2026.

The IEA projected a continuous decline in coal-fired power generation in the United States, with an average annual decrease of 9.9% from 2024 to 2026, while renewable energy sources and natural gas still play

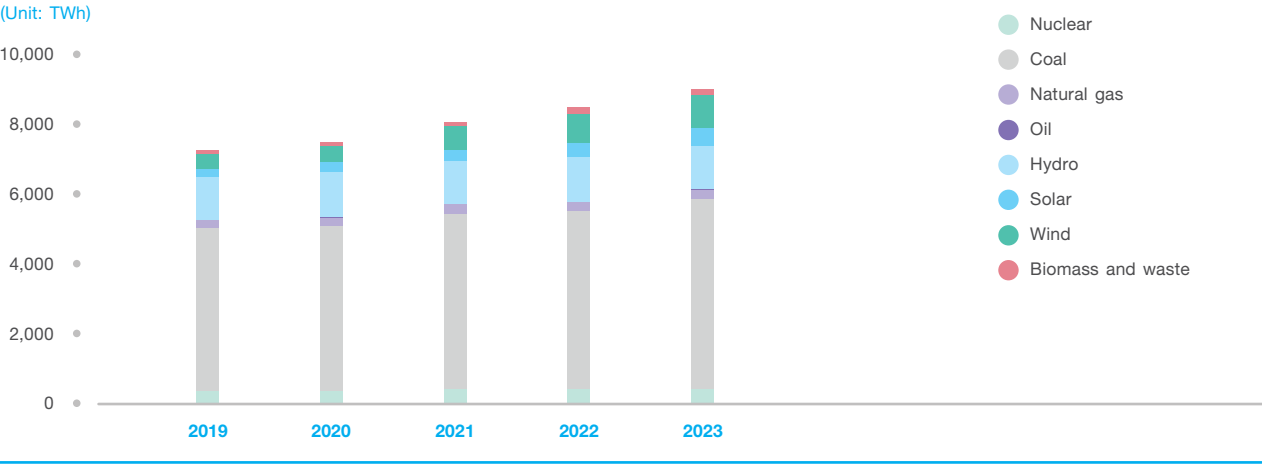
a significant role in the energy mix. The share of renewables in U.S. electricity generation is expected to rise from 30% in 2023 to 37% by 2026, driven by substantial growth in solar and wind energy, which are anticipated to expand at an average annual rate of 7.2%. Natural gas is projected to remain the primary energy source, accounting for approximately 35% of total electricity generation in 2026.

The growth of renewable energy in the U.S. relies substantially on investments in infrastructure, such as modernizing the power grid and developing energy storage systems, to facilitate the future integration of renewables into the power system.



1.4 Market and Competition in China

China's Electricity Generation by Energy Source 2021-2026



Source: IEA (2024), Electricity 2024, IEA, Paris <https://www.iea.org/reports/electricity-2024>, Licence: CC BY 4.0

In 2023, China's electricity demand grew by 6.4%, up from 4.7% in 2022, driven by growth in services and industries such as solar panels, EVs, and related materials. The IEA forecasted that electricity demand would grow at an average annual rate of 5.1% from 2024 to 2026.

In 2023, China's electricity generation remained heavily reliant on fossil fuels, with coal contributing 60.5% and natural gas 3.3% of the total energy mix. Concurrently, renewable energy sources have experienced significant growth. Solar power generation reached 584.15 TWh, while wind power generation increased to 885.87 TWh. This expansion reflects substantial government support as China transitions toward clean energy, aiming to reduce its dependence on fossil fuels and achieve its targets of peaking carbon emissions before 2030 and attaining carbon neutrality before 2060. Promoting solar and wind power is crucial in realizing these future energy objectives.

1.5 Market and Competition in Japan

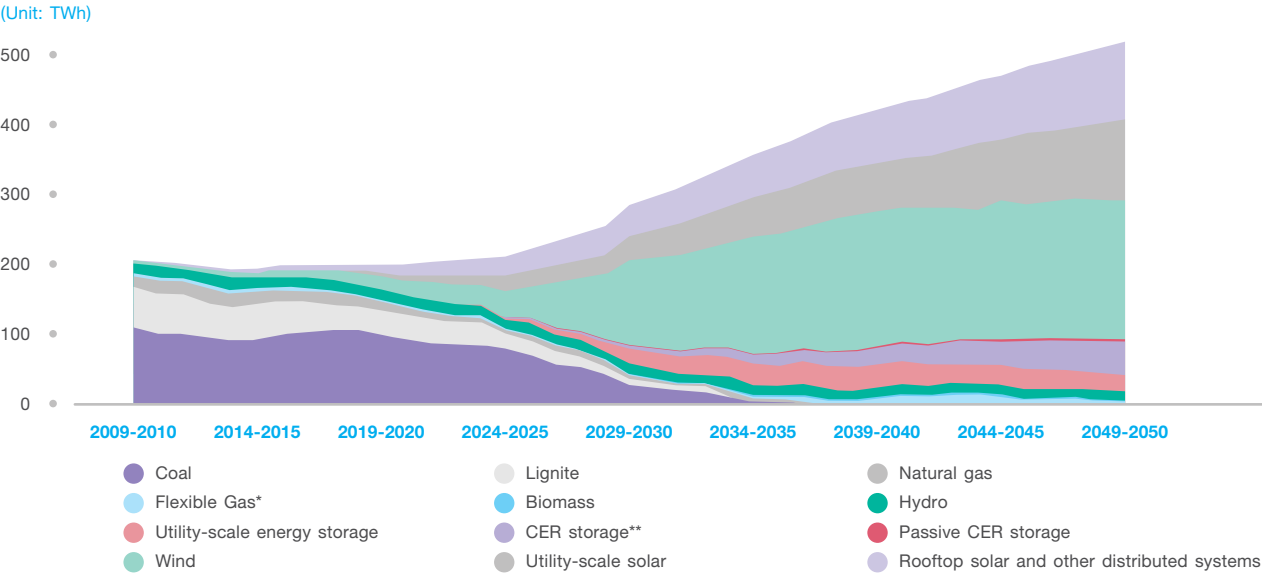
Japan's Ministry of Economy, Trade and Industry (METI) has outlined targets in its draft of the 7th Strategic Energy Plan to drive forward a sustainable energy system. The plan aims for renewable energy to constitute 40-50% of the country's energy mix by 2040. Solar power is expected to play a pivotal role, contributing between 22% and 29% of the total energy production. This strategy reflects Japan's determination to reduce carbon emissions and enhance potential through investments in technology and infrastructure.

Nuclear power will remain significant in the energy portfolio, accounting for about 20% to support energy security. The new plan also seeks to reduce reliance on nuclear power while placing greater emphasis on other clean energy sources. This approach aligns with the increasing demand for energy driven by the growth of digital technology and the transition to green energy.

Finally, the plan emphasizes the importance of a balanced energy portfolio that integrates various energy sources, including renewable energy, nuclear power, and low-carbon thermal power, to ensure stability and flexibility to future changes.

1.6 Market and Competition in Australia

Australia's Electricity Generation by Energy Source 2009-2050



* Flexible gas refers to natural gas-fired power generation that can be adapted to burn hydrogen in the future.
** Consumer Energy Resources (CER) storage, such as batteries and EVs, owned by consumers

Source: Australian Energy Market Operator (AEMO) Final 2024 Integrated System Plan (ISP)

Australia's Eastern and Southern states consist of New South Wales, the Australian Capital Territory, Queensland, South Australia, Victoria, and Tasmania. These states jointly operate the National Electricity Market, where electricity demand from 2023 to 2024 reached 213,420 GWh, rising 1.33% from the previous year.

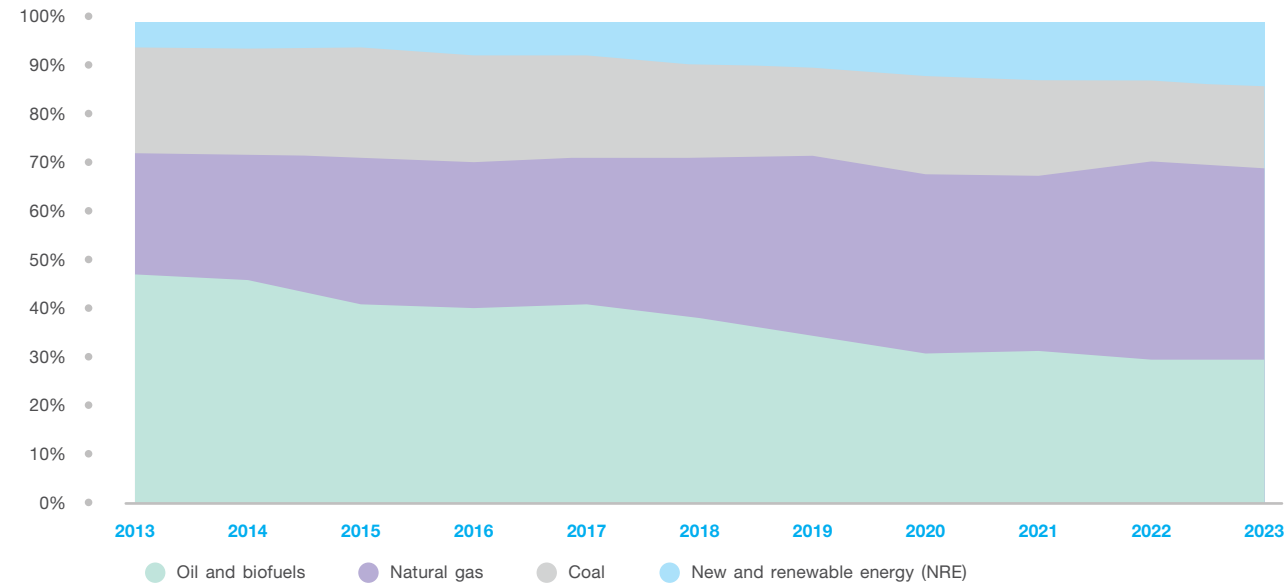
Australia's primary energy sources are coal and lignite, with a share of 56.46% of the energy mix. However, the share of coal and lignite has gradually

declined due to the increasing adoption of renewable energy and energy storage, especially solar power, which has gained popularity in households with solar rooftop systems. The Australian government has committed to achieving net-zero emissions by 2050, prompting each state and territory to implement policies that promote renewable energy generation. Projections indicate that the share of renewable energy (wind and solar) could reach 81.84% by 2050.



1.7 Market and Competition in Indonesia

Indonesia's Electricity Generation by Energy Source 2012-2023



Source: Handbook of Energy & Economic Statistics of Indonesia (HEESI) 2023

In pursuit of its net-zero emissions target by 2060, Indonesia plans to develop 51.6% of its new power plant capacity from renewable sources between 2021 and 2030, adding 20.9 gigawatts (GW) of new capacity by 2030. Perusahaan Listrik Negara (PLN) aims to increase its share of renewable power generation to 24.1-25.3% by 2030. Currently, Indonesia's Energy Ministry is drafting a new power development plan for 2024-2033, under which the government intends to approximately double the capacity of renewable energy power plants compared to the original plan.

According to Indonesia's Ministry of Energy and Mineral Resources, electricity consumption per capita reached 1,337 kWh in 2023, marking a 13.98% increase from 1,173 kWh in 2022. This rise is attributed to Gross Domestic Product (GDP) growth. The latest National Electricity Master Plan (RUKN) 2023-2060 targets an annual electricity consumption growth of 4.8-5.2% from 2024 to 2060.

1.8 Market and Competition in Vietnam

In 2023, Vietnam's electricity consumption increased by approximately 7%, driven by economic and industrial sector growth. The International Energy Agency (IEA) forecasts an average annual growth in electricity demand of 7% from 2024 to 2026. In terms of power generation by energy source in 2023, coal maintained the largest share at 43%, a slight decrease from 46% the previous year, while natural gas was projected to rise from 9% to 10%. Renewable energy experienced significant growth, particularly in solar and wind power, with an additional 2.7 GW of renewable energy capacity added in 2023. This reflects the Vietnamese government's increased support for clean energy development and sustainability in the energy sector.

However, Vietnam continues to face challenges in the energy sector, including power shortage in the north. It has had to depend on electricity imports from China to enhance energy security for the first time since 2016. For infrastructure development, the Vietnamese government has supported the installation of rooftop solar systems, targeting half of the country's office and residential buildings to be equipped with rooftop solar systems to promote clean energy and reduce dependence on fossil fuels in the future.

1.9 Market and Competition in Lao PDR

Currently, Lao PDR operates 97 power plants with a combined installed capacity of 12,500 MW. This capacity comes from 81 hydropower plants, each with an installed capacity of 1 MW or more, accounting for 80% of the total power generation capacity. The remaining capacity comes from ten solar power plants, five biomass plants, and one coal-fired plant. 70% of the output is exported to neighboring countries, including Thailand, Vietnam, Cambodia, Singapore, and Myanmar.

According to the 2016 statistical data from the Division of Power Generation Planning, the Department of Energy Policy and Planning, the Ministry of Energy and Mine, Lao PDR plans to develop 450 power generation projects, aiming for an additional capacity of approximately 30,000 MW and an annual total power generation capacity of 130,000 GWh by 2030. Lao PDR has signed memorandums of understanding (MOUs) to supply electricity to neighboring countries,

including 12,000 MW to Thailand, 6,000 MW to Cambodia, 5,000 MW to Vietnam, 600 MW to Myanmar, and 200 MW to Singapore. Lao PDR is currently exploring the opportunities of supplying an extra 400 MW of electricity to Singapore and also supplying electricity to southern China through a power purchase agreement between the countries. Moreover, in 2023, Lao PDR signed a MOU with Brunei to promote energy cooperation.

Most of Lao PDR's capacity is from hydropower, which accounts for over 85% of domestic electricity consumption. Therefore, Lao PDR faces power outages during the dry season, forcing the country to rely on electricity imports. To address this challenge, the Lao government plans to diversify energy sources by increasing the energy mix of power from solar, wind, and coal while reducing reliance on hydropower generation.

Competitive Strategies

Competitive Strategies in Thailand

BPP holds 50% shareholding in BLCP Power Ltd., which operates the BLCP Power Plant, in which BPP owns an equity-based capacity of 717 MW out of a total capacity of 1,434 MW. Located in the Map Ta Phut Industrial Estate, the BLCP Power Plant is a major power producer selling electricity directly to the Electricity Generating Authority of Thailand (EGAT). The dispatch rate of the BLCP Power Plant in 2024 was 99.6%, reflecting the power plant's ability to manage operational efficiencies. BLCP's production output accounts for 5% of EGAT's total installed and purchased power capacity.



Competitive Strategies

1) Maintaining Operational Efficiency and Readiness of Power Plants

BPP consistently conducts the efficiency improvement and equipment maintenance of power plants according to the maintenance schedule to secure the Availability Factor (AF) and Contracted Available Hours (CAH) in accordance with the Power Purchase Agreement (PPA). In 2024, BLCP reported the Equivalent Availability Factor (EAF) of 90.4%.

2) Seeking Opportunities for Business Expansion

BPP has been seeking new domestic growth opportunities by aligning its business expansion plan with the Power Development Plan for 2018-2037 (PDP 2018 Revision 1), approved by the National Energy Policy Council(NEPC) on 19 March 2020, which emphasizes the development of technology that helps reduce CO₂ emissions. In 2024, BLCP Power Plant and its project shareholders participated in a study to explore approaches for developing and adding value to the power plant in various forms as part of the transition to cleaner energy production. This reaffirms BPP's commitment to sustainable development and delivery of low-carbon solutions.

3) Stakeholder Relations Management

BPP has supported activities and fostered mutual understanding in all the areas where it operates, resulting in a positive relationship with local communities.

Major Competitors

BPP's thermal power plants that are commercially operational have no direct competitors who are power producers because the Company entered into a long-term power purchase agreement with the Electricity Generating Authority of Thailand (EGAT).

Competitive Strategies in the United States of America

On 1 November 2021, BKV-BPP Power LLC (BKV-BPP), a 50%-owned joint venture of Banpu Power US Corporation (BPPUS), a wholly-owned subsidiary of BPP, invested in the 768-MW Temple I Combined Cycle Gas-Turbine (Temple I CCGT) Power Plant. Subsequently, on 11 July 2023, BKV-BPP invested in the 755-MW Temple II Power Plant. Both power plants are located in Temple, Texas, one of the fastest-growing economic and population centers in the United States. The power plants can generate and supply electricity to meet the needs of over 750,000 households in Central Texas. Equipped with a pollution control management system to maintain low emissions, the power plants are highly efficient and flexible in adjusting power generation to match consumption patterns. Their priority dispatch status makes them ideal for the competition in the Electric Reliability Council of Texas (ERCOT) market. The investment has created added value through synergies between BPP and BKV Corporation, a subsidiary of Banpu, by leveraging knowledge and resource sharing to maximize investment benefits.

Competitive Strategies

1) Maintaining Readiness and Enhancing Efficiency of Power Plants

Temple I and Temple II CCGT power plants undergo annual maintenance in spring and fall or during March and October to ensure optimal operational readiness during peak electricity consumption periods (in winter and summer). To prevent damage from winter storms, the power plants have installed windshields and permanent enclosures to protect outdoor equipment from snowstorms and extreme temperatures. They also installed the heat tracing system and heaters on pumps, valves, gauges, and other equipment to prevent them from freezing and becoming inoperable. To enhance the efficiency of the power plants during summer, wet compression systems are deployed. The systems increase generation capacity during summer months, the time when power demand in the ERCOT market reaches its peak.

2) Cost and Price Management

Temple I and Temple II CCGT power plants are exposed to fluctuations in electricity prices and fuel costs. However, in the United States, advanced derivatives are available to help power producers mitigate the risk of electricity price fluctuations. As a result, both power plants will consider entering into derivative contracts to mitigate this risk. Moreover, as Temple has contractual rights to a regional gas storage facility which enables Temple to manage daily fluctuations in its gas usage in a more cost efficient manner, as well as take advantage of seasonal gas price differences, enhancing the power plant's competitiveness. With a team of experts in the natural gas business and effective operational management from both BPP and BKV Corporation, both power plants can benefit from their gas storage facilities.

3) Seeking Opportunities for Business Expansion and Added Value Creation

BPP monitors market conditions, growth, and investment trends, seeking investment opportunities in various projects across the United States. These include natural gas-fired power plants, renewable energy facilities, and emerging technologies. The Company also explores value creation through strategic investments in related businesses, such as potential ventures in new fuel sources aligned with the country's energy development policy. At the end of 2022, BKV-BPP expanded into the retail electricity market by launching BKV-BPP Retail, a wholly-owned subsidiary of BPP that supplies electricity to customers in Texas. Currently, BKV-BPP Retail serves approximately 50,000 customers. Furthermore, BPP has entered the Congestion Revenue Rights (CRR) Trading market in ERCOT, leveraging price differences caused by transmission congestion and constraints to generate revenue. This business is managed by BPPUS, a subsidiary of BPP, which commenced rights trading in Q4/2024.

Major Competitors

- Domestic and international power producers and investors

Competitive Strategies in China

BPP's combined heat and power plants and its solar power plants operate with higher efficiency than average power plants while meeting pollution control standards. Hence, they obtain various supports from the Chinese government, such as guaranteed electricity sales to local electricity authorities, exclusive rights to sell steam and heat in permitted zones, and local government subsidies. In August 2024, China introduced an action plan for a "New Energy System" as part of its efforts to develop a cleaner energy



infrastructure and ensure national energy security. The plan, set to be implemented between 2024 and 2027, outlines key initiatives such as increasing the supply of clean electricity to the grid and improving the efficiency of coal-fired power plants.

Competitive Strategies

1) Cost Management and Efficiency

The Chinese government has pursued the electricity market reform to reflect fuel costs in each province and, at the same time, has imposed measures to stabilize electricity prices for households. BPP has assessed the impact on the pricing in power and steam purchase agreements and adjusted the prices accordingly. The Company maintains its cash flow generation and liquidation management by improving production efficiency and strictly controlling costs by strategically buying and stocking up coal when coal prices decline and utilizing it when coal prices increase.

2) Environmental Management

The Chinese government enforces a stringent policy on environment and pollution control, which restricts the use of coal as a major fuel source in industrial plants. BPP's power generation processes comply with current environmental standards. The Company regularly maintains all equipment and machinery and has a plan to improve environmental control equipment. Furthermore, BPP monitors and assesses environmental impacts to ensure that its business operations fully comply with environmental laws, rules, and regulations. The Company has considered the deployment of state-of-the-art technology called Ultra-Supercritical (USC), which is high efficiency, low emissions (HELE) technology, in new projects such as the Shanxi Lu Guang Power Plant.

3) High Adaptability

BPP has a dedicated team to closely monitor changing market conditions and align business operations to the market conditions or situations in order to embrace business opportunities and mitigate negative impacts. The Company is prepared to adjust the distribution of electricity, steam, and hot and chilled water in response to the factors affecting the demand. For instance, the Zhengding CHP Plant generates electricity, steam, and hot water for sale during winter. In summer, when customer demand shifts, it swaps to produce chilled water for sale, which helps generate additional income and reduce the impacts of the seasonal decrease in electricity and steam sales. In addition, the Zhengding CHP Plant was selected to develop a major solar rooftop project with support from the local government in Hebei Province. Currently, the solar rooftop has an operating capacity of 22.7 MW, with the potential for further expansion in the future, marking another BPP's milestone in expanding its clean energy portfolio.

4) Service Quality and Stakeholder Relations Management

BPP prioritizes the quality of its products and services. The Company strives to ensure readiness and security in generating and distributing electricity and steam to respond to customers' needs at all times, especially the distribution of steam and hot water in wintertime. The Company always maintains

a good relationship with customers based on mutual trust and benefits, which has earned the Company trust and confidence from its customers. Relationship management with local government agencies and communities is also based on mutual benefits by providing basic utility services (electricity and steam) to local communities, building trust and equity, and lending continued support to the community. This has brought BPP acceptance from local government agencies and communities as an exemplary local enterprise. Despite a setback from external factors, the Company still enjoys full support from local governments, for instance, financial subsidies or approval to raise steam prices when coal prices increase.

5) Seeking Opportunities for Business Expansion and Added Value Creation

BPP puts greater emphasis on investment in renewable energy to align with the government's renewable energy promotion policy. The Company also focuses on creating added value by expanding investment into related businesses while considering the costs of different fuel sources and appropriate technologies. For example, the Luannan CHP Plant is located in the urban industrial area, which gives it a strategic advantage in becoming the sole distributor of steam. BPP is also exploring opportunities to expand its customer base to new industrial areas to offer solar rooftop power generation system services. Moreover, the Company is conducting a feasibility study for the development of its existing land to develop the biomass coal co-firing power plant project to reduce costs and create positive environmental impacts. The Zhengding CHP Plant began utilizing biomass coal co-firing technology in 2024 and is expected to continue its use in 2025. This technology will also be deployed at the Luannan CHP Plant and the Zouping CHP Plant.

Major Competitors

- Government agencies and private power producers

Competitive Strategies in Japan

BPP's core business in Japan focuses on developing next-generation energy solutions, particularly in battery energy storage systems (BESS) and electricity trading. The Company continues to expand its renewable energy portfolio through joint investments with partners to reinforce its position and long-term sustainability.

For business development and expansion, BPP prioritizes enhancing operational efficiency and optimizing the BESS system, as well as advancing its energy trading and risk management (ETRM) system, which is expected to play a critical role in the future.

Moreover, BPP is expanding new energy solutions, including the BESS+ virtual power plant (VPP) and platforms that support modern energy innovations.

Networking and collaboration are also key drivers of business innovation and upscaling. BPP is exploring alternative financial sources to ensure the necessary cash flow for investments in battery energy storage systems (BESS) and electricity trading business. To drive digitalization systematically, the Company has established a digital master plan to improve operational efficiency, unlock new business opportunities, and support growth through optimizing work processes, data-driven decision making, and the development of innovative products and services.



By prioritizing the development of battery-based energy storage systems and electricity trading, BPP is well-positioned to capitalize on expanding markets driven by the energy transition and digitalization. This strategy not only creates profit opportunities but also supports Japan's strategic energy objectives.

Major Competitors

- Domestic and international power producers and investors

Competitive Strategies in Australia

Banpu Group has been driving the growth of the renewable energy business through Banpu Energy Australia Pty Ltd, in which Banpu holds an 80% stake, and Banpu Renewable Australia Pty Ltd, jointly owned by Banpu NEXT and BPP with 20% and 50% stakes, respectively. Banpu Renewable Australia owns and operates, via the establishment of Banpu Energy Hold Trust, two solar farms with a combined generation capacity of 166.8 MWdc, comprising 110.9 MWdc from the Beryl Solar Farm (BSF) and 55.9 MWdc from the Manildra Solar Farm (MSF). Both solar farms are located in New South Wales, a region with consistent growth in electricity consumption and demand, and the government has a clear policy to promote electricity generation from renewable energy. Power plants under long-term power purchase agreements will supply electricity to the National Electricity Market (NEM). As NEM is a wholesale electricity market with an advanced trading system, BPP concurrently secured a long-term PPA with the private sector to prevent the risk of trading in the wholesale electricity market. The Company has been actively seeking investment opportunities with a focus on team and people management and building trust with business partners to expand growth in renewable energy and related businesses. After obtaining the license in 2022, BPP started energy trading to generate added value and enhance profitability.

Major Competitors

- Domestic and international power producers and investors

Competitive Strategies in Indonesia

PT. ITM Bhinneka Power (IBP) engages in renewable power generation and explores opportunities in the new energy technology business. In 2024, IBP supplied electricity from a 2.2 MWp hybrid solar rooftop project at the mines of PT. TCM, a subsidiary of PT. Indo Tambangraya Megah Tbk (ITM). Currently, IBP has established joint ventures, PT. Cahaya Power Indonesia (CPI) and PT Centra Multi Suryanesia Aset (CMSA), in which IBP and local partners own

79.5:19.5% and 65:35%, respectively. Both joint ventures operate an energy-as-service business offering solar rooftop systems to commercial and industrial customers. In 2024, projects that have already started dispatching electricity totaled 12.9 MWp, while lease contracts amounting to 60.3 MWp are scheduled to begin electricity dispatch within the first half of 2025.

In addition to solar power generation projects for commercial and industrial consumers, IBP is exploring

investment opportunities in hydropower development projects and solar power plants to supply electricity to PT Perusahaan Listrik Negara (PLN). IBP is well-prepared to participate in independent power producer (IPP) solar power purchase agreement (PPA) auctions with PLN. In 2024, the Company entered the auction for two solar power projects with a total capacity of 28.35 MW, and the results from PLN are currently under review. IBP plans to consistently participate in future IPP solar power auctions, aligning with PLN's power development plan. For hydropower projects, IBP is in the process of preparing the required documentation and collaborating with partner companies to enter the PLN auction scheduled for 2025.

Competitive Strategies

1) Managing Existing Relationships and Expanding Strategic Business Alliances

The management leverages existing networks of coal businesses, Thai companies, and partners in Indonesia to connect with industries and companies that can promote renewable energy and carbon credits. The Company also builds relationships with new alliances by investing in their companies, which helps accelerate business growth.

2) Business Development and Project Management

IBP focuses on exploring renewable energy projects, primarily solar and hydropower while looking for possible expansion into other clean energy projects. The Company surveys existing projects in the market to conduct a thorough analysis and hires a consultant for due diligence to ensure the accuracy and feasibility of project operation and development. The Company

also collaborates with experts from Banpu NEXT, who provide specialized guidance and knowledge transfer in renewable energy and the energy business.

3) Seeking Opportunities in Integrated Energy Use and Value-Added Services

Indonesia has sizable commercial, industrial, and service markets. However, the renewable energy sector is still in its early stages and at a point where other competitors are also looking to enter the renewable energy sector. As BPP's advantage is its extensive experience in renewable energy and energy technologies in other regions, it has devised a strategy to provide integrated energy services, including solar rooftop installation and energy efficiency projects, to increase energy saving and support carbon credit offset plans for customers.

Major Competitors

Domestic and international power producers, developers of solar rooftop projects, and investors

Competitive Strategies in Vietnam

BPP has expanded its investment in the power business in Vietnam since 2016, focusing on renewable energy. Due to the country's growing demand for sustainable energy, BPP has continuously expanded its renewable energy portfolio. One notable project is the Vinh Chau wind farm in Soc Trang province, which has a generating capacity of 29.4 MW and plays a key role in achieving Vietnam's clean energy goals. Another significant project is the El Wind Mui Dinh project in Ninh Thuan province, which has a generating capacity of 37.6 MW, further strengthening BPP's wind power portfolio. Additionally, the 35 MW Nhon Hai solar farm, located



in Ninh Thuan province, benefits from excellent solar lighting conditions and contributes to the expansion of the country's renewable energy capacity. These projects are crucial for enhancing energy security, reducing dependence on fossil fuels, and supporting Vietnam's sustainable development goals.

In August 2022, BPP invested in Solar ESCO, a provider of rooftop solar installation solutions for commercial and industrial (C&I) customers. Solar ESCO has already signed Power Purchase Agreements (PPAs) totaling 107 MW out of the 115 MW target, reflecting strong demand in the C&I market and Solar ESCO's competitiveness. This investment underscores BPP's commitment to developing sustainable projects with positive environmental impacts. It also demonstrates confidence in the long-term potential of solar power in the C&I sector. With a diversified portfolio that includes wind and solar power and C&I projects, BPP is well-positioned to play a key role in Vietnam's clean energy future and strengthen its leadership in the renewable energy sector.

Competitive Strategies

1) Managing Relationships with Local Government Agencies and Communities

BPP places great importance on building strong and transparent partnerships with the Vietnamese government and local communities. The Company closely monitors laws and regulations in the renewable energy sector to ensure that all projects comply with national policies. It is committed to collaborating with policymakers and community stakeholders, aiming for sustainable economic and social development in all its operational areas.

2) Seeking Opportunities for Business Expansion and Added Value Creation

BPP seeks business expansion opportunities in alignment with Vietnam's economic growth and rising energy demand. With GDP projected to grow by 7.09% in 2024 (Source: Vietnam General Statistics Office, Reuters, January 2025), electricity demand consumption is expected to increase accordingly. The Vietnamese government aims to increase the share of renewable energy in its Power Development Plan (PDP8), creating a favorable investment environment for BPP. In addition to expanding renewable energy projects, BPP is looking into new approaches to diversify its investments in energy-related products and services to support the country's growing electricity demand.

3) Management by the Operational Excellence Approach

BPP prioritizes efficient power plant management, implementing proactive maintenance strategies to prevent issues and minimize damage affecting operations. Furthermore, BPP emphasizes operational and financial cost control to enhance profitability and mitigate financial risks. The Company is also committed to developing its human capital, ensuring its workforce is equipped to adapt to rapidly changing industry challenges. At the same time, BPP fosters strong relationships with financial partners to secure funding under favorable terms and conditions. This approach enables BPP to operate efficiently, maintain financial stability, and drive sustainable long-term growth while strengthening valuable partnerships across all levels.

Major Competitors

- Domestic and international power producers and investors

Competitive Strategies in Lao PDR

BPP holds a 40% stake in Hongsa Power Company Limited, which operates the HPC Power Plant, the only mine-mouth power plant in Lao PDR. The HPC Power Plant has a total capacity of 1,878 MW, of which BPP holds 751 MW equity capacity. The power plant sells the majority of electricity to the Electricity Generating Authority of Thailand (EGAT) under the Independent Power Producer (IPP) scheme and some of its output to Lao PDR. The HPC Power Plant's production output constitutes 25% of the total electricity that Lao PDR supplies to Thailand.

Competitive Strategies

1) Maintaining Operational Efficiency and Readiness of Power Plants

All three production units of the HPC Power Plant have been fully operational since 2016 and achieved 104.0% dispatch in 2024. This demonstrates the operational stability and cost efficiency, which are crucial for both countries' electricity systems.

2) Managing Relationships with Local Government Agencies and Communities

BPP places importance on community development by promoting community engagement and improving the quality of life of local people. These measures have been realized into community development initiatives, for example, infrastructure development (water supply, electricity, and roads), partial relocation and rebuilding of houses in appropriate areas, vocational training, and promotion of employment at power plants such as contracts for project construction, and equipment procurement.

3) Cost and Efficiency Management

In 2024, BPP supported the HPC Power Plant in improving its efficiency and capacity readiness for power generation and distribution. The improvements covered equipment refurbishment and improvements in coal transportation to the power plant, enabling the plant to maintain the Equivalent Availability Factor (EAF) at 86.3%. Moreover, the power plant improved operational readiness by stocking equipment parts and improving maintenance speed and efficiency, contributing to stable power generation.

Major Competitors

BPP's commercially operational coal-fired power plant has no direct competitors because the Company has a long-term power purchase agreement with the Electricity Generation Authority of Thailand and lectricit du Laos.



Energy Technology Business

Market and Competition

Market

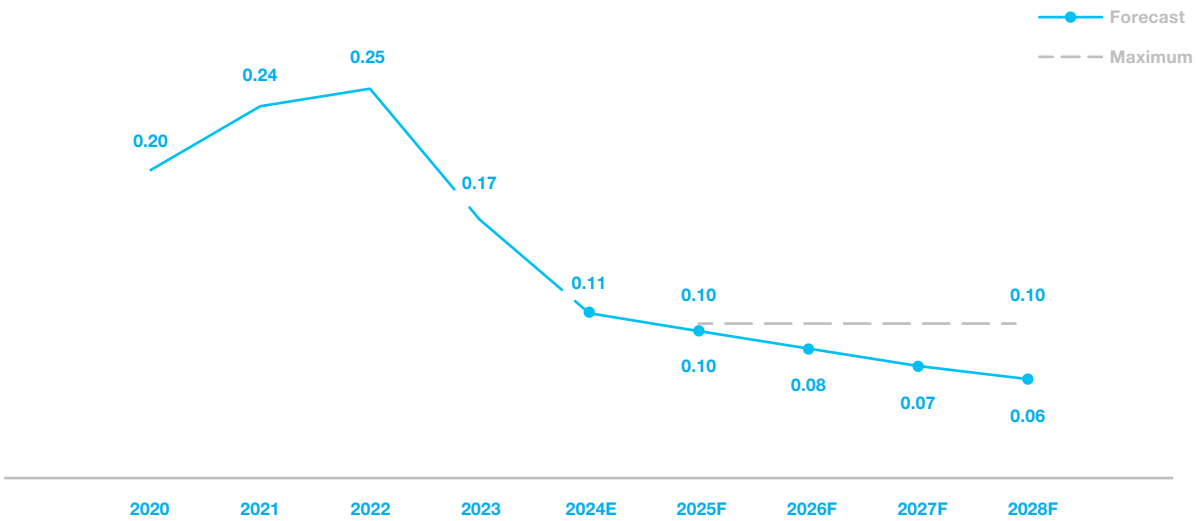
1. Solar Rooftop and Floating

Renewable energy in Thailand, particularly solar rooftop installations, has been on a continuous growth trajectory. This progress is largely driven by the Power Development Plan (PDP 2024), which sets a target to increase the renewable energy share to over 51% of the national energy portfolio by 2037, along with expanding solar power generation capacity to 36,305 MW.

Government support policies have been pivotal in fostering this growth. Key initiatives, such as the Direct Power Purchase Agreement (PPA) pilot project of 2,000 MW by 2025, tax incentives, and accessible loans, accelerate clean energy adoption. Furthermore, the declining costs of solar panels and energy storage systems have improved the accessibility of solar energy.

Price of Solar Panels

Unit: Monocrystalline Module Price (USD/W)



Source: SCB EIC analysis based on data from BloombergNEF, Bloomberg, JPMorgan, Maycock, PV Infolink, EIA, and PV Magazine

These factors contribute to the rising demand for solar energy in Thailand, for both private power purchase agreements (Private PPA) and self-consumption within organizations.

Fluctuating energy prices in the global market have also led to high electricity prices in Thailand, which are projected to reach THB 4.1-4.2 per unit in 2025. This situation has prompted businesses and households to adopt solar rooftop solutions as a cost-saving measure.

Government policies have been pivotal in fostering solar power consumption in the country. Initiatives such as the Residential Solar Rooftop Program support installations in the household sector, while recent legal amendments now allow businesses to install solar rooftop systems with a capacity exceeding 1,000 kW without requiring an electricity operator license. These changes have removed significant legal barriers, making it more convenient for businesses to utilize solar power. In addition to reducing energy costs, these measures contribute to lowering greenhouse gas emissions, aligning with Thailand's goals to achieve Net Zero emissions and increase ESG awareness in the business sector.

The solar rooftop market in Thailand holds an additional installation potential of approximately 3,000 MW (Source: SCB EIC, JPMorgan, and Prachachat Turakij.) The market's growth is supported by the expansion of data centers and the rapid increase in electric vehicles (EVs). These factors underscore Thailand's commitment to promoting solar rooftop energy as a key solution to long-term economic, energy, and environmental challenges.

2. e-Mobility

The electric vehicle (EV) market in Thailand has seen significant growth and shift, reflecting market maturity with positive responses from both consumers and industry stakeholders. In the first nine months of 2024 (January-September), new electric vehicle registrations reached 187,073 units, a 30.9% increase year-on-year (as of 3 October 2024, Source: Bangkok

Bank, Industry Report). The growth is particularly notable in the private passenger car segment, as well as commercial vehicles such as electric trucks and buses.

The drivers of the growth in the EV market this year include volatile car fuel prices, reduced import duties, and government support measures that lower the cost of EV ownership. The launch of new models and brands of EVs, particularly from China, has also played a significant role. The transportation and logistics sectors are using more EVs to reduce energy costs and promote sustainability. There are more EV charging stations in key areas to meet the growing demand from domestic EV users, with support from both private and public sectors.

3. Energy Management

Thailand's energy consumption has been steadily increasing, as energy is an essential factor for the business and industrial sectors. Hence, the Ministry of Energy has set targets for energy procurement and resource management to maximize efficiency, in line with the Energy Efficiency Plan 2018-2037 (EEP2018). This plan focuses on promoting and developing technologies and advanced knowledge that support energy conservation, reduce greenhouse gas emissions, and enhance energy efficiency by harnessing the Internet of Things (IoT) and innovative smart technologies.

This approach aligns with the Thailand 4.0 policy and smart city development initiatives, which emphasize the adoption of key technologies, such as Energy Management Systems (EMS) and District Cooling Systems (DCS), to facilitate sustainable and modern urban growth.

As of November 2024, a total of 175 smart city development proposals have been submitted to



the Smart Cities Authority—169 from existing livable cities and 6 from new city developments. Of these, 36 cities have been officially announced as smart cities, while 139 cities have been classified as smart city promotion zones (as of 17 August 2023, Source: Digital Economy Promotion Agency, www.depa.or.th).

Based on the smart city development initiatives, Thailand has set a target to reduce final energy consumption per unit of GDP (energy intensity: EI) by 30% from the 2010 baseline. According to the EEP2018, the most recent quarterly energy savings report revealed that, as of Q3/2024, cumulative energy savings had reached 10.54%, equivalent to 9,683 kilotonnes of oil equivalent (ktoe). This progress aligns with the GDP reporting framework established by the Office of the National Economic and Social Development Council (NESDC) (Source: Energy Statistics Data, Department of Alternative Energy Development and Energy Conservation, www.dede.go.th).

4. Energy Storage Systems

Thailand has implemented proactive measures to achieve its carbon neutrality and net-zero goals, including the promotion of clean energy generation through the Power Development Plan (PDP 2024). This plan mandates the installation of Energy Storage Systems (ESS) at solar power plants, with a target to expand total capacity to 10,485 MW between 2024 and 2037. In addition, the plan supports the production of zero-emission vehicles, aiming for these vehicles to account for 30% of total electric vehicle production capacity by 2030, driving progress toward the long-term goal of reducing greenhouse gas (GHG) emissions.

The government has implemented measures to support the public, including subsidizing the retail price of electric vehicles (EVs) to make them more accessible to consumers. These initiatives have led to a significant increase in battery demand in Thailand, both in the transportation sector and for energy storage systems. By 2030, Thailand's battery demand is projected to reach at least 36 GWh, driven by the promotion of EVs and renewable energy generation. Specifically, the battery demand for EVs is expected to account for at least 34 GWh in 2030, while the solar and energy storage sectors are projected to require a minimum of 2.76 GWh in the same year (Source: SCB EIC).

Thailand has also gained recognition from foreign investors as a hub for the production of right-hand drive EVs for export. Notably, leading Chinese EV manufacturers are relocating their production bases to Thailand.

Net Zero Solutions Services Policy to Drive the Net Zero Society

Banpu NEXT has established an explicit, transparent, and accountable marketing policy that is responsible to all stakeholders, supporting the Banpu Group's sustainable growth.

1. Expand the customer portfolio to cover major markets in the Asia-Pacific Region.

2. To create added value to products and services as a total Net Zero solutions provider, offering diverse Net Zero solutions with state-of-the-art technology, including smart hardware and digital platforms, to satisfy diverse customer needs at every step of business operations in order to ensure infinite access to clean energy, alignment with ESG principles to achieve SDGs, and enhancing the quality of life for customers and society as a whole.
3. Maintain ethical standards in marketing practices by respecting customers, competitors, and stakeholders.
4. Ensure transparency, credibility, integrity, and professionalism in all operations.

Competition

• Being a Net Zero Solutions Provider

Banpu NEXT is a Net Zero solutions provider, starting from helping customers assess greenhouse gas emissions. The company offers tailored consulting and solutions for carbon emissions reduction, including solar power generation systems, energy storage systems, energy management systems, and EV fleet management. Our approach is designed to meet the diverse needs of customers across different industries and locations to ensure infinite access to clean energy while supporting organizations in achieving their sustainability and Net Zero goals and driving Thailand toward a carbon-free society.

• Customer-Centricity

Banpu NEXT adopts a customer-centric approach to developing its services and solutions, focusing on addressing customers' pain points and energy utilization needs. A team of experts visits customer sites to discuss their requirements and recommend tailored Net Zero solutions. In addition, cutting-edge technologies and innovations are employed to facilitate data collection, analysis, and evaluation, providing insights that help customers optimize

energy usage efficiently and cost-effectively. This approach not only effectively addresses customer challenges but also meets their specific needs, fostering satisfaction and long-term business relationships while supporting them in achieving their Net Zero goals.

• Product Excellence

Banpu NEXT is committed to delivering high-quality products and services by utilizing top-tier products from industry-leading brands with guaranteed industrial standards. The company's engineering team excels in designing customized systems tailored to the specific needs of each project. All installations adhere to international standards and incorporate advanced technologies, such as drone thermal scans for post-installation solar panel inspections. Banpu NEXT's research and development team works closely with customers to provide safe, durable, and highly efficient smart energy solutions that genuinely address their needs.

In the e-Mobility business, Banpu NEXT offers comprehensive EV fleet management services, with a strong focus on selecting high-quality products,



including EVs, EV chargers, and batteries. These products have been tested in real market conditions and are widely recognized and certified by reputable agencies and standardization institutes. In particular, our battery selection focuses on high-performance products that are durable and lightweight with a fast-charging capability. These batteries underwent testing to meet global standards to ensure maximum safety and effectively meet customer needs.

In terms of collaboration, Banpu NEXT partners with leading industry players to deliver the best solutions tailored to each customer's business needs. The company has partnered with Alto Tech, a developer of energy management platforms and automation systems, to integrate AI into our Energy Management System (EMS) for enhanced efficiency. Moreover, Banpu NEXT has joined forces with Singapore Power Group (SP Group) to provide services for District Cooling Systems (DCS).

• **Service Excellence**

Banpu NEXT has developed systems to support after-sales service, for instance, a control room for real-time monitoring of power generation, allowing timely rectification of system malfunctions by a team of experienced engineers and customer service staff. The mobile application “Banpu Application” was developed to enable real-time and historical tracking of the power generation system, the amount of power generated, and the power-saving performance. Customers also get alerts in case of system failures.

Furthermore, Banpu NEXT has developed an integrated digital platform that allows customers to monitor the performance of all solutions, enhancing convenience and streamlining customer support. The company's customer service department operates 24/7, providing information, addressing issues, and responding to customer inquiries promptly. Additionally, an on-site service team is available to offer after-sales support, providing consultations and initial troubleshooting over the phone before dispatching an on-site team to resolve issues directly at the customer's location.

• **Strong Ecosystem**

Banpu NEXT prioritizes collaboration with partners in the energy technology sector, including carbon trading platforms and integrated AI solutions for energy trading. The company aims to enhance its service offerings to address various customer issues, as well as to develop business potential, strengthen its energy technology, and create a robust business ecosystem. In addition, Banpu NEXT embraces innovative technologies and ideas from new-generation startups that can complement its Net Zero solutions. Through funding and co-creating innovations, the company helps transform these innovations into new business models or accelerate business growth to deliver optimal solutions that fit each customer's needs.

• **Brand and Marketing Communication Strategies**

Banpu NEXT conducts its business in alignment with its vision to provide infinite access to smart energy solutions and its commitment to advancing a Net Zero society. The company focuses on two key aspects:

1. Delivering Net Zero solutions to organizations and businesses across the Asia-Pacific region to reduce carbon emissions and create growth opportunities, aiming to become a Smart Business and achieve their sustainability and Net Zero goals together.
2. Providing long-term partnership by supporting every stage of business operations, from design, planning, and development of best tailor-made solutions to after-sales services. The company also offers advanced digital platforms to enable seamless, real-time energy management for businesses.

Banpu NEXT's brand communication aims to build trust among its target groups, including customers, investors, end users, and the general public. The company reaffirms its position as a Net Zero solutions provider and aims to drive growth in all businesses and move forward to achieve Net Zero targets through various public relations and marketing activities as follows:

1. **PR Activities for Business Movement and Highlight Projects**

- Announcement of the launch of two battery assembly factories in Thailand: In partnership with SVOLT, a leading lithium-ion battery manufacturer for electric vehicles, the SVOLT Thailand factory will produce batteries for electric passenger vehicles, catering to local manufacturers such as Great Wall Motors and Hozon Motor. Moreover, Banpu NEXT, in collaboration with Durapower Holdings Co., Ltd., a subsidiary of Banpu NEXT and a producer of lithium-ion batteries for renewable energy applications and electric vehicles, has established the DP NEXT factory. This factory focuses on producing batteries for electric buses, trucks, and heavy-duty commercial vehicles.
- Expansion of partnership with SVOLT: Banpu NEXT has strengthened its collaboration with SVOLT by signing a Memorandum of Understanding (MoU) to establish a new factory and develop industries related to energy storage systems, battery cells, and battery recycling. This strategic partnership aims to position SVOLT Thailand as a leader in the lithium battery industry both in Thailand and Southeast Asia.
- Collaboration with Koh Samui Municipality: Banpu NEXT has signed a Memorandum of Understanding (MoU) with Koh Samui Municipality to explore the feasibility and develop a master plan to transform Samui Island into a low-carbon tourism destination. This collaboration aims to enhance the island's green tourism potential and tackle sustainability challenges by harnessing renewable energy and high-efficiency energy storage systems in alignment with Thailand's sustainability policy and objectives to achieve carbon neutrality and net-zero emissions.
- Announcement of investment in Amp Japan: Banpu NEXT has jointly invested in Amp Co., Ltd. (Amp Japan), a developer of renewable energy projects from an early stage until commercialization, with the Asia-Pacific Sustainable & Decarbonisation Infrastructure Equity Fund (SDIEF), sponsored by Aravest and SMBC Group. The joint investment aims to develop solar farm and wind farm projects in Japan and seek to expand production capacity to 2 GW.



- e-Mobility business expansion: Banpu NEXT has established a joint venture company with Marubeni Corporation (Marubeni), a Japanese integrated trading and investment business conglomerate, and Fuyo General Lease Co., Ltd. (Fuyo), a leasing and financing services for corporate clients, to offer comprehensive commercial electric vehicle (EV) fleet services in Thailand.
- Publishing business article on two new battery assembly plants in Thailand: The CEO of Banpu NEXT, in a recent media interview, highlighted the expansion of the battery business in Thailand. The interview highlights the promotion of electric vehicle (EV) adoption to position Thailand as a regional hub for EV production and related industries. Additionally, the initiative aims to encourage businesses to recognize the significance of business transformation and energy transition, which are essential for improving energy efficiency, lowering operational costs, creating growth opportunities, and reducing carbon emissions.
- Reinforcing its position as a leading clean energy technology company: Banpu NEXT has also highlighted key megatrends that reflect the growing global commitment to achieving Net Zero. These trends emphasize the urgent need to combat climate change through clean energy innovations. These megatrends align with key outcomes of the 28th United Nations Climate Change Conference (COP28), which emphasized the critical role of the private sector in addressing climate challenges and accelerating the need for a transition to clean energy.

2. Corporate Branding

- Banpu NEXT has continued its “Infinite Cafe Powered by Banpu NEXT” campaign, in collaboration with Craze Cafe, under Boncafe, to launch a 100% clean energy pop-up cafe at Chamchuri Square. The cafe integrates Net Zero solutions in its operations and beverage preparations, featuring a solar rooftop with batteries for solar energy production and storage. The initiative also utilizes digital platforms for energy management, including carbon saving monitoring to track CO2 reduction from beverage choices, full digitalization in all processes, systematic waste management, and provides electric Tuk-Tuk (MuvMi) shuttle services for visitors. This aims to enhance everyday life by making clean energy more accessible through simple daily activities like enjoying coffee, contributing to a Net Zero society, and promoting the Samyan Smart City area.

The campaign reinforces Banpu NEXT's position as a Net Zero solutions provider, offering total smart energy solutions suitable for all businesses. This attracts entrepreneurs by showcasing the potential and benefits of adopting clean energy to transform their businesses into Smart Businesses, helping to reduce carbon emissions and achieve sustainability goals.



- Banpu NEXT has launched the Infinite Podcast through its social media channels, hosted by a team of experts from Banpu NEXT. The podcast presents content that updates global business trends, provides insights, and encourages the importance of using technology and clean energy in developing modern businesses. The program emphasizes the need to reduce carbon emissions at every stage of operations, to achieve Net Zero goals in the future.



3. Branding and Marketing Communication Events

The CEO and Net Zero solutions experts from Banpu NEXT had the honor of delivering presentations, participating in discussions, and sharing their expertise and experiences with representatives from public and private agencies both in Thailand and internationally.

- Participated in the panel discussion on “Adaptation and Collaboration Between Thai Public and Private Sectors in Driving AI Innovation” at the AI Thailand Forum 2024, hosted by the Artificial Intelligence Association of Thailand (AIAT). The company shared insights into enhancing employees' AI capabilities, integrating AI technologies into smart energy solutions, and fostering the development of AI innovations in Thailand.





- Participated as a speaker to share knowledge and experience with a group of Bangkok Bank employees, presenting approaches to achieving a Net Zero society. The session focused on utilizing total smart energy solutions as essential tools for reducing carbon emissions across the value chain and driving societal development toward sustainable development.
- Participated in the HPAIR 2024 Asia Conference, held under the theme “Reimagining Connectivity: Building Bridges in a Globalized Society” at Chulalongkorn University, to share perspectives on global energy trends, the challenges and opportunities in clean energy, and the application of technologies and Net Zero solutions to drive progress toward national and global Net Zero targets.
- Joined a panel discussion on Decarbonization and Electrification of the Transport Sector in Southeast Asia and India at the UNFCCC Climate Change Conference (COP29) in Baku, Azerbaijan organized by the Asian Development Bank (ADB). The session was a side event during the COP29 and focused on collaborative efforts to combat global warming. The discussion emphasized the promotion of clean energy innovations in transportation systems, the importance of strategic investments to accelerate the transition to sustainable transport, decarbonizing the transport sector across the value chain to achieve Net Zero targets by reducing greenhouse gas emissions throughout Asia.
- Organized the seminar “Elevating Smart & Green Tourism: Promoting Samui Low Carbon Island with Total Smart Energy Solutions” for tourism entrepreneurs on Samui Island. The event featured a keynote address by the President of the Ko Samui Tourism Promotion Association, who outlined tourism promotion policies, business direction, and the island’s transition toward becoming a Low Carbon Island. The seminar provided a platform for entrepreneurs to exchange ideas and consult with Banpu NEXT’s Net Zero solutions experts on the importance of pursuing Net Zero targets. The discussions highlighted opportunities for sustainable growth through the integration of total smart energy solutions and the application of AI technologies to enhance service standards and improve tourist safety.

Major Competitors

Currently, there are still relatively few competitors offering total Net Zero solutions similar to Banpu NEXT. Most competitors tend to focus on providing only one specific type of energy service. In contrast, Banpu NEXT offers end-to-end solutions as a Net Zero solutions provider, covering solar power generation, energy storage systems, sustainable energy management, and EV fleet management.

Banpu NEXT’s competitors in the solar rooftop installation service are large-scale providers offering installation services along with investment packages since they are financially stable operators with diverse services to offer. Moreover, the ongoing decline in solar panel prices has attracted new players to the market, intensifying price competition. Many players are seeking business partners or investors to expand their service models to be similar to Banpu NEXT, which could make them key competitors in the future.

EV fleet management services remain a relatively new business in Thailand. The market is primarily segmented by the supply chain, including EV manufacturers, EV importers, and charging station operators and installers. However, no competitor currently offers a fully integrated solution as Banpu NEXT, which covers operating lease and financial lease services, installation of EV chargers, EV charging station services, and AI platform development to enhance operational efficiency and reduce costs for entrepreneurs. In the future, financial institutions and car leasing or rental companies could become indirect competitors in the leasing services segment. In addition, new operators of EV charging stations for commercial EV fleet management services may also enter the market, posing further competition.

In Thailand’s battery business, tariff barriers imposed by certain countries and investment promotion policies encouraging the use of domestic raw materials have driven many entrepreneurs to relocate their production bases to Thailand to meet the rapidly growing demand for batteries. Currently, a growing number of operators have established factories for pack and module battery assembly.

In the Energy Management Systems (EMS) and District Cooling Systems (DCS) sectors, major competitors include multinational companies and large Thai energy operators that provide generation and distribution services for utilities. Additionally, Energy Service Companies (ESCOs) and energy consulting firms, typically medium-sized, are also active players in the market. Their offerings vary depending on their financial capabilities, with larger firms able to invest in large-scale projects and offer more competitive pricing.

Pricing Policy

Banpu NEXT offers various pricing options tailored to customer needs. For solar power generation installations, Energy Management Systems (EMS), and District Cooling Systems (DCS), the company provides two primary service models: Banpu NEXT fully invests in the system installation, or the customer covers the cost of equipment and installation themselves. The investment budget varies depending on factors such as equipment, the size of the installation, and the selected service model.

The investment and pricing are influenced by several factors, including equipment specifications, the size of the installation, and the selected service model. The company adjusts pricing based on market conditions, considering equipment costs, installation expenses, and electricity prices in line with

government policies. Furthermore, the company continually tracks and selects the latest technology to offer customers the most reasonable and cost-effective pricing.

For EV fleet management services, the company sources certified EVs legally registered from authorized dealers, importers, or manufacturers eligible for government subsidies and exemptions from import and excise duties. This ensures that customers receive high-quality, cutting-edge EV technology. For charging station services supporting commercial EV fleet management, the company works with related government authorities to secure low-priority status for all stations to reduce electricity costs, enabling the company to offer customers electricity at reasonable and competitive prices.



In addition, Banpu NEXT's batteries stand out for their long cycle life, lightweight design, high safety standards, and rapid charging capabilities. They also come with a comprehensive warranty and reliable after-sales service. The company's pricing strategy reflects the quality and value offered to customers. Prices are adjusted based on factors such as purchase volume, repeat orders, and market conditions to remain competitive.

Customer Profiles

For solar rooftop installation, Banpu NEXT serves businesses seeking efficient energy management solutions, particularly medium- to large-scale enterprises that primarily consume electricity during daytime hours. These include industrial plants, commercial buildings, and industrial estates or communities looking for total Net Zero solutions. In 2024, 70% of customers who signed solar power installation contracts with Banpu NEXT opted for the company-funded model, allowing them to save on electricity bills without the need for upfront investments. The remaining 30% chose to invest in equipment and installation themselves and benefit from the use of solar energy generated from their solar rooftops at no additional cost.

In EV fleet management services, its primary customers include operators in the transportation and logistics industries, as well as companies and government agencies that utilize shared vehicles for business operations and other activities.

In the battery business, major customers require batteries for commercial EVs, such as electric trucks, buses, forklifts, trailers, dump trucks, semi-trailers, and aircraft tow tractors. Some customers also utilize EV charging and battery-swapping services. Future customers are anticipated to focus on energy storage systems for households, businesses, and industries. This includes the installation of solar power systems with integrated batteries or the adoption of microgrid systems to improve grid stability.

The primary customers for Energy Management Systems (EMS) and District Cooling Systems (DCS) include office buildings, shopping malls, hotels, and factories that rely on energy-intensive utility systems such as chillers, air compressors, boilers, and HVAC systems. Banpu NEXT offers customized services tailored to the specific requirements of each enterprise, supported by a team of professional engineers to help reduce energy costs.

Distribution and Distribution Channels

Banpu NEXT offers Net Zero solutions through bidding processes, direct negotiations with customers, business partnerships, and presentations to agencies or organizations overseeing renewable energy initiatives. The company proactively engages with potential customers to introduce its services and understand their specific needs. Following this, Banpu NEXT conducts site assessments to design tailored solutions and prepares a project proposal accordingly.

In addition, Banpu NEXT uses both online and offline communication channels to advertise and promote its solutions. The company expands its distribution channels through participation in events and activities while leveraging word-of-mouth referrals from satisfied customers to build trust and enhance opportunities to attract new customers.

BUSINESS ASSETS

Fixed Assets

Banpu’s business assets in Thailand and overseas include coal mining, natural gas, generation and distribution of power and steam, renewables, energy technology, and related businesses. The fixed assets illustrated in the tables below consist of the Company’s and its subsidiaries’ fixed assets. Net book value after deducting accumulated depreciation and impairment losses, as reported in the consolidated financial statements of the Company and its subsidiaries for the year ended 31 December 2024 and 31 December 2023, amounted to USD 4,280.68 million and USD 4,601.76 million, respectively, as detailed below:

The Group’s Property, Plant and Equipment

Items	Book Value (USD Million)		Liabilities
	31 Dec 2024	31 Dec 2023	
1. Land	45.52	49.77	No obligation
2. Land Improvement	59.95	52.84	No obligation
3. Building and Infrastructures	122.32	125.83	Put up some buildings and infrastructures as collateral for the long-term loan agreements between subsidiaries and financial institutions
4. Machinery and Equipment and Power Plants and Components of Power Plants and Gas Exploration and Producing Assets and Pipelines	3,883.04	4,221.98	Put up some machinery and equipment as collateral for the long-term loan agreements between subsidiaries and financial institutions
5. Furniture and Office Equipment	6.21	6.39	Put up some furniture and office equipment as collateral for the long-term loan agreements between subsidiaries and financial institutions
6. Equipment and Tools	7.56	6.20	Put up some equipment and tools as collateral for the long-term loan agreements between subsidiaries and financial institutions
7. Motor Vehicles	8.62	7.31	Put up some motor vehicles as collateral for the long-term loan agreements between subsidiaries and financial institutions
8. Assets under Construction	147.46	131.44	Put up some assets under construction as collateral for the long-term loan agreements between subsidiaries and financial institutions
Total	4,280.68	4,601.76	

Leases and Rights

1. Leases and Investment Incentives of the Company and its Subsidiaries and Joint Ventures

1.1 Leases held by Subsidiaries in Indonesia

Project	Lease No.	County	Province	Area (Hectare)	Expiry Date	Lessee	Notes
Jorong	462.K/30/DJB/2015	Tanah Laut	South Kalimantan	4,883	9 December 2029	PT. Jorong Barutama Greston	Production
Indominco	503.K/30/DJB/2016	Bontang, Kutai Timur, Kutai Kartanegara	East Kalimantan	24,121	31 March 2028	PT. Indominco Mandiri	Production
Kitadin (Embalut)	KTN 2013 006 OP	Embalut, Kutai Kartanegara	East Kalimantan	2,973	25 February 2022	PT. Kitadin	Mine Rehabilitation & Mine Closure
Trubaindo	142.K/MB.05/DJB.B/2024	Kutai Barat	East Kalimantan	22,573	27 February 2035	PT. Trubaindo Coal Mining	Production
Bharinto	249.K/30/DJB/2018	Barito Utara & Kutai Barat	Central and East Kalimantan	17,311	29 June 2041	PT. Bharinto Ekatama	Production
TIS	545/K.355A/2010	Kutai Barat	East Kalimantan	2,065	11 April 2029	PT. Tepian Indah Sukses	Production
NPR	188.45/277/2013	Barito Utara	Central Kalimantan	4,291	20 May 2033	PT. Nusa Persada Resources	Production
GPK	545/K.745/2009	Kutai Barat	East Kalimantan	5,060	14 September 2029	PT. Graha Panca Karsa	Production

1.2 Leases held by Subsidiaries in Australia

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Airly	ML1331	Airly, Coco, Morundurey & Bandamora	New South Wales	2,745	11 October 2035	Centennial Airly Pty Ltd.	Production
Airly	ML1814	Morundurey	New South Wales	1,258	22 July 2042	Centennial Airly Pty Ltd.	Production
Angus Place	ML1424	Wolgan, Cox, Cook & Marangaroo	New South Wales	7,735	18 August 2045	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Care & Maintenance
Angus Place	CCL704	Cox & Lidsdale	New South Wales	2,541	20 July 2039	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Care & Maintenance
Angus Place	ML1699	Cook	New South Wales	30.6	26 June 2035	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Care & Maintenance
Angus Place	ML1720	Cook	New South Wales	158.9	23 November 2036	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Care & Maintenance
Angus Place	ML1853	Cox, Lidsdale	New South Wales	92.7	25 May 2044	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Care & Maintenance
Blue Mountains	CCL738	Lett	New South Wales	1,116	28 September 2025	Hartley Valley Coal Company Pty Ltd.	Closed
Blue Mountains	ML1457	Lett & Marangaroo	New South Wales	185.1	4 November 2033	Hartley Valley Coal Company Pty Ltd.	Closed
Charbon	MPL505	Clandulla	New South Wales	0.4	11 August 2026	Charbon Coal Pty Ltd.	Closed
Charbon	MPL526	Wells, Clandulla & Rylstone	New South Wales	7.1	14 December 2045	Charbon Coal Pty Ltd.	Closed

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Charbon	MPL499	Clandulla	New South Wales	0.8	28 May 2026	Charbon Coal Pty Ltd.	Closed
Charbon	ML1318	Clandulla	New South Wales	983	29 June 2026	Charbon Coal Pty Ltd.	Closed
Charbon	ML1384	Clandulla	New South Wales	195.5	18 January 2038	Charbon Coal Pty Ltd.	Closed
Charbon	ML1501	Clandulla	New South Wales	13	20 December 2043	Charbon Coal Pty Ltd.	Closed
Charbon	ML1545	Clandulla	New South Wales	204.7	9 January 2046	Charbon Coal Pty Ltd.	Closed
Charbon	CCL732	Clandulla	New South Wales	1,024	2 December 2025	Charbon Coal Pty Ltd.	Closed
Charbon	MPL670	Rylstone & Clandulla	New South Wales	9.9	26 March 2045	Charbon Coal Pty Ltd.	Closed
Charbon	ML1524	Clandulla	New South Wales	20.3	27 October 2044	Charbon Coal Pty Ltd.	Closed
Charbon	MPL964	Clandulla	New South Wales	4.9	20 November 2044	Charbon Coal Pty Ltd.	Closed
Charbon	ML1647	Clandulla	New South Wales	570.9	17 December 2031	Charbon Coal Pty Ltd.	Closed
Charbon	ML1663	Clandulla	New South Wales	52.5	9 January 2033	Charbon Coal Pty Ltd.	Closed
Charbon	ML1850	Roxburgh	New South Wales	51.3	15 May 2044	Charbon Coal Pty Ltd.	Closed
Clarence	CCL705	Clwydd, Marangaroo & Rock Hill	New South Wales	3,210	20 December 2026	Coalex Pty Ltd. and Clarence Coal Investments Pty Ltd.	Production
Clarence	ML1354	Clwydd & Cook	New South Wales	155.3	21 July 2036	Coalex Pty Ltd. and Clarence Coal Investments Pty Ltd.	Production
Clarence	ML1353	Clwydd, Cook & Rock Hill	New South Wales	1,075	21 July 2036	Coalex Pty Ltd. and Clarence Coal Investments Pty Ltd.	Production

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Ciarence	ML1583	Clwydd, Marangaroo, Lett	New South Wales	3,331	9 July 2027	Coalex Pty Ltd.	Production
Ciarence	ML1721	Clwydd	New South Wales	5.1	7 December 2036	Coalex Pty Ltd. and Clarence Coal Investments Pty Ltd.	Production
Ivanhoe	ML1627	Cullen Bullen	New South Wales	79.8	2 February 2030	Ivanhoe Coal Pty Ltd.	Closed
Ivanhoe	CCL712	Cullen Bullen, Cox & Falnash	New South Wales	1,628	28 June 2027	Ivanhoe Coal Pty Ltd.	Closed
Ivanhoe	ML1301	Cox	New South Wales	5.1	28 September 2034	Ivanhoe Coal Pty Ltd.	Closed
Ivanhoe	MPL348	Cox	New South Wales	9.5	24 May 2025	Ivanhoe Coal Pty Ltd.	Closed
Mandalong	ML1443	Morisset, Dora & Mandalong	New South Wales	3,648	1 March 2043	Centennial Mandalong Pty Ltd.	Production
Mandalong	ML1543	Mandolong	New South Wales	172.5	25 November 2024 (Renewal submitted, mining lease continues)	Centennial Mandalong Pty Ltd.	Production
Mandalong	MPL191	Coorumbung	New South Wales	0.6	25 February 2044	Centennial Mandalong Pty Ltd.	Production
Mandalong	CCL762	Dora, Awaba, Mandolong, Morisset & Wallarah	New South Wales	2,940	13 October 2043	Centennial Mandalong Pty Ltd.	Production
Mandalong	ML1553	Morisset	New South Wales	64.3	7 September 2046	Centennial Mandalong Pty Ltd.	Production
Mandalong	ML1722	Mandolong, Morisset, Wyong & Munmorah	New South Wales	3,206	17 December 2036	Centennial Mandalong Pty Ltd.	Production
Mandalong	ML1744	Mandolong, Wyong, Olney	New South Wales	409	6 October 2037	Centennial Mandalong Pty Ltd.	Production

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Mandalong	ML1793	Coorumbung	New South Wales	6.4	16 July 2040	Centennial Mandalong Pty Ltd.	Production
Mandalong	ML1852	Coorumbung	New South Wales	2.4	25 May 2044	Centennial Mandalong Pty Ltd.	Production
Mannering	CCL721	Morisset & Wallarah	New South Wales	579	29 July 2026	Centennial Mannering Pty Ltd.	Closed
Mannering	CCL719	Wallarah	New South Wales	964.4	3 July 2031	Centennial Mannering Pty Ltd.	Closed
Munmorah	CCL720	Wallarah & Munmorah	New South Wales	58.8	12 December 2039	Centennial Munmorah Pty Ltd.	Closed
Munmorah	CCL722	Morisset, Wallarah, Munmorah & Tuggerah	New South Wales	978.3	28 June 2028	Centennial Munmorah Pty Ltd.	Closed
Myuna	MPL334	Awaba	New South Wales	33.3	19 October 2036	Centennial Myuna Pty Ltd.	Production
Myuna	ML1370	Wallarah	New South Wales	524	7 March 2033	Centennial Myuna Pty Ltd.	Production
Myuna	ML1632	Awaba, Coorumbung, Wallarah & Morisset	New South Wales	6,125	13 October 2043	Centennial Myuna Pty Ltd.	Production
Myuna	ML1880	Awaba	New South Wales	108.3	1 August 2045	Centennial Myuna Pty Ltd.	Production
Neubecks Project	CCL756	Cox	New South Wales	101	5 April 2035	Centennial Springvale Pty Ltd.	Project
Newstan	CCL746	Awaba & Coorumbung	New South Wales	3,308	31 December 2028	Centennial Newstan Pty Ltd.	Care & Maintenance

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Newstan	CCL764	Teralba & Awaba	New South Wales	108.8	19 May 2041	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	CCL763	Awaba	New South Wales	190.9	9 June 2032	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	PLL497	Awaba	New South Wales	20.2	24 August 2038	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	ML1587	Awaba	New South Wales	3	23 October 2027	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	ML1452	Awaba & Coorumbung	New South Wales	1,587	6 July 2033	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	CCL727	Teralba & Awaba	New South Wales	2,194.1	12 August 2027	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	MPL328	Awaba	New South Wales	0.4	5 August 2036	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	ML1380	Awaba	New South Wales	78	18 September 2037	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	MPL304	Teralba	New South Wales	0.7	25 March 2035	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	MPL305	Awaba	New South Wales	0.4	25 March 2035	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	ML1480	Awaba	New South Wales	14.5	20 July 2044	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	MPL327	Awaba	New South Wales	1	5 August 2036	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	ML1797	Awaba & Teralba	New South Wales	43.1	20 July 2028	Centennial Newstan Pty Ltd.	Care & Maintenance

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Newstan	ML1826	Awaba & Teralba	New South Wales	287.1	10 January 2030	Centennial Newstan Pty Ltd.	Care & Maintenance
Newstan	ML1875	Awaba	New South Wales	1.4	10 January 2045	Centennial Newstan Pty Ltd.	Care & Maintenance
Springvale	ML1303	Lidsdale & Marangaroo	New South Wales	713	15 December 2034	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	ML1588	Cook & Clwydd	New South Wales	976	19 October 2027	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	CL377	Lidsdale & Marangaroo	New South Wales	1,105	9 March 2025	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	MPL314	Lidsdale	New South Wales	96	3 August 2035	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	ML1323	Lidsdale & Marangaroo	New South Wales	30.1	3 August 2035	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	ML1537	Marangaroo	New South Wales	4.1	15 June 2045	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	ML1326	Clwydd, Cook, Cox & Maranagroo	New South Wales	2,157	18 August 2045	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	ML1352	Cox & Lidsdale	New South Wales	7.6	23 June 2036	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Springvale	ML1670	Cook	New South Wales	0.3	17 February 2033	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	ML1727	Clwydd, Cook, Maranagroo	New South Wales	1,256	4 February 2037	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Springvale	ML1843	Cook & Maranagroo	New South Wales	19	7 February 2044	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Western Main	ML1448	Lidsdale	New South Wales	95.2	31 May 2043	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Production
Western Main	CCL733	Cox & Lidsdale	New South Wales	146.7	3 July 2027	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Closed
Western Main	ML1319	Cox	New South Wales	1.5	5 July 2035	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Closed
Western Main	ML1866	Cox	New South Wales	64.1	15 November 2044	Centennial Springvale Pty Ltd. and Boulder Mining Pty Ltd.	Closed

1.3 Leases held by Subsidiaries in the People’s Republic of China

Project	Lease No.	County	State	Area (Hectare)	Expiry Date	Lessee	Notes
Gaohe	C1000002 01010111 0077581	Changzhi County, Changzhi City	Shanxi	65.0596	14 October 2040	Shanxi Gaohe Energy Co., Ltd.	Production
Hebi	10000 0052 0080	Heshan District, Hebi City	Henan	23.4825	14 July 2035	Hebi Zhong Tai Mining Co., Ltd.	Production

2. Land Use Rights of Power Business in the People’s Republic of China

Location	Right Holder	Area (sq. m)	Start Date	Expiry Date	Purpose	Book Value of Land Use Right (THB Thousand)
Zhending County Shijiazhuang City, Hebei Province	Shijiazhuang Chengfeng Cogen Co., Ltd.	7,132 67,354 17,665 23,135	27 December 2006 16 February 1998 28 December 2016 18 April 2001	2 September 2053 30 November 2047 26 March 2062 17 April 2031	To be the location of Zhengding Combined Heat and Power Plant	77,084
Luannan County Tangshan City, Hebei Province	Tangshan Banpu Heat and Power Co., Ltd.	225,172 2,100 90,370 40,960	18 April 2020 22 September 2018 1 January 2017 1 January 2017	18 April 2070 21 September 2068 31 December 2066 Under Consideration by Government Agencies	To be the location of Luannan Combined Heat and Power Plant	373,534
Zouping County Binzhou Prefecture, Shandong Province	Zouping Peak CHP Co., Ltd.	105,831 18,190 24,315	30 August 2001 29 December 2007 29 December 2008	3 July 2051 29 December 2056 3 December 2058	To be the location of Zouping Combined Heat and Power Plant	25,644

COAL AND NATURAL GAS RESERVES

Details of coal reserves and sales volume

as of 31 December 2024

(Unit: Million Tons)				
Coal Mine	Quantity of Coal Sales and Reserves			
	Coal reserves	Reserves movement	Sales volume	Coal reserves
	as of 31 Dec 2023	during 2024	Jan - Dec 2024	as of 31 Dec 2024
1. Indonesia				
1.1 Jorong	6.70	(4.30)	0.23	2.17
1.2 Indominco	16.98	25.42	7.51	34.89
1.3 Trubaindo	29.72	27.78	2.79	54.71
1.4 Bharinto	128.86	(22.26)	8.05	98.55
1.5 GPK	21.50	42.80	0.91	63.39
1.6 NPR Project	77.40	-	-	77.40
1.7 TIS	-	3.03	0.15	2.88
2. Australia	246.16	(17.24)	7.23	221.69
3. China				
3.1 Gaohe	90.79	-	8.83	81.95
3.2 Hebi Zhongtai	12.04	-	1.12	10.92
Total	630.15	55.23	36.83	648.54

* NPR Project (Nusa Persada Resources)

Details of natural gas reserves and sales volume

as of 31 December 2024

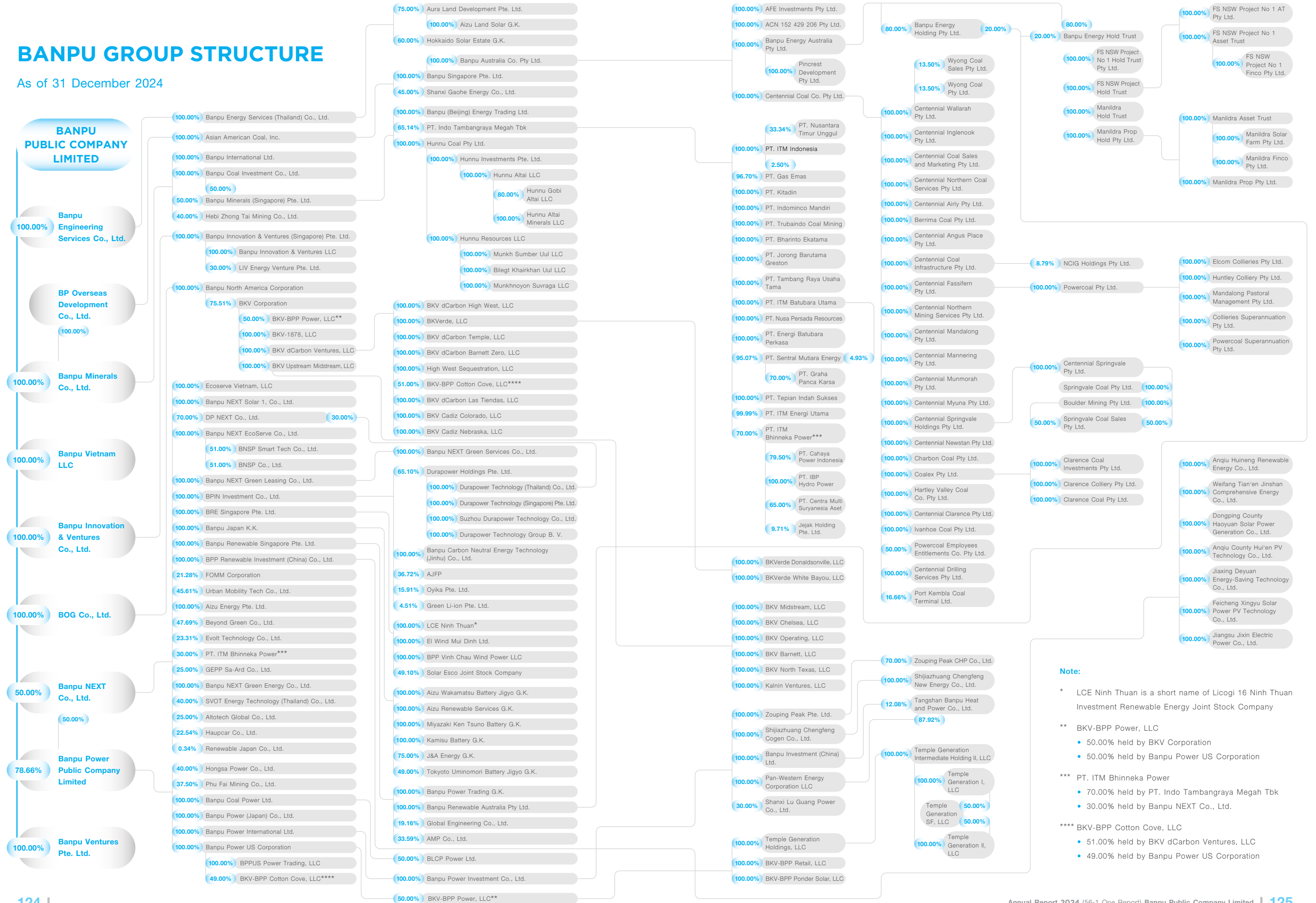
(Unit: Million Cubic Feet)	
Quantity of Natural Gas Sales and Reserves	Natural Gas
Natural Gas reserves as at 31 December 2023	5,149,724
1. Adjustment on reserve estimation	415,611
2. Production and Sales 2024	(288,405)
Natural Gas reserves as at 31 December 2024	5,276,930

*** Natural Gas Reserves in the Marcellus and Barnett shales refer to Reserve Report 's Ryder Scott



BANPU GROUP STRUCTURE

As of 31 December 2024





DETAIL OF THE COMPANY, ITS SUBSIDIARIES AND ASSOCIATED COMPANIES AND JOINT VENTURES AND OTHER INVESTMENT OF BANPU PUBLIC COMPANY LIMITED

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
1	Banpu Public Company Limited	Energy	10,018,902,725 THB	10,018,902,725 THB	10,018,902,725	1 THB	-	1550, Thanapoom Tower, 27 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2694 6600
Subsidiary Companies									
Thailand									
2	Banpu Minerals Co., Ltd.	Coal mining and trading	52,462,730,000 THB	52,462,730,000 THB	52,462,730	1,000 THB	100.00% (held by Banpu Public Company Limited)	1550, Thanapoom Tower, 27 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2694 6600
3	Banpu NEXT Green Energy Co., Ltd.	Smart Clean Energy Solution Business	80,000,000 THB	80,000,000 THB	800,000	100 THB	100.00% (held by Banpu NEXT Co., Ltd.)	1550, Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2095 6569
4	Banpu International Limited	Investment studying	1,040,000,000 THB	1,040,000,000 THB	104,000,000	10 THB	100.00% (held by Banpu Minerals Co., Ltd.)	1550, Thanapoom Tower, 27 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2694 6600
5	BOG Co., Ltd.	Investment in energy business	36,250,000,000 THB	36,250,000,000 THB	362,500,000	100 THB	100.00% (held by Banpu Public Company Limited)	1550, Thanapoom Tower, 27 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2694 6600
6	Banpu Engineering Services Co., Ltd.	Investment in alternative energy	212,000,000 THB	212,000,000 THB	21,200,000	10 THB	100.00% (held by Banpu Public Company Limited)	1550, Thanapoom Tower, 27 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2694 6600
7	Banpu Energy Services (Thailand) Co., Ltd.	Investment in alternative energy	139,124,430 THB	139,124,430 THB	13,912,443	10 THB	100.00% (held by Banpu Engineering Services Co., Ltd.)	1550, Thanapoom Tower, 27 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2694 6600
8	Banpu Innovation & Ventures Co., Ltd.	Research and development in disruptive technology	460,135,500 THB	460,135,500 THB	4,601,355	100 THB	100.00% (held by Banpu Public Company Limited)	1550, Thanapoom Tower, 27 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2694 6600
9	Banpu Power Public Company Limited	Energy Generation Business	31,012,020,000 THB	30,477,317,000 THB	3,047,731,700	10 THB	78.66% (held by Banpu Public Company Limited)	1550, Thanapoom Tower, 26 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2007 6000
10	Banpu Coal Power Limited	Investment in energy and power business	4,868,087,160 THB	4,868,087,160 THB	486,808,716	10 THB	100.00% (held by Banpu Power Public Company Limited)	1550, Thanapoom Tower, 26 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2007 6000
11	Banpu Power (Japan) Co., Ltd.	Investment in renewable energy business	5,000,000 THB	5,000,000 THB	500,000	10 THB	100.00% (held by Banpu Power Public Company Limited)	1550, Thanapoom Tower, 26 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2007 6000

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
12	Banpu NEXT Co., Ltd.	Smart Clean Energy Solution Business	18,795,000,000 THB	18,795,000,000 THB	Ordinary share 747,950,000 Preference share 191,800,000 Ordinary share 747,950,000 Preference share 191,800,000	10 THB	50.00% (held by Banpu Public Company Limited) 50.00% (held by Banpu Power Public Company Limited)	1550, Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2095 6569
13	Banpu Next Green Leasing Co., Ltd.	Investment in energy business and leasing	50,000,000 THB	50,000,000 THB	5,000,000	10 THB	100.00% (held by Banpu NEXT Co., Ltd.)	1550, Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2095 6569
14	Banpu NEXT EcoServe Co., Ltd.	Providing energy management services	228,000,000 THB	207,000,000 THB	2,280,000	100 THB	100.00% (held by Banpu NEXT Co., Ltd.)	1550, Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2095 6569
15	Banpu NEXT Green Services Co., Ltd.	Electric vehicle and charging stations business	100,000,000 THB	100,000,000 THB	10,000,000	10 THB	100.00% (held by Banpu NEXT Green Leasing Co., Ltd.)	1550 Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan Subdstrict, Ratchathewi District, Bangkok 10400, Thailand	+66 2095 6595
16	DP NEXT Co., Ltd.	Assembly and sale of battery	277,300,000 THB	97,695,500 41,869,500 THB	1,941,100 831,900	100 THB	70.00% (held by Banpu NEXT Co., Ltd.) 30.00% (held by Durapower Technology (Thailand) Co., Ltd.)	1550 Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok 10400, Thailand	+66 2095 6595
17	Durapower Technology (Thailand) Co., Ltd.	Marketing and sales of batteries and energy storage solution and wholesale of parts and accessories for vehicles	55,951,000 THB	55,951,000 THB	559,510	100 THB	100.00% (held by Durapower Holdings Pte. Ltd.)	75/19 Ocean Tower 2, 16 th Floor, Soi Sukhumvit 19 (Wattana), Klongtoey Nua Sub-district, Wattana District, Bangkok 10110, Thailand	N/A
18	Banpu NEXT Solar 1 Co., Ltd.	Solar rooftop business	633,680,000 THB	633,680,000 THB	63,368,000	10 THB	100.00% (held by Banpu NEXT Co., Ltd.)	1550, Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2095 6569
Republic of Indonesia									
19	PT. Indo Tambangraya Megah Tbk	Major trading of solid, liquid and gas fuel and other related products	1,500,000,000,000 IDR	564,962,500,000 IDR	1,129,925,000	500 IDR	65.14% (held by Banpu Minerals (Singapore) Pte. Ltd.)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
20	PT. Kitadin	Coal Mining	1,000,000,000,000 IDR	377,890,000,000 IDR	188,945	2,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
21	PT. Indominco Mandiri	Coal Mining	20,000,000,000 IDR	12,500,000,000 IDR	12,500	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
22	PT. Jorong Barutama Greston	Coal Mining	2,138,400,000,000 IDR	534,600,000,000 IDR	35,640	15,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
23	PT. Trubaindo Coal Mining	Coal Mining	100,000,000,000 IDR	63,500,000,000 IDR	63,500	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100



	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
24	PT. Bharinto Ekatama	Coal Mining	68,000,000,000 IDR	17,000,000,000	17,000	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
25	PT. ITM Indonesia	Major trading of solid, liquid and gas fuel and other related products	156,680,000,000 IDR	39,170,000,000 IDR	39,170	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
26	PT. Tambang Raya Usaha Tama	Mining and other excavations support activities	2,762,320,000,000 IDR	691,530,000,000 IDR	69,153	10,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
27	PT. ITM Batubara Utama	Coal Mining	40,000,000,000 IDR	11,000,000,000 IDR	11,000	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
28	PT. ITM Energi Utama	Energy business	148,280,000,000 IDR	37,070,000,000 IDR	37,070	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
29	PT. ITM Bhinneka Power	Electric Power Generator	774,788,000,000 IDR	699,205,000,000 IDR	699,205	1,000,000 IDR	70.00% (held by PT. Indo Tambangraya Megah Tbk) 30.00% (held by Banpu NEXT Co., Ltd.)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
30	PT. Gas Emas	Major trading of solid, liquid and gas fuel and other related products	979,050,000,000 IDR	717,599,820,864 IDR	31,000,000 1,275,000 255,000 170,000 18,256,528	9,725 (Series A Shares) 13,700 (Series B Shares)	96.70% (held by PT. Indo Tambangraya Megah Tbk) 2.50% (held by PT. ITM Indonesia)	Pondok Indah Office Tower 3, 3 rd Floor, 3 Jl. Sultan Iskandar Muda Kav. V-TA Pondok Pinang, Kebayoran Lama, Jakarta 12310, Indonesia	+62 21 29328100
31	PT. Tepian Indah Sukses	Coal Mining	349,424,000,000 IDR	87,356,000,000 IDR	87,356	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd Floor, 3 Jl. Sultan Iskandar Muda Kav. V-TA Pondok Pinang, Kebayoran Lama, Jakarta 12310, Indonesia	+62 541 749437
32	PT. Nusa Persada Resources	Coal Mining	500,000,000,000 IDR	312,337,000,000 IDR	3,123,370	100,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd Floor, 3 Jl. Sultan Iskandar Muda Kav. V-TA Pondok Pinang, Kebayoran Lama, Jakarta 12310, Indonesia	+62 811 884374
33	PT. Energi Batubara Perkasa	Major trading of solid, liquid and gas fuel and other related products	659,924,000,000 IDR	164,981,000,000 IDR	164,981	1,000,000 IDR	100.00% (held by PT. Indo Tambangraya Megah Tbk)	Pondok Indah Office Tower 3, 3 rd floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	+62 21 29328100
34	PT. Sentral Mutiara Energy	Major trading of solid, liquid and gas fuel and other related products	150,000,000,000 IDR	131,897,000,000 IDR	1,318,970	100,000 IDR	95.07% (held by PT. Indo Tambangraya Megah Tbk) 4.93% (held by PT. ITM Batubara Utama)	Gd. Menara Pertiwi Lt.28 Unit C-D Jl.Mega Kuningan Barat III Kav.10.1 No.3 Kel. Kuningan Timur, Kec. Setiabudi Jakarta Selatan -12950, Indonesia	+62 21 25983737
35	PT. Graha Panca Karsa	Coal mining and major trading of metal goods for construction material	500,000,000 IDR	300,000,000 IDR	300	1,000,000 IDR	70.00% (held by PT. Sentral Mutiara Energy)	Pondok Indah Office Tower 3, 3 rd Floor, Jl. Sultan Iskandar Muda Kav. V-TA Pondok Pinang, Kebayoran Lama, Jakarta 12310, Indonesia	+62 21 29328100

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
36	PT. Cahaya Power Indonesia	Smart Energy System	114,720,000,000 IDR	28,680,000,000 IDR	2,000,000	14,340 IDR	79.50% (held by PT. ITM Bhinneka Power)	Pondok Indah Office Tower 3, suite 302 Jl. Sultan Iskandar Muda Kav. V-TA Pondok Pinang, Kebayoran Lama, Jakarta 12310, Indonesia	+62 21 29328100
37	PT. IBP Hydro Power	Management Consultation	840,000,000,000 IDR	252,150,000,000 IDR	252,150	1,000,000 IDR	100.00% (held by PT. ITM Bhinneka Power)	Pondok Indah Office Tower 3, suite 302 Jl. Sultan Iskandar Muda Kav. V-TA Pondok Pinang, Kebayoran Lama, Jakarta 12310, Indonesia	+62 21 29328100
38	PT. Centra Multi Suryanesia Aset	Rental and Leasehold Without Option Rights and Wholesale Trade in Machinery, Equipment and Other Supplies	160,000,000,000 IDR	40,340,085,000 IDR	40,340,085	1,000 IDR	65.00% (held by PT. ITM Bhinneka Power)	Jalan Kaji Nomor 6, Desa/ Kelurahan Petojo Utara, Gambir, Jakarta Pusat, DKI Jakarta, Indonesia	+62 21 29328100
Australia									
39	Banpu Australia Co. Pty Ltd.	Investment in coal mining in Australia	2,958,218,276 AUD	2,958,218,276 AUD	2,958,218,276	1 AUD	100.00% (held by Banpu Singapore Pte. Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
40	AFE Investments Pty Ltd.	Mining Investment	2 AUD	2 AUD	2	1 AUD	100.00% (held by Banpu Australia Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
41	ACN 152 429 206 Pty Ltd.	Dormant	2 AUD	2 AUD	2	1 AUD	100.00% (held by Banpu Australia Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
42	Pincrest Development Pty Ltd.	Renewable Energy	2 AUD	2 AUD	2	1 AUD	100.00% (held by Banpu Energy Australia Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
43	Centennial Coal Co. Pty Ltd.	Coal Mining and Marketing	876,990,678 AUD	876,990,678 AUD	845,126,381	No par value*	100.00% (held by Banpu Australia Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
44	Centennial Northern Coal Services Pty Ltd.	Employer Company for Newstan Washery	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
45	Berrima Coal Pty Ltd.	Dormant	2 AUD	2 AUD	2	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
46	Centennial Airlty Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
47	Centennial Angus Place Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
48	Centennial Coal Infrastructure Pty Ltd.	Coal exporting logistics and infrastructure	2 AUD	2 AUD	2	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
49	Centennial Coal Sales and Marketing Pty Ltd.	Coal Marketing	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
50	Centennial Northern Mining Services Pty Ltd.	Dormant	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
51	Centennial Inglenook Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700



	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
52	Centennial Mandalong Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
53	Centennial Mannering Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
54	Centennial Munmorah Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
55	Centennial Myuna Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
56	Centennial Newstan Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
57	Charbon Coal Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
58	Centennial Clarence Pty Ltd.	Coal Mining - Clarence JV	8,800,000 AUD	8,800,000 AUD	8,800,000	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
59	Centennial Fassifern Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
60	Powercoal Pty Ltd.	Dormant Holding company	4,590,001 AUD	4,590,001 AUD	4,590,001	1 AUD	100.00% (held by Centennial Fassifern Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
61	Powercoal Superannuation Pty Ltd.	Superannuation Company (Dormant)	2 AUD	2 AUD	2	1 AUD	100.00% (held by Powercoal Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
62	Powercoal Employee Entitlements Company Pty Ltd.	Employee Trust Company Ex Powercoal	2 AUD	2 AUD	2	1 AUD	50.00% (Held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
63	Hartley Valley Coal Co Pty Ltd.	Dormant	1,000,000 AUD	1,000,000 AUD	1,000,000	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
64	Ivanhoe Coal Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
65	Centennial Drilling Services Pty Ltd.	Drilling Services	1,250,000 AUD	1,250,000 AUD	1,250,000	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
66	Centennial Springvale Holdings Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
67	Coalex Pty Ltd.	Coal Mining - Clarence JV	7,500,000 AUD	7,500,000 AUD	750,000	10 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
68	Clarence Coal Investments Pty Ltd.	Coal Mining - Clarence JV	19,500,002 AUD	19,500,002 AUD	19,500,002	1 AUD	100.00% (held by Coalex Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
69	Clarence Colliery Pty Ltd.	Coal Mining - Clarence JV	10,000 AUD	10,000 AUD	10,000	1 AUD	100.00% (held by Coalex Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
70	Clarence Coal Pty Ltd.	Coal Mining - Clarence JV	2 AUD	2 AUD	2	1 AUD	100.00% (held by Coalex Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
71	Collieries Superannuation Pty Ltd.	Superannuation Company (Dormant)	2 AUD	2 AUD	2	1 AUD	100.00% (held by Powercoal Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
72	Elcom Collieries Pty Ltd.	Dormant	1,500,000 AUD	1,500,000 AUD	750,000	2 AUD	100.00% (held by Powercoal Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
73	Huntley Colliery Pty Ltd.	Dormant	354,000 AUD	354,000 AUD	177,000	2 AUD	100.00% (held by Powercoal Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
74	Mandalong Pastoral Management Pty Ltd.	Dormant	2,736,028 AUD	2,736,028 AUD	10,368,014	2 AUD	100.00% (held by Powercoal Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
75	Centennial Springvale Pty Ltd.	Coal Mining	1,000,000 AUD	1,000,000 AUD	1,000,000	1 AUD	100.00% (held by Centennial Springvale Holdings Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
76	Springvale Coal Pty Ltd.	Coal Mining	2,000,000 AUD	2,000,000 AUD	2,000,000	1 AUD	100.00% (held by Centennial Springvale Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
77	Boulder Mining Pty Ltd.	Coal Mining	1,000 AUD	1,000 AUD	1,000	1 AUD	100.00% (held by Centennial Springvale Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+62 2 9266 2700
78	Springvale Coal Sales Pty Ltd.	Coal Marketing	2 AUD	2 AUD	2	1 AUD	50.00% (held by Centennial Springvale Pty Ltd.) 50.00% (held by Boulder Mining Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
79	Centennial Wallarah Pty Ltd.	Mining Investment	2 AUD	2 AUD	2	1 AUD	100.00% (held by Centennial Coal Co. Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
80	Hunnu Coal Pty Ltd.	Coal mining and trading	311,290,518.33 AUD	311,290,518.33 AUD	419,123,887	No par value*	100.00% (held by Banpu Minerals (Singapore) Pte. Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9166 2700
81	Banpu Energy Australia Pty Ltd.	Renewable Energy	78,001,278 AUD	78,001,278 AUD	78,001,278	1 AUD	100.00% (held by Banpu Australia Co. Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
82	Banpu Renewable Australia Pty Ltd.	Investment in Renewable Energy	9,031,774 AUD	9,031,774 AUD	9,031,774	1 AUD	100.00% (held by Banpu Renewable Singapore Pte. Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
83	Banpu Energy Hold Trust	Renewable Energy	N/A	N/A	82,320,008 20,580,002	N/A	80.00% (held by Banpu Energy Australia Pty Ltd. 20.00% (held by Banpu Renewable Australia Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
84	Banpu Energy Holding Pty Ltd.	Renewable Energy	10 AUD	10 AUD	10	1 AUD	80.00% (held by Banpu Energy Australia Pty Ltd. 20.00% (held by Banpu Renewable Australia Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760



	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
85	FS NSW Project No 1 HT Pty Ltd.	Renewable Energy	100 AUD	100 AUD	100	1 AUD	100.00% (held by Banpu Energy Holding Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
86	FS NSW Project No 1 AT Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1 AUD	100.00% (held by FS NSW Project No 1 HT Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
87	FS NSW Project No 1 Finco Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1 AUD	100.00% (held by FS NSW Project No 1 AT Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
88	Manildra Prop Hold Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1 AUD	100.00% (held by Banpu Energy Holding Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
89	Manildra Prop Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1 AUD	100.00% (held by Manildra Prop Hold Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
90	Manildra Finco Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1 AUD	100.00% (held by Manildra Prop Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
91	Manildra Solar Farm Pty Limited	Renewable Energy	100 AUD	100 AUD	100	1 AUD	100.00% (held by Manildra Prop Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
92	FS NSW Project No 1 Hold Trust	Renewable Energy	1 AUD	1 AUD	1	1 AUD	100.00% (held by Banpu Energy Hold Trust)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
93	FS NSW Project No 1 Asset Trust	Renewable Energy	N/A	N/A	8,206,490,677	N/A	100.00% (held by FS NSW Project No 1 Hold Trust as trustee for FS NSW Project No 1 AT Pty Ltd.)	Level 8, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2760
94	Manildra Hold Trust	Renewable Energy	N/A	N/A	6,926,658,900	N/A	100.00% (held by Banpu Energy Hold Trust as trustee of the Manildra Prop Hold Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
95	Manildra Asset Trust	Renewable Energy	N/A	N/A	3,701,105	N/A	100.00% (held by Manildra Hold Trust as trustee for Manildra Prop Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	+61 2 9266 2700
Republic of China									
96	Shijiazhuang Chengfeng Cogen Co., Ltd.	Power and steam generation and sales	52,516,000 USD	52,516,000 USD	N/A	N/A	100.00% (held by Banpu Power Investment Co., Ltd.)	East of Jingshen Highway, Zhengding County, Shijiazhuang City, Hebei Province, P.R.China, 050800	(+86311) 85176918
97	Banpu Investment (China) Ltd.	Investment in energy business and other industrial areas	30,000,000 USD	30,000,000 USD	N/A	N/A	100.00% (held by Banpu Power Investment Co., Ltd.)	Unit 508, 5 th Floor, Tower 21, No. 10 Jiuxianqiao Road, Chaoyang District, Beijing, P.R.China, 100015	(+8610) 57580388
98	Tangshan Banpu Heat and Power Co., Ltd.	Power and steam generation and sales	78,082,200 USD	47,504,216.60 USD	N/A	N/A	87.92% (held by Pan-Western Energy Corporation LLC) 12.08% (held by Banpu Investment (China) Ltd.)	West of Gujiaying Village, Bencheng Town, Luannan County, Tangshan City, Hebei Province, P.R.China, 063500	(+86315) 4168274

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
99	Zouping Peak CHP Co., Ltd.	Power and steam generation and sales	261,800,000 CNY	261,800,000 CNY	N/A	N/A	70.00% (held by Zouping Peak Pte. Ltd.)	Handian Town, Zouping County, Binzhou City, Shandong Province, P.R.China, 256209	(+86543) 4615655
100	BPP Renewable Investment (China) Co., Ltd.	Investment in renewable energy business	160,000,000 USD	97,620,000 USD	N/A	N/A	100.00% (held by Banpu NEXT Co., Ltd.)	Unit 509, 5 th Floor, Tower 21, No.10 Jiuxianqiao Road, Chaoyang District, Beijing, P.R.China, 100015	(+8610) 57580388
101	Anqiu Huineng Renewable Energy Co., Ltd.	Solar power generation	66,000,000 CNY	66,000,000 CNY	N/A	N/A	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	1 st Floor, Unit 1, Dafugou Village, Wushan Town, Anqiu County, Weifang City, Shandong Province, P.R.China	(+8610) 57580310
102	Weifang Tian'en Jinshan Comprehensive Energy Co., Ltd.	Solar power generation	83,000,000 CNY	83,000,000 CNY	N/A	N/A	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	2 nd Floor, Unit 1, Dafugou Village, Wushan Town, Anqiu County, Weifang City, Shandong Province, P.R.China	(+8610) 57580310
103	Dongping County Haoyuan Solar Power Generation Co., Ltd.	Solar power generation	69,000,000 CNY	69,000,000 CNY	N/A	N/A	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	East side of the north section of Xishan Road, Dongping County, Taian City, Shandong Province, P.R.China	(+8610) 57580310
104	Anqiu County Hui'en PV Technology Co., Ltd.	Solar power generation	62,000,000 CNY	62,000,000 CNY	N/A	N/A	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	Unit 2, Longwangmiao Village, Dasheng Town, Anqiu County, Weifang City, Shandong Province, P.R.China	(+8610) 57580310
105	Jiaxing Deyuan Energy-Saving Technology Co., Ltd.	Solar power generation	150,740,000 CNY	150,737,585.55 CNY	N/A	N/A	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	No. 999 Xianghu Road, Yaozhuang Town, Jiashan County, Jiaxing City, Zhejiang Province, P.R.China	(+8610) 57580310
106	Feicheng Xingyu Solar Power PV Technology Co., Ltd.	Solar power generation	55,000,000 CNY	55,000,000 CNY	N/A	N/A	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	Huangtuling Village, Anzhan Town, Feicheng County, Tai'an City, Shandong Province, P.R.China	(+8610) 57580310
107	Jiangsu Jixin Electric Power Co., Ltd.	Solar power generation	64,000,000 CNY	64,000,000 CNY	N/A	N/A	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	Zhengwei Village, Qianfeng Town, Jinhu County, Huai'an City, Jiangsu Province, P.R.China	(+8610) 57580310
108	Banpu (Beijing) Energy Trading Ltd.	Coal Trading	80,000,000 CNY	80,000,000 CNY	N/A	N/A	100.00% (held by Banpu Minerals (Singapore) Pte. Ltd.)	Unit 508A, 5 th Floor, Tower 21, No.10 Jiuxianqiao Road, Chaoyang District, Beijing, P.R.China	(+8610) 57580388
109	Shijiazhuang Chengfeng New Energy Co., Ltd.	Solar power generation	66,000,000 CNY	5,000,000 CNY	N/A	N/A	100.00% (held by Shijiazhuang Chengfeng Cogen Co., Ltd.)	No. 2-1, Jianye Xiang, Jianye Road, Zhengding County, Shijiazhuang City, Hebei Province, P.R.China	(+86311) 85176918
110	Suzhou Durapower Technology Co., Ltd.	Manufacture and sales of Lithium batteries for hybrid and electronic vehicles	50,000,000 USD	50,000,000 USD	50,000,000	N/A	100.00% (held by Durapower Holdings Pte. Ltd.)	No.12 Fuhua Road, Changshu Economic Development Zone, Changshu, Jiangsu, P.R.China, 215513	0512-52267811
111	Banpu Carbon Neutral Energy Technology (Jinhu) Co., Ltd.	Solar power generation	20,000,000 USD	5,000,000 USD	N/A	N/A	100.00% (held by BPIN Investment Co., Ltd.)	Zhengwei Village, Qianfeng Town, Jinhu County, Huai'an City, Jiangsu Province, P.R.China	(86517) 86585608
Mongolia									
112	Hunnu Altai LLC	Wholesale trade upon payment and agreement	167,356,458,736.68 MNT	167,356,458,736.68 MNT	1,208,436	138,490.13 MNT	100.00% (held by Hunnu Investments Pte. Ltd.)	Suite 502, Level 5, Block A of Monasa Office, Monasa Center, Mahatma Gandhi Street, 15 th Khoroo, Khan-Uul District, Ulaanbaatar 17011, Mongolia	(+976) 75551221



Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
113 Hunnu Gobi Altai LLC	Wholesale trade upon payment and agreement, minerals exploration and mining	93,378,027,000 MNT	93,378,027,000 MNT	93,378,027	1,000 MNT	80.00% (held by Hunnu Altai LLC)	Suite 502, Level 5, Block A of Monasa Office, Monasa Center, Mahatma Gandhi Street, 15 th Khoroo, Khan-Uul District, Ulaanbaatar 17011, Mongolia	(+976) 75551221
114 Hunnu Altai Minerals LLC	Wholesale trade upon payment and agreement, minerals mining	41,454,601,000 MNT	41,454,601,000 MNT	41,454,601	1,000 MNT	100.00% (held by Hunnu Altai LLC)	Suite 502, Level 5, Block A of Monasa Office, Monasa Center, Mahatma Gandhi Street, 15 th Khoroo, Khan-Uul District, Ulaanbaatar 17011, Mongolia	(+976) 75551221
115 Hunnu Resources LLC	Wholesale trade upon payment and agreement, minerals exploration	412,137,053,754.25 MNT	412,137,053,754.25 MNT	256,852,025	1,604.57 MNT	100.00% (held by Hunnu Coal Pty Ltd.)	Suite 502, Level 5, Block A of Monasa Office, Monasa Center, Mahatma Gandhi Street, 15 th Khoroo, Khan-Uul District, Ulaanbaatar 17011, Mongolia	(+976) 75551221
116 Munkh Sumber Uul LLC	Wholesale trade upon payment and agreement, minerals mining, tourism, construction materials sale	4,316,870,000 MNT	4,316,870,000 MNT	431,687	10,000 MNT	100.00% (held by Hunnu Resources LLC)	Suite 502, Level 5, Block A of Monasa Office, Monasa Center, Mahatma Gandhi Street, 15 th Khoroo, Khan-Uul District, Ulaanbaatar 17011, Mongolia	(+976) 75551221
117 Bilegt Khairkhan Uul LLC	Wholesale trade upon payment and agreement, minerals mining	34,700,750,000 MNT	34,700,750,000 MNT	3,470,075	10,000 MNT	100.00% (held by Hunnu Resources LLC)	Suite 502, Level 5, Block A of Monasa Office, Monasa Center, Mahatma Gandhi Street, 15 th Khoroo, Khan-Uul District, Ulaanbaatar 17011, Mongolia	(+976) 75551221
118 Munkhnoyon Suvraga LLC	Wholesale trade upon payment and agreement, minerals mining, tourism, construction materials sale	233,363,932,000 MNT	233,363,932,000 MNT	223,363,932	1,000 MNT	100.00% (held by Hunnu Resources LLC)	Suite 502, Level 5, Block A of Monasa Office, Monasa Center, Mahatma Gandhi Street, 15 th Khoroo, Khan-Uul District, Ulaanbaatar 17011, Mongolia	(+976) 75551221
Republic of Singapore								
119 Banpu Minerals (Singapore) Pte. Ltd.	Investment in coal mining	N/A	17,670,002 SGD 11,000,000 USD	Ordinary share 17,670,002 Preference share 17,670,002	No par value*	50.00% (held by Banpu Minerals Co., Ltd.) 50.00% (held by Banpu Coal Investment Co., Ltd.)	1 Marina Boulevard, #28-00 Singapore 018989	+65 6890 7188
120 Banpu Singapore Pte. Ltd.	Investment in coal business	N/A	1,500,000 SGD 3,067,856,827.21 USD	Ordinary share 1,500,000 Ordinary share 3,040,473,604	No par value*	100.00% (held by Asian American Coal, Inc.)	1 Marina Boulevard, #28-00 Singapore 018989	+65 6890 7188
121 Hunnu Investments Pte. Ltd.	Investment in coal business	N/A	100 SGD 35,778,188.82 USD	Ordinary share 100 Ordinary share 35,778,188	No par value*	100.00% (held by Hunnu Coal Pty Ltd.)	1 Marina Boulevard, #28-00 Singapore 018989	+65 6890 7188
122 Banpu Power Investment Co., Ltd.	Investment in power business	N/A	111,962,391.00 CNY	104,917,663	No par value*	100.00% (held by Banpu Power International Limited)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	+65 6338 1888
123 Zouping Peak Pte. Ltd.	Investment in power business	N/A	2 SGD 136,461,010 USD	2 136,461,010	No par value*	100.00% (held by Banpu Power Investment Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	+65 6338 1888
124 Banpu Renewable Singapore Pte. Ltd.	Investment in renewable energy business	N/A	17,010,029,719.8 JYP 71,295,176.69 USD	Ordinary share 17,010,029,719 Ordinary share 71,295,175	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	+65 6338 1888

Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
125 BRE Singapore Pte. Ltd.	Investment in renewable energy business	N/A	75,120,001 USD	75,120,001	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	+65 6338 1888
126 Banpu Innovation & Ventures (Singapore) Pte. Ltd.	Research and development in disruptive technology	N/A	6,000,000 USD	6,000,000	No par value*	100.00% (held by Banpu Innovation & Ventures Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	+65 6338 1888
127 Banpu Ventures Pte. Ltd.	Holding company for investment in fund and securities	N/A	266,175,000 USD	266,175,000	No par value*	100.00% (held by Banpu Public Company Limited)	1 Marina Boulevard #28-00 One Marina Boulevard Singapore 018989	+65 6890 7188
128 Durapower Holdings Pte. Ltd.	Investment holding company (with subsidiaries undertaking manufacturing of Lithium-Ion Battery (LiB) for EV and Energy Storage System (ESS))	N/A	59,737,835.50 SGD 50,000,000.00 USD	Ordinary share 385,699 Ordinary share 96,425	No par value*	65.10% (held by BPIN Investment Co., Ltd.)	10 Kallang Sector, The EGIS, Singapore 349280	+65 6846 0171
129 Durapower Technology (Singapore) Pte. Ltd	Marketing and sales of batteries and energy storage solution and wholesale of parts and accessories for vehicles	N/A	34,000,000 SGD	34,000,000	No par value*	100.00% (held by Durapower Holdings Pte. Ltd.)	10 Kallang Sector, The EGIS, Singapore 349280	+65 6846 0171
130 Aizu Energy Pte. Ltd.	Investment in renewable energy business	N/A	40,000,000 JYP	40,000,000	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	+65 6338 1888
Republic of Mauritius								
131 Banpu Coal Investment Co., Ltd.	Investment in coal mining	11,050,500 USD	11,050,500 USD	11,050,500	1 USD	100.00% (held by Banpu Minerals Co., Ltd.)	2 nd Floor, Offices 201 & 202, The Trademark, 550, La Promenade, Telfair 80829, Moka, Mauritius	+230 4908989
132 BP Overseas Development Co., Ltd.	Investment in coal mining	2,015,533,002 USD	2,015,533,002 USD	2,015,533,002	1 USD	100.00% (held by Banpu Minerals Co., Ltd.)	2 nd Floor, Offices 201 & 202, The Trademark, 550, La Promenade, Telfair 80829, Moka, Mauritius	+230 4908989
133 BPIN Investment Co., Ltd.	Investment in renewable energy	212,497,600 USD	212,497,600 USD	212,497,600	1 USD	100.00% (held by Banpu NEXT Co., Ltd.)	2 nd Floor, Offices 201 & 202, The Trademark, 550, La Promenade, Telfair 80829, Moka, Mauritius	+230 4908989
134 Banpu Power International Limited	Investment in power business	117,835,000 USD	117,835,000 USD	117,835,000	1 USD	100.00% (held by Banpu Power Public Company Limited)	2 nd Floor, Offices 201 & 202, The Trademark, 550, La Promenade, Telfair 80829, Moka, Mauritius	+230 4908989
British Virgin Islands								
135 Asian American Coal, Inc.	Investment in coal mining	1,730,000,000 USD	1,585,917,026 USD	1,585,917,026	1 USD	100.00% (held by BP Overseas Development Co., Ltd.)	Geneva Place, 2 nd Floor, #333 Waterfront Drive, Road Town, Tortola, British Virgin Islands	+284 494 4388
Cayman Islands								
136 Pan-Western Energy Corporation LLC	Investment in power business	100,000 USD	100,000 USD	10,000,000	0.01 USD	100.00% (held by Banpu Power Investment Co., Ltd.)	PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands, KY1-1104	+1 345 949 8066



Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
137 AJFP	Holding company for investment in energy generation and related business	601,000 USD	109,733 USD	Ordinary share 1,000 Preference share 108,733	1 USD	36.72% (held by BPIN Investment Company Limited)	PO Box 309, Ugland House, Grand Cayman, Cayman Islands, KY1-1104	+1 345 949 8066
Japan								
138 Banpu Power Trading G.K.	Energy trading	N/A	100,000,000 JPY	N/A	No par value*	100.00% (held by Banpu Renewable Singapore Pte. Ltd.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	+81 3 6205 4665
139 Banpu Japan K.K.	Investment in renewable energy business	N/A	100,000,000 JPY	558,868	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	+81 3 6205 4665
140 J&A Energy G.K.	Store and sell electricity using battery	N/A	500,000 JPY	N/A	No par value*	75.00% (held by Banpu Japan K.K.) 25% (held by Global Engineering Co., Ltd.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	+81 3 6205 4665
141 Aizu Renewable Services G.K.	Electricity business aggregation and consulting service in Aizuwakamatsu city area	N/A	2,000,000 JPY	N/A	No par value*	100.00% (held by Banpu Japan K.K.)	Smart City AiCT, 1-77 Higashisakaemachi, Aizuwakamatsu City, Fukushima Prefecture, Japan 965-0872	+81 3 6205 4665
142 Kamisu Battery G.K.	Store and sell electricity using battery	N/A	100,000 JPY	N/A	No par value*	100.00% (held by Banpu Japan K.K.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoku-ku, Tokyo, Japan 100-6033	+81 3 6205 4665
143 Aizu Wakamatsu Battery Jigyo G.K.	Store and sell electricity using battery	N/A	100,000 JPY	N/A	No par value*	100.00% (held by Banpu Japan K.K.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	+81 3 6205 4665
144 Miyazaki ken Tsuno Battery G.K.	Store and sell electricity using battery	N/A	100,000 JPY	N/A	No par value*	100.00% (held by Banpu Japan K.K.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	+81 3 6205 4665
Netherlands								
145 Durapower Technology Group B. V.	Marketing, technical and product application support of batteries and energy storage system	N/A	15,000 EUR	15,000	No par value*	100.00% (held by Durapower Holdings Pte. Ltd.)	Automotive Campus 30 5708 JZ Helmond, Netherlands	N/A
United States of America								
146 Banpu North America Corporation	Investment in oil and gas business	1,088,000,100 USD	1,088,000,100 USD	1,088,000,100	1 USD	100.00% (held by BOG Co., Ltd.)	251 Little Falls Dive, Wilmington, Delaware, USA 19808	+1 720 375 9680
147 BKV Corporation	Exploration and production of natural gas	N/A	1,438,713,949 USD	84,600,301	No par value*	75.51% (held by Banpu North America Corporation)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
148 BKV-1878, LLC	Investment in oil and gas business	N/A	N/A	N/A	No par value*	100.00% (held by BKV Corporation)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
149 BKV Upstream Midstream, LLC	Holding Company	N/A	N/A	N/A	No par value*	100.00% (held by BKV Corporation)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680

Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
150 Kalnin Ventures, LLC	Investment in oil and gas business	N/A	18,576,245 USD	N/A	No par value*	100.00% (held by BKV Upstream Midstream, LLC)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
151 BKV Chelsea, LLC	Investment in oil and gas business	N/A	205,285,593.76 USD	N/A	No par value*	100.00% (held by BKV Upstream Midstream, LLC)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
152 BKV Operating, LLC	Investment in oil and gas business	N/A	195,541,343.37 USD	N/A	No par value*	100.00% (held by BKV Upstream Midstream, LLC)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
153 BKV Barnett, LLC	Investment in oil and gas business	N/A	406,000,000 USD	N/A	No par value*	100.00% (held by BKV Upstream Midstream, LLC)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
154 BKV Midstream, LLC	Investment in oil and gas business	N/A	N/A	N/A	No par value*	100.00% (held by BKV Upstream Midstream, LLC)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
155 BKV North Texas, LLC	Investment in oil and gas business	N/A	N/A	N/A	No par value*	100.00% (held by BKV Upstream Midstream, LLC)	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
156 Banpu Innovation & Ventures, LLC	Research and development in disruptive technology	1,000,000 USD	1,000,000 USD	N/A	No par value*	100.00% (held by Banpu Innovation & Ventures (Singapore) Pte. Ltd.)	1105 North Market Street, Suite 1300, Wilmington, Delaware, USA 19801	+1 302 427 7650
157 BKV dCarbon Ventures, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV Corporation)	1200, 17th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
158 BKV dCarbon High West, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
159 BKV dCarbon Temple, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
160 BKV- BPP Cotton Cove, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	51.00% (held by BKV dCarbon Ventures, LLC) 49.00% (held by Banpu Power US Corporation)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
161 BKV dCarbon Barnett Zero, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
162 High West Sequestration, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	111 Veterans Memorial Boulevard, Metairie, Louisiana, USA	+1 720 375 9680
163 BKV dCarbon Las Tiendas, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
164 BKV Cadiz Colorado, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
165 BKV Cadiz Nebraska, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
166 BKVerde, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value*	100.00% (held by BKV dCarbon Ventures, LLC)	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680



Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
167 BKVerde Donaldsonville, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value* (held by BKVerde, LLC)	100.00%	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
168 BKVerde White Bayou, LLC	Carbon capture and related business	N/A	N/A	N/A	No par value* (held by BKVerde, LLC)	100.00%	1200, 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
169 Banpu Power US Corporation	Investment in energy generation and related business	N/A	71,840,000 USD	4	0.01 USD (held by Banpu Power Public Company Limited)	100.00%	251 Little Falls Dive, Wilmington, Delaware, USA 19808	+1 720 375 9680
170 BKV-BPP POWER, LLC	Investment in energy generation and related business	N/A	173,963,925.34 USD	N/A	No par value* (held by Banpu Power US Corporation) 50.00% (held by BKV Corporation)	50.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
171 Temple Generation Holdings, LLC	Energy generation and related business	N/A	N/A	N/A	No par value* (held by BKV-BPP Power, LLC)	100.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
172 Temple Generation Intermediate Holding II, LLC	Energy generation and related business	N/A	N/A	N/A	No par value* (held by Temple Generation Holdings, LLC)	100.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
173 Temple Generation I, LLC	Gas-fired power plant	N/A	N/A	N/A	No par value* (held by Temple Generation Intermediate Holding II, LLC)	100.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
174 Temple Generation II, LLC	Gas-fired power plant	N/A	N/A	N/A	No par value* (held by Temple Generation Intermediate Holding II, LLC)	100.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
175 Temple Generation SF, LLC	Energy generation and related business	N/A	N/A	N/A	No par value* (held by Temple Generation I, LLC) 50.00% (held by Temple Generation II, LLC)	50.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
176 BKV-BPP Retail, LLC	Consumer energy	N/A	N/A	N/A	No par value* (held by BKV-BPP Power, LLC)	100.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
177 BKV-BPP Ponder Solar, LLC	Renewable Energy Business	N/A	N/A	N/A	No par value* (held by BKV-BPP Power, LLC)	100.00%	1200 17 th Street, Suite 2100, Denver, Colorado, USA 80202	+1 720 375 9680
178 BPPUS Power Trading, LLC	To hold a power trading license and perform power trading activities	N/A	5,000,000 USD	N/A	No par value* (held by Banpu Power US Corporation)	100.00%	251 Little Falls Dive, Wilmington, Delaware, USA 19808	+1 720 375 9680
Socialist Republic of Vietnam								
179 BPP Vinh Chau Wind Power Limited Liability Company	Wind power production, power transmission and distribution	427,395,900,000 VND	427,395,900,000 VND	N/A	No par value* (held by BRE Singapore Pte. Ltd.)	100.00%	Wind power plant no.3, Street 48, Vinh Phuoc ward, Vinh Chau town, Soc Trang province, Vietnam, 96000	+849 0988 5015
180 Banpu Vietnam LLC	Management consulting services (Except for financial, accounting and legal consultancy)	23,000,000,000 VND	23,230,000,000 VND	N/A	No par value* (held by Banpu Public Company Limited)	100.00%	8 th Floor, Friendship Tower, 31 Le Duan Street, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam	+849 0748 4047

Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
181 El Wind Mui Dinh Ltd.	Power production, Installation of electrical systems	281,768,370,557 VND	281,768,370,557 VND	N/A	No par value* (held by BRE Singapore Pte. Ltd.)	100.00%	Tu Thien Village, Phuoc Dinh Ward, Thuan Nam District, Ninh Thuan Province, Vietnam, 59000	+849 25 9651 1234
182 Licogi 16 Ninh Thuan Renewable Energy Joint Stock Company	Power production	240,000,000,000 VND	240,000,000,000 VND	24,000,000	10,000 VND (held by BRE Singapore Pte. Ltd.)	100.00%	Kien Kien Vinh Hy Street, Khanh Phuoc Hamlet, Nhon Hai Commune, Ninh Hai District, Ninh Thuan Province, Vietnam, 59000	+84 28 3866 8535
183 Ecoserve Vietnam Limited Liability Company	Management consulting services (Except for financial, accounting and legal consultancy)	2,036,760,000 VND	2,036,760,000 VND	N/A	No par value* (held by Banpu NEXT Co., Ltd.)	100.00%	6 th Floor, Friendship Tower, 31 Le Duan, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam, 70000	+849 0748 4047
Associated Companies								
Australia								
184 Port Kembla Coal Terminal Limited	Ship loading Coal Port	720,000 AUD	720,000 AUD	720,000	1 AUD (held by Centennial Coal Co. Pty Ltd.)	16.66%	Port Kembla Road, Inner Harbour, Wollongong NSW 2520, Australia	+61 2 4221 8224
Japan								
185 FOMM Corporation	Planning, developing, manufacturing and selling of compact electric vehicle	N/A	81,250,000 JPY	2,063,135	No par value* (held by Banpu NEXT Co., Ltd.)	21.28%	30-18 Mitsuzawakamichou, Kanagawa-ku, Yokohama-shi, Kanagawa-ken, Japan	81-(0)45-286-3476
186 Global Engineering Co., Ltd.	Electricity sales and resource aggregator of virtual power plant	N/A	342,920,000 JPY	3,759,000	No par value* (held by Banpu Renewable Singapore Pte. Ltd.)	19.16%	Nishiko Living Kashii 2 nd Floor, 1-1-1, Kashii, Higashi-ku, Fukuoka city, Fukuoka pref. Japan 813-0011	+81 92 692 7547
Thailand								
187 Urban Mobility Tech Co., Ltd.	Electric vehicle business	2,447,750 THB	1,333,810 1,113,940 THB	Preference share 133,381 Ordinary share 111,394	10 THB (held by Banpu NEXT Co., Ltd.)	45.61%	256 Soi Soonvijai, Rama IX Soi 17 Road, Bangkapi, Huaykwang, Bangkok 10310, Thailand	+668 6887 4796
188 Beyond Green Co., Ltd.	Integrated electric vehicle	833,325,700 THB	833,325,700 THB	8,333,257	100 THB (held by Banpu NEXT Co., Ltd.)	47.69%	115/1, 115/6, Motorway Road, Thap Chang Sub-Area, Saphan Sung Area, Bangkok 10250, Thailand	+66 2136 0490
189 GEPP SA-ARD Co., Ltd.	Integrated waste management platform	2,666,700 THB	2,666,700 THB	26,667	100 THB (held by Banpu NEXT Co., Ltd.)	25.00%	559/186 Nonsi Road, Chong Nonsi Subdistrict, Yannawa District, Bangkok 10120, Thailand	+668 4360 2928
190 SVOLT Energy Technology (Thailand) Co., Ltd.	Manufacturing of Lithium-Ion Battery (LiB) for EV and Energy Storage System (ESS)	519,466,700 THB	519,466,700 THB	5,194,667	100 THB (held by Banpu NEXT Co., Ltd.)	40.00%	102/21 Moo 7, Bo Win Subdistrict, Sri Racha District, Chonburi 20230, Thailand	+6694 592 5936
191 Haupcar Co., Ltd.	Renting of passenger car, pick-up truck, van and similar light motor vehicles	9,212,780 THB	5,995,080 3,217,700 THB	Ordinary share 599,508 Preference share 321,770	10 THB (held by Banpu NEXT Co., Ltd.)	22.54%	128/21 3 Floor, Phayathai Plaza, Phayathai Road, Thung Phaya Thai Subdistrict, Ratchathewi District, Bangkok 10400 Thailand	+662 113 1155
192 Altotech Global Co., Ltd.	Other information technology and computer service activities	1,644,500 THB	1,644,500 THB	Ordinary share 10,153 Preference share 6,292	100 THB (held by Banpu NEXT Co., Ltd.)	25.00%	719 Mint Tower, 4 th Floor, Room No. 416, Rama VI Road, Wang Mai, Pathum Wan, Bangkok, Thailand	+662 059 9603



Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
Socialist Republic of Vietnam								
193 Solar Esco Joint Stock Company	Computer Programming, Power production, Power transmission and distribution	306,661,690,000 VND	306,661,690,000 VND	Ordinary share 30,642,239 Preference share 23,930	10,000 VND	49.10% (held by BRE Singapore Pte. Ltd.)	47 Le Van Thinh, Quarter 5, Binh Trung Dong Ward, Thu Duc City, Ho Chi Minh City, Vietnam	+286 285 4535
Joint Ventures								
Republic of Indonesia								
194 PT. Nusantara Timur Unggul	Fuel Distributor	1,000,000,000 IDR	600,000,000 IDR	600	1,000,000 IDR	33.34% (held by PT. ITM Indonesia)	Gedung Graha Indramas 4 th Fl., Jalan AIP II K.S. Tubun Raya No. 77, Palmerah, West Jakarta, Indonesia	+6221 29328100
Republic of China								
195 Shanxi Gaohe Energy Co., Ltd.	Coal mining in China	1,519,860,000 CNY	1,519,860,000 CNY	N/A	N/A	45.00% (held by Asian American Coal, Inc.)	Haojiazhuang Town, Changzhi County, Changzhi City, Shanxi Province, P.R.China	+8610 5820 3663
196 Hebi Zhong Tai Mining Co., Ltd.	Investment in coal mining	783,330,000 CNY	783,330,000 CNY	N/A	N/A	40.00% (held by Banpu Minerals Co., Ltd.)	Sikuang Industrial Park, Hebiji, Hebei City, Henan Province, P.R.China	+8639 2291 7401-2
197 Shanxi Lu Guang Power Co., Ltd.	Power generating and sales	1,745,818,000 CNY	1,500,000,000 CNY	N/A	N/A	30.00% (held by Banpu Power Investment Co., Ltd.)	Songcun Town, Zhangzi County, Changzhi City, Shanxi Province, P.R.China	+86355 8580511
Japan								
198 Aizu Land Solar G.K.	Land owner of solar project	N/A	100,000 JYP	N/A	No par value*	100.00% (held by Aura Land Development Pte. Ltd.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	+81 3 6205 4665
199 Hokkaido Solar Estate G.K.	Land owner of solar project	N/A	10,000,000 JYP	N/A	No par value*	60.00% (held by Banpu Energy Services (Thailand) Co., Ltd.)	1-1-7 Moto-akasaka, Minato-ku, Tokyo, Japan, 107-0051	+81 3 3560 1115
200 Tokyoto Uminomori Battery Jigyo G.K.	Store and sell electricity using battery	N/A	100,000 JYP	N/A	No par value*	49.00% (held by Banpu Japan K.K.)	3-7-11 Shibaura, Minato-ku, Tokyo, Japan 108-0023	+83 6400 5970
201 AMP Co., Ltd.	Renewable Energy Business	98,805 JPY	64,981,460 JPY	Ordinary share 95,000 Preference share 3,805	No par value*	33.59% (held by Banpu Renewable Singapore Pte. Ltd.)	Ark Hills South Tower 16Fl 1-4-5 Roppongi, Minato-Ku Tokyo, Japan 106-0032	+81 3 4500 8054
Lao People's Democratic Republic								
202 Hongsa Power Co., Ltd.	Power generating and sales	927,000,000 USD	927,000,000 USD	92,700,000	10 USD	40.00% (held by Banpu Power Public Company Limited)	NNN Building 4 th Floor, Room No.D5 Bourichan Road, Phonsinouane Village, Sisattanak District, Vientiane Capital, Lao PDR	+856 2122 483
203 Phu Fai Mining Co., Ltd.	Mining concession	50,000 USD	50,000 USD	5,000	10 USD	37.50% (held by Banpu Power Public Company Limited)	NNN Building 4 th Floor, Room No.D5 Bourichan Road, Phonsinouane Village, Sisattanak District, Vientiane Capital, Lao PDR	+856 2122 483
Republic of Singapore								
204 Aura Land Development Pte. Ltd.	Investment in property for solar energy business	N/A	3,840,989.20 USD	3,840,988	No par value*	75.00% (held by Banpu Energy Services (Thailand) Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	+65 6338 1888

Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (Shares)	Par value per Share	% of holding	Head Office	Telephone
205 LIV Energy Venture Pte. Ltd.	Development and commercialization of hybrid ESS	N/A	3,333,333 USD	3,333,333	No par value*	30.00% (held by Banpu Innovation & Ventures (Singapore) Pte. Ltd.)	1 Cleantech Loop #02-26 Cleantech One Singapore 637141	+65 6268 6129
Thailand								
206 BLCP Power Limited	Power generation and sales	11,610,000,000 THB	11,610,000,000 THB	116,100,000	100 THB	50.00% (held by Banpu Coal Power Ltd.)	9 I-8 Road, Map Ta Phut Industrial Estate, Muang District, Rayong 21150 Thailand	+6638 925 100
207 BNSP Smart Tech Co., Ltd.	Investor and developer district cooling systems (DCS)	260,000,000 THB	214,675,000 THB	2,600,000	100 THB	51.00% (held by Banpu NEXT EcoServe Co., Ltd.)	1550, Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	+66 2095 6595
208 Evolt Technology Co., Ltd.	Electric Vehicle Infrastructure	10,215,000 THB	10,215,000 THB	102,150	100 THB	23.31% (held by Banpu NEXT Co., Ltd.)	926 Block 28, Building C, 2 nd Floor, Room No. C201-C202, Soi Chula 7, Wang Mai Sub-district, Pathumwan District, Bangkok 10330, Thailand	+662 095 6569
209 BNSP Co., Ltd.	Investor and developer district cooling systems (DCS)	3,000,000 THB	750,000 THB	7,500	100 THB	51% (held by Banpu NEXT EcoServe Co., Ltd.)	1550 Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok 10400, Thailand	+662 095 6569
Other investment								
Republic of Singapore								
210 Green Li-ion Pte. Ltd.	Recycling of Metal waste and scrap	N/A	37,112,368.12 USD 75,000.00 SGD 1,177.00 USD 81.77 SGD	Preference share 150,875 Preference share 8,135 Ordinary share 7,690 Ordinary share 81,770	N/A	4.51% (held by BPIN Investment Co., Ltd.)	83 Kim Yam Road #03-01 Singapore 239378	+65 6016 7459
211 Oyika Pte. Ltd	Operate battery swapping platform	N/A	540,378 USD 22,000,007.28 USD	Ordinary share 1,961,200 Preference share 2,264,326	N/A	15.91% (held by BPIN Investment Co., Ltd.)	2 Leng Kee Road #05-02A Thye Hong Centre 159086 Singapore	N/A
Republic of Indonesia								
212 Jejak Holding Pte. Ltd.	Climate-tech Company	2,710,000 USD	2,710,000 USD	1,545,349	1.75 USD	9.71% (held by PT. ITM Bhinneka Power)	Gedung Office 8. Level 18-A, Jl. Senopati No. 8B, Kawasan SCBD, Jakarta Selatan, 12190 Indonesia	+62 21 5020 3905
Australia								
213 Wyong Coal Sales Pty Limited	Coal marketing (Dormant)	400 AUD	400 AUD	400	1 AUD	13.50% (held by Centennial Wallarah Pty Limited)	Suite 404, 50 Berry Street, North Sydney, NSW, 2060, Australia	+61 2 4352 7500
214 Wyong Coal Pty Limited	Coal Mining - JV Manager	N/A	N/A	N/A	N/A	13.50% (held by Centennial Wallarah Pty Limited)	78 Tooheys Road, Bushells Ridge NSW 2259, Australia	3 4352 7500
215 NCIG Holdings Pty Ltd	Ship loading coal port	922 AUD	922 AUD	922	1 AUD	8.79% (held by Centennial Coal Infrastructure Pty Limited)	30 Raven Street, Australia	+61 2 4920 3900
Japan								
216 Renewable Japan Co., Ltd.	Electricity power generation, renewable energy-related financing services	N/A	2,109,525,000 JPY	29,754,180	No par value*	0.34% (held by Banpu NEXT Co., Ltd.)	Toranomon Kotohira Tower 6 th floor, 1-2-8 Toranomon, Minato-ku, Tokyo, Japan 105-0001	81 3 5510 9086

* Under Corporate Law

SHAREHOLDERS

Top 10 Major Shareholders, as of 31 December 2024

Major Shareholders	No. of Shares	%
1. Vongkusolkrit Family	788,201,312	7.87
Mitr Phol Sugar Corp., Ltd.	827,908,786	8.26
TME Capital Co., Ltd.	102,371,266	1.02
Mid-Siam Capital Co., Ltd.	82,300,820	0.82
MP Particle Board Co., Ltd.	61,299,415	0.61
City Holding Co., Ltd.	59,918,082	0.60
East Spring Holding Co., Ltd.	55,801,100	0.56
Pacific Sugar Corp., Ltd.	27,482,796	0.27
Mitr Phol Bio-Power (Phu Wiang) Co., Ltd.	24,794,390	0.25
2. Thai NVDR Co., Ltd.	842,028,912	8.40
3. South East Asia UK (Type C) Nominees Limited	309,739,029	3.09
4. Mr. Direk Vinichbutr	241,505,600	2.41
5. Mr. Prateep Tangmatitham	179,937,498	1.80
6. The Bank of New York (Nominees) Limited	126,326,959	1.26
7. Vayupak Fund 1	106,960,100	1.07
8. Mr. Wichai Wachiraphong	90,645,100	0.90
9. State Street Europe Limited	78,456,581	0.78
10. Mr. Supachai Suthipongchai	71,994,210	0.72
Total	4,077,671,956	40.69

Notes:

- Mitr Phol Sugar Corp., Ltd. has the following shareholder:
Mid-Siam Sugar Corp., Ltd. holds 99.99% of its paid-up capital.
 - TME Capital Co., Ltd. has the following shareholders:
 - The Vongkusolkrit Family holds 80.01% of its paid-up capital.
 - Ufinves Co., Ltd. holds 15.23% of its paid-up capital.
 - The Kanjanakumnerd Family holds 3.82% of its paid-up capital.
 - The Putongsiriporn Family holds 0.94% of its paid-up capital.
 - Mid-Siam Capital Co., Ltd. has the following shareholder:
Mid-Siam Sugar Corp., Ltd. holds 99.99% of its paid-up capital.
 - MP Particle Board Co., Ltd. has the following shareholder:
United Farmer and Industry Co., Ltd. holds 99.99% of its paid-up capital.
- City Holding Co., Ltd. has the following shareholders:
 - The Vongkusolkrit Family holds 90.50% of its paid-up capital.
 - The Kanjanakumnerd Family holds 6.00% of its paid-up capital.
 - The Putongsiriporn Family holds 2.00% of its paid-up capital.
 - The Jenlapwattanakul Family holds 1.50% of its paid-up capital.
 - East Spring Holding Co., Ltd. has the following shareholder:
The Vongkusolkrit Family holds 100% of its paid-up capital.
 - Pacific Sugar Corp., Ltd. has the following shareholder:
Mitr Phol Sugar Corp., Ltd. holds 99.99% of its paid-up capital.
 - Mitr Phol Bio-Power (Phu Wiang) Co., Ltd. has the following shareholder:
United Farmer and Industry Co., Ltd. holds 52.38% of its paid-up capital.

SECURITY

Authorized Capital	
Company Name	บริษัท บ้านปู จำกัด (มหาชน)
Company Name (English)	Banpu Public Company Limited
Market Symbol	BANPU
Major Business	Energy
Registration Number	BorMorJor. 152
Authorized Capital	THB 10,018,902,725* Consisting of 10,018,902,725 ordinary shares with the par value of THB 1 per share
Paid-up Capital	THB 10,018,902,725 Consisting of 10,018,902,725 ordinary shares with the par value of THB 1 per share
Number of Shares	10,018,902,725 shares
Par Value	THB 1 (One Baht)

Notes:

* The Company has reduced its registered capital by THB 130,260,303, from the previous registered capital of THB 10,149,163,028 (par value of THB 1 per share) to THB 10,018,902,725 (par value of THB 1 per share). The capital reduction has been successfully registered with the Minister of Commerce on 2 April 2024.

As of 31 December 2024, Thai NVDR Company Limited (Thai NVDR), a subsidiary of the Stock Exchange of Thailand, as well as the Company’s shareholders hold the underlying securities total amount of 842,028,912 shares, or 8.40% of the issued and paid-up shares at that date. NVDR holders will obtain all financial benefits in the same manner as the Company’s ordinary shareholders, except that NVDR holders will have no voting rights at shareholder meetings since they are not the Company’s direct shareholders. Practically, Thai NVDR will attend a shareholder meeting and vote at its discretion but not by the instruction of NVDR shareholders. The number of the Company’s shares held by the investors who have invested via Thai NVDR is subject to change, which is beyond the Company’s control.

Foreign Ownership Restrictions

Foreign shareholders may own the Company’s shares in a total amount not exceeding 40% of the Company’s issued and paid-up shares. As of 31 December 2024, the Company’s shares owned by foreign shareholders were approximately 15.82% of the Company’s paid-up capital.

DEBENTURE

Debenture Details	Banpu Debentures No. 1/2011 Tranche 4	Banpu Debentures No. 2/2013 Tranche 2	Banpu Debentures No. 1/2015 Tranche 2	Banpu Debentures No. 1/2015 Tranche 3	Banpu Debentures No. 1/2017
Issuer	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.
Total Value of Debentures	THB 2,000 Million	THB 2,100 Million	THB 1,750 Million	THB 1,250 Million	THB 10,000 Million
Type of Debenture	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures	Name-registered, unsubordinated and unsecured debentures	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative
Amount of Debentures	2,000,000 Units	2,100,000 Units	1,750,000 Units	1,250,000 Units	10,000,000 Units
Par Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Outstanding Debenture Value as of 31 December 2024	THB 2,000 Million	THB 2,100 Million	THB 1,750 Million	THB 1,250 Million	THB 10,000 Million
Coupon Rate	5.19%	5.05%	4.00%	4.10%	4.17%
Tenor	15 Years	12 Years	10 Years	12 Years	10 Years
Issue Date	1 April 2011	10 July 2013	12 November 2015	12 November 2015	21 April 2017
Maturity Date	1 April 2026	10 July 2025	12 November 2025	12 November 2027	21 April 2027
Call Option for Debenture Holders and Issuer	-None-	-None-	-None-	-None-	-None-
Principal Payment Before the Maturity Date	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.
Maturity Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Collateral	-None-	-None-	-None-	-None-	-None-
Debenture Rating	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	-None-	-None-	A+ TRIS Rating Co., Ltd.

Debenture Details	Banpu Debentures No. 1/2018	Banpu Debentures No. 1/2019	Banpu Debentures No. 1/2021 Tranche 1	Banpu Debentures No. 1/2021 Tranche 2	Banpu Debentures No. 2/2021 Tranche 1
Issuer	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.
Total Value of Debentures	USD 50 Million	THB 10,000 Million	THB 2,000 Million	THB 3,670 Million	THB 3,945 Million
Type of Debenture	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative
Amount of Debentures	5,000 Units	10,000,000 Units	2,000,000 Units	3,670,000 Units	3,945,000 Units
Par Value	USD 10,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Outstanding Debenture Value as of 31 December 2024	USD 50 Million	THB 10,000 Million	THB 2,000 Million	THB 3,670 Million	THB 3,945 Million
Coupon Rate	5.25%	4.00%	3.33%	3.78%	2.90%
Tenor	10 Years	10 Years	7 Years	10 Years	5 Years
Issue Date	8 August 2018	22 May 2019	24 February 2021	24 February 2021	4 August 2021
Maturity Date	8 August 2028	22 May 2029	24 February 2028	24 February 2031	4 August 2026
Call Option for Debenture Holders and Issuer	-None-	-None-	-None-	-None-	-None-
Principal Payment Before the Maturity Date	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.
Maturity Value	USD 10,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Collateral	-None-	-None-	-None-	-None-	-None-
Debenture Rating	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.



Debenture Details	Banpu Debentures No. 2/2021 Tranche 2	Banpu Debentures No. 2/2021 Tranche 3	Banpu Debentures No. 1/2022 Tranche 1	Banpu Debentures No. 1/2022 Tranche 2	Banpu Debentures No. 1/2022 Tranche 3
Issuer	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.
Total Value of Debentures	THB 4,010 Million	THB 6,045 Million	THB 2,000 Million	THB 1,000 Million	THB 2,000 Million
Type of Debenture	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative
Amount of Debentures	4,010,000 Units	6,045,000 Units	2,000,000 Units	1,000,000 Units	2,000,000 Units
Par Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Outstanding Debenture Value as of 31 December 2024	THB 4,010 Million	THB 6,045 Million	THB 2,000 Million	THB 1,000 Million	THB 2,000 Million
Coupon Rate	3.30%	3.80%	1.76%	3.11%	3.58%
Tenor	7 Years	10 Years	3 Years	6 Years	8 Years
Issue Date	4 August 2021	4 August 2021	27 January 2022	27 January 2022	27 January 2022
Maturity Date	4 August 2028	4 August 2031	27 January 2025	27 January 2028	27 January 2030
Call Option for Debenture Holders and Issuer	-None-	-None-	-None-	-None-	-None-
Principal Payment Before the Maturity Date	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.
Maturity Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Collateral	-None-	-None-	-None-	-None-	-None-
Debenture Rating	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.

Debenture Details	Banpu Debentures No. 1/2022 Tranche 4	Banpu Debentures No. 1/2022 Tranche 5	Banpu Debentures No. 2/2022 Tranche 1	Banpu Debentures No. 2/2022 Tranche 2	Banpu Debentures No. 2/2022 Tranche 3
Issuer	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.
Total Value of Debentures	THB 3,000 Million	THB 4,000 Million	THB 4,000 Million	THB 1,860 Million	THB 3,240 Million
Type of Debenture	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative
Amount of Debentures	3,000,000 Units	4,000,000 Units	4,000,000 Units	1,860,000 Units	3,240,000 Units
Par Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Outstanding Debenture Value as of 31 December 2024	THB 3,000 Million	THB 4,000 Million	THB 4,000 Million	THB 1,860 Million	THB 3,240 Million
Coupon Rate	3.89%	4.12%	3.26%	3.80%	4.20%
Tenor	10 Years	12 Years	4 Years	7 Years	10 Years
Issue Date	27 January 2022	27 January 2022	20 September 2022	20 September 2022	20 September 2022
Maturity Date	27 January 2032	27 January 2034	20 September 2026	20 September 2029	20 September 2032
Call Option for Debenture Holders and Issuer	-None-	-None-	-None-	-None-	-None-
Principal Payment Before the Maturity Date	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.
Maturity Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Collateral	-None-	-None-	-None-	-None-	-None-
Debenture Rating	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.



Debenture Details	Banpu Debentures No. 1/2023 Tranche 1	Banpu Debentures No. 1/2023 Tranche 2	Banpu Debentures No. 1/2023 Tranche 3	Banpu Debentures No. 1/2023 Tranche 4	Banpu Debentures No. 1/2024 Tranche 1
Issuer	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.
Total Value of Debentures	THB 3,226.8 Million	THB 1,531.4 Million	THB 1,951.8 Million	THB 1,490 Million	THB 1,300 Million
Type of Debenture	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative
Amount of Debentures	3,226,800 Units	1,531,400 Units	1,951,800 Units	1,490,000 Units	1,300,000 Units
Par Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Outstanding Debenture Value as of 31 December 2024	THB 3,226.8 Million	THB 1,531.4 Million	THB 1,951.8 Million	THB 1,490 Million	THB 1,300 Million
Coupon Rate	3.26%	3.76%	4.04%	4.46%	3.10%
Tenor	5 Years	7 Years	10 Years	15 Years	2 Years 3 Months
Issue Date	8 March 2023	8 March 2023	8 March 2023	8 March 2023	10 May 2024
Maturity Date	8 March 2028	8 March 2030	8 March 2033	8 March 2038	10 August 2026
Call Option for Debenture Holders and Issuer	-None-	-None-	-None-	-None-	-None-
Principal Payment Before the Maturity Date	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.
Maturity Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Collateral	-None-	-None-	-None-	-None-	-None-
Debenture Rating	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.

Debenture Details	Banpu Debentures No. 1/2024 Tranche 2	Banpu Debentures No. 1/2024 Tranche 3	Banpu Debentures No. 1/2024 Tranche 4	Banpu Debentures No. 1/2024 Tranche 5	Banpu Debentures No. 2/2024
Issuer	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.	Banpu Plc.
Total Value of Debentures	THB 1,859 Million	THB 722 Million	THB 1,099 Million	THB 2,410 Million	THB 2,500 Million
Type of Debenture	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures with a debenture holders' representative	Name-registered, unsubordinated and unsecured debentures
Amount of Debentures	1,859,000 Units	722,000 Units	1,099,000 Units	2,410,000 Units	2,500,000 Units
Par Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Outstanding Debenture Value as of 31 December 2024	THB 1,859 Million	THB 722 Million	THB 1,099 Million	THB 2,410 Million	THB 2,500 Million
Coupon Rate	3.50%	3.76%	4.08%	4.21%	No interest payments (zero coupon) with a 2.98% discount rate per year
Tenor	5 Years 9 Months	7 Years	10 Years	12 Years	2 Years 11 Months 27 Days
Issue Date	10 May 2024	10 May 2024	10 May 2024	10 May 2024	27 December 2024
Maturity Date	10 February 2030	10 May 2031	10 May 2034	10 May 2036	24 December 2027
Call Option for Debenture Holders and Issuer	-None-	-None-	-None-	-None-	-None-
Principal Payment Before the Maturity Date	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.	The debenture issuer will pay the principal on the maturity date.
Maturity Value	THB 1,000	THB 1,000	THB 1,000	THB 1,000	THB 1,000
Collateral	-None-	-None-	-None-	-None-	-None-
Debenture Rating	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	A+ TRIS Rating Co., Ltd.	-None-



Utilization of Proceeds from the Issuance and Offering of Debentures

Utilization of Proceeds	Amount (THB Million)	Duration of Utilization (Months)	Details
To repay debts, including loans and/or promissory notes from financial institutions and/or bills of exchange and/or debentures	7,390		The company used the proceeds from the issuance and offering of debentures 1/2024 as follows:
		1	• Repayment of loans from financial institutions that are not the underwriters, amounting to THB 1,500 million
		1	• Repayment of bill of exchange, amounting to THB 2,300 million
		2	• Repayment of bill of exchange, amounting to THB 1,000 million
		2	• Repayment of debenture, amounting to THB 2,590 million

DIVIDEND POLICY

Banpu has a policy to pay approximately 50% of its net profits from the consolidated financial statements, less all kinds of statutory and corporate reserves. However, the dividend payout rate will depend on cash flows, investment obligations of the Company and its affiliates as well as legal restrictions and other requirements.

The Company’s affiliates have a policy to pay the dividend from net profits after the deduction of all reserves required by governing laws. The Board of Directors shall consider the dividend payout rate based on operating income, financial conditions, and capital requirements. After that, it will be proposed to shareholders for approval. For the past five years, Banpu Public Company Limited has paid out dividends as follows:

Year	Dividend Rate for First Six Months (THB/Share)	Dividend Rate for Second Six Months (THB/Share)	Dividend Rate for Full Year (THB/Share)	Net Profit (THB/Share)	Dividend Payout per Net Profit (%)
2020	0.15	0.15	0.30	(0.30)	n.a.
2021	0.20	0.25	0.45	1.59	28%
2022	0.45	0.75	1.20	5.65	21%
2023	0.25	0.20	0.45	0.615	73%
2024	0.18	0.12	0.30	(0.068)	n.a.

* The Company announced a total dividend of THB 0.30 per share arising from its performance during the period from 1 January 2024 to 31 December 2024, of which THB 0.18 was paid on 26 September 2024. The remaining dividend of THB 0.12 per share for 2024 performance will be paid on 30 April 2025.



RISK MANAGEMENT

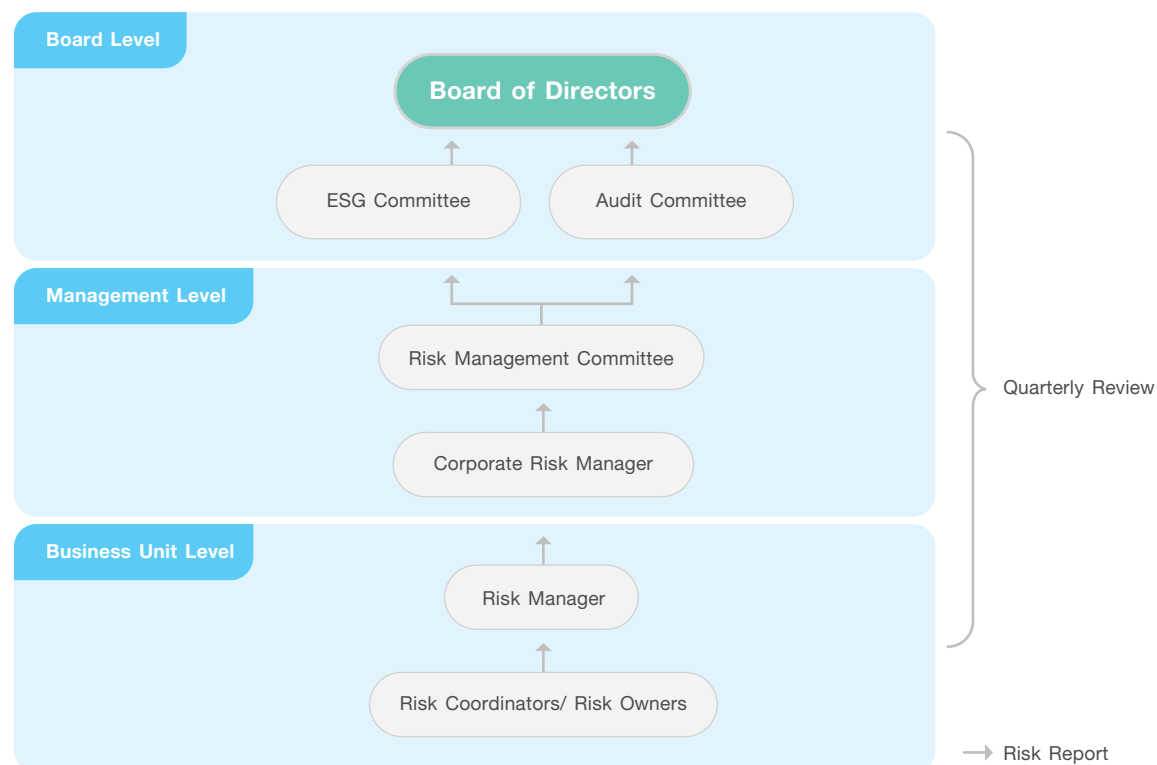
Risk Management

Amid uncertainty driven by external factors such as geopolitical conflicts, declining interest rates, and fluctuations in coal, oil, and natural gas prices, Banpu prioritizes systematic and effective risk management. This approach aims to minimize potential risks and their adverse impacts while maximizing business opportunities to create added value for the Company. To mitigate price volatility and meet consumers' energy consumption demands, Banpu has implemented a production optimization plan, allowing the Company to generate additional revenue and manage costs amid market fluctuations. The Company is committed to integrating risk management with strategic planning to drive sustainable growth and achieve its strategic goals and objectives within an acceptable risk appetite.

Risk Management Structure

The Company's risk management is under the supervision of the Board of Directors through the Audit Committee, the Environmental, Social and Governance (ESG) Committee, and the Risk Management Committee, which are assigned to monitor risks and performance according to risk mitigation plans in all business units.

Risk Management Structure



The Company has adopted the Three Lines Model to clearly define roles and responsibilities for risk management and legal and regulatory compliance at all levels of the organization. This model establishes clear lines of responsibility and supports appropriate governance and control to protect and maximize organizational value.

1. **First Line:** Comprising business operations, frontline employees, and key functional roles such as risk managers and business unit heads, the first line is crucial for day-to-day operations as it is directly responsible for risk management, risk identification, issue resolution, and compliance enforcement. These departments ensure strict adherence to relevant policies, procedures, and laws, integrating risk management into daily operations to effectively mitigate potential risks.
2. **Second Line:** Consisting of the Compliance and Risk Management Departments, this line is responsible for monitoring, evaluating, and advising on risk management and compliance. It establishes standards, policies, and processes at corporate level while working closely with the first line to ensure alignment with annual goals, strategic objectives, and legal requirements.
3. **Third Line:** Represented by the Internal Audit Department, this line independently conducts internal audits and consulting services to assess compliance and the effectiveness of the internal control system. Reporting directly to the Audit Committee, it evaluates the performance of the first and second lines, ensuring independence through transparent processes and efficient control systems.

Risk Management Culture

The Company prioritizes the cultivation of risk management culture that permeates all units in the organization, using a top-down approach led by the Board of Directors and senior management. The Enterprise Risk Management Department is responsible for the company-wide implementation of risk management policy and framework by employing various tools, such as identification of risk appetite and establishing Key Risk Indicators (KRIs), which are regularly reviewed and improved to ensure all units are capable of effective risk management in alignment with the Company's goals. In addition, the Company integrates risk management with performance evaluation criteria for senior management to strengthen the link between risk management and the corporate strategic objectives. The Company focuses on developing assessment criteria to promote risk awareness and engagement in the risk management process at all levels to foster a culture where risk management is viewed as a core operational principle. Furthermore, the Company incorporates risk management into employee training programs and conducts Risk Workshops to enhance employees' understanding and ability to assess risks. It also produces media and organized activities to promote employee engagement and understanding of risk management. Moreover, the Company annually organizes training sessions on risk management for the Board of Directors and independent directors. In 2024, specific training sessions were conducted on risk and risk management, such as "Cybersecurity and AI Tech Awareness" and "Digital Risk Awareness."



Risk Management Process

The Company's risk management process is systematically designed to identify, assess, and manage risks in alignment with stakeholders' objectives and expectations while integrating ESG factors into consideration. The process consists of the following five steps:

1. Identify Risks: Understand existing and emerging risks by clearly defining their scope. This process includes stakeholder engagement, expert consultations, and monitoring external trends (for instance, economic, political, and social conditions) to anticipate potential challenges.
2. Assess Risks: Analyze the likelihood and impact of each risk using a risk matrix. The results are presented in a risk map to highlight significant risks requiring targeted management.

3. Mitigate Risks: Develop risk management plans tailored to address high-priority risks. Strategies may include operational improvements, policy enhancements, and proactive measures to minimize risk impact and occurrence.
4. Monitor and Report Risks: Continuously monitor risks and report findings to the Risk Management Committee, Audit Committee, Environmental, Social and Governance Committee, and the Board of Directors to ensure that risk responses remain consistent with corporate governance and organizational priorities.
5. Promote risk awareness; Foster a risk-aware culture across the organization through internal communication, training programs, and stakeholder engagement to promote proactive risk management aligned with predefined objectives.

Business Risk Factors

1. Strategic Risk

1.1 Risks in Strategic Planning and Implementation

Risk Management for ESG
Development in the Aspect of:



In 2024, Banpu launched a new strategy, Energy Symphonics, to drive a sustainable energy transition in response to the changing landscape and the Energy Trilemma, which includes: 1. Energy Security, ensuring reliability and availability of energy supply; 2. Energy Equity, enabling affordable energy access for all; and 3. Energy Sustainability: minimizing the environmental impact of energy production. Under this strategy, the Company has developed a five-year business plan and integrated

risk management into the business plan to facilitate efficient business operations.

The Company holds annual strategy meetings to analyze the current situation, review progress on business plans, and adjust strategies for greater flexibility while ensuring performance stays on target. Moreover, it focuses on developing a business portfolio in line with its sustainability goals, investing in technology and innovation as well as human resources development to adapt to future changes.

In addition, the Company prioritizes proactive measures to drive sustainable development strategies while balancing reasonable returns. It manages and monitors progress on sustainability issues through an effective governance, integrating sustainability principles into decision-making processes at all levels. It conducts annual reviews and evaluations of materiality issues and develops communication strategies to enhance understanding of its strategic goals and direction. Furthermore, it ensures transparent communication of sustainability performance both internally and externally.

1.2 Risk in Human Resources (HR) Management and Development to Accommodate Future Growth

Risk Management for ESG
Development in the Aspect of:



To navigate complex and rapidly changing business conditions, Banpu prioritizes comprehensive human resource development to support rapid expansion and efficient transformation. The Company focuses on enhancing digital and technological skills, management capabilities, and innovative thinking to cultivate high-quality talent capable of driving robust and sustainable organizational growth.

The Company has reviewed the organizational structure to optimally support operations and address business needs. It collaborates with the human resources departments in each country to identify workforce needs and design staff development programs to satisfy business requirements. Apart from that, the Company has formulated the training and development policy and allocated at least 5% of salary budgets in each host country for HR development. Banpu Academy serves as a key driver in the Company's transition to a Learning Organization. It empowers employees

and aligns their skills with the needs of their roles and business objectives through the development of learning frameworks and individual development plans.

In recruitment, the Company emphasizes hiring talented professionals with knowledge, expertise, and experience in key areas to enhance operational potential and continuity. To develop future leaders, the Company has established the Banpu Global Leadership Program, which fosters cross-cultural collaboration and cross-functional networking to enable international cooperation and teamwork.

For top executives and critical positions, the Company has a process to select, review, and monitor succession planning and high-potential talent management. The Succession Planning Committee is responsible for creating individual development plans for selected candidates using the Success Factor system, as well as monitoring and evaluating progress. The Company also recruits new executives to further strengthen its leadership team.

Apart from that, the Company emphasizes fostering the corporate culture, "Banpu Heart," by internalizing 3 core values: Passionate, Innovative, and Committed. These shared values facilitate seamless operations and effective collaboration among employees across all locations.

1.3 Corporate Reputation Risk

Risk Management for ESG
Development in the Aspect of:



The digital age presents both opportunities and challenges, and the Company recognizes that reputation risk management is essential to safeguarding its business image and credibility. To mitigate potential risks, the Company remains commit-



ted to developing an energy business that meets both present and future needs while upholding its environmental, social, and governance (ESG) responsibilities. The Company strives to achieve sustainable growth, generating long-term returns to shareholders and investors while ensuring sustainable benefits for all stakeholders.

Banpu has adopted the Management Framework – Stakeholder Analysis, based on the AA1000 Stakeholder Engagement Standard (AA1000SES), to assess issues of interest to stakeholders. This framework aligns with the three principles: Inclusivity – Engaging stakeholders in an inclusive manner, Materiality – Identifying significant issues for both the Company and stakeholders, and Responsiveness – Ensuring systematic management and transparent disclosure of operational results. In addition, the Company has improved the approach for materiality assessment by considering the three aspects of social capital management, including human capital, natural capital, and social capital.

The Company has aligned corporate communications and brand management with its direction and commitment to ESG principles by developing communication strategies to achieve quick and accurate communications while ensuring good understanding among all stakeholders. These include quarterly analyst meetings for investors and analysts, a direct communication channel for local and international investors via the Investor Relations Department, and communications of its Corporate Social Responsibility (CSR) activities. Additionally, the Company promotes strong relationships with local communities and regularly conducts satisfaction surveys with community members, stakeholders, customers, and employees to assess their perceptions and opinions toward the Company. A whistleblower channel has also been established to gather information to improve the Company's operations.

Accordingly, in 2024, Banpu was listed in the Dow Jones Sustainability Indices (DJSI) for the 11th consecutive year, reflecting its commitment to sustainable business operations under ESG principles. Additionally, Banpu received the Highly Commended Sustainability Award at the 2024 SET Awards and the Corporate Excellence Award in the Energy Business category at the 2024 Asia Pacific Enterprise Awards (APEA) Regional Edition. These achievements reflect the Company's dedication to ethical business conduct, corporate governance, and responsible social and environmental practices, as well as its commitment to stakeholder engagement.

1.4 Risk of Success and Investment Returns in Businesses

Risk Management for ESG
Development in the Aspect of:



Governance

The Company is committed to developing and expanding its energy and energy technology businesses across the value chain to achieve strong and sustainable growth in the energy industry. However, challenges such as economic and trade uncertainties, geopolitical tensions, regulatory and policy changes, environmental concerns, technological advancements, and inaccurate investment assumptions or irrelevant investment assumptions may impact project success or lead to a lower return on investment than anticipated. To manage such risks, Banpu has implemented a systematic investment review process through a dedicated Executive Committee, comprising executives and experts from various fields. This committee prudently evaluates investment projects by integrating risk assessments into decision-making, ensuring effective and appropriate risk management across all aspects, including financial, market, operational, and ESG risks. In addition, the Company has established an internal working group to

define investment guidelines and criteria aligned with its strategic objectives and performance targets. This committee regularly monitors investment performance, assesses external factors affecting returns, and proactively addresses challenges to support strategic decision-making. Banpu continuously analyzes its investment portfolio to maintain a balance between business growth and stability.

In 2024, the Company continued to expand its environmentally friendly energy portfolio both domestically and internationally. Key initiatives included investments in energy transition development platforms and the launch of the DP NEXT battery assembly plant, aimed at promoting clean-energy travel and transport in response to the growing EV market in Thailand and the Asia-Pacific region. Moreover, the Company established a Net Zero Consultant unit to explore new business opportunities, focusing on consulting and delivering efficient clean energy solutions that significantly and sustainably reduce greenhouse gas emissions. This unit also reinforces Banpu's position as a leader in sustainable development, helping to attract new investors and customers interested in achieving Net Zero targets.

1.5 Supply Chain Risk

Risk Management for ESG
Development in the Aspect of:



Social



Governance

International conflicts, economic volatility, exchange rate and interest rate fluctuations, and policy changes can significantly impact domestic and international supply chains, affecting investment, employment, and manufacturing operations. Recognizing the importance of supply chain risk management, Banpu has implemented proactive measures to mitigate such uncertainties. The Company has introduced the Sustainable Supply Chain Policy and the Supplier Code of Conduct, integrating safety, occupational

health, and ESG targets to ensure alignment with its supply chain management strategy and relevant policies. Furthermore, Banpu leverages digital technology for supplier segmentation through a systematic, multidimensional assessment based on the Kraljic matrix. This approach helps create sustainable value across the supply chain, minimize business disruption risks, and enhance operational efficiency.

The Company closely monitors local and international political and economic situations, assessing the potential risks and impacts of each incident. It ensures the availability of production inputs by adequately and properly stocking critical spare parts. Moreover, it entered into long-term coal purchase contracts to secure coal supply for power generation and maintain adequate coal stocks for its power plants. The Company utilizes derivative financial instruments, such as Oil Swaps, to mitigate the impact on production costs. It closely tracks coal price trends to determine the optimal timing for entering into coal purchase contracts with customers, considering the proportion of fixed-price versus variable-price coal sales based on global market prices.

For customer management, the Company is committed to delivering quality products and services that meet diverse customer needs while prioritizing safety and environmental responsibility in product use. The Company conducts regular customer satisfaction surveys across its major businesses to improve service quality and strengthen customer relationships. Moreover, it seeks opportunities to expand its customer base and explore new business ventures to mitigate supply chain risks, ensuring long-term business sustainability in alignment with its strategic plan.



2. Financial Risks

2.1 Exchange Rate Risk

Risk Management for ESG
Development in the Aspect of:



Governance

The Company systematically manages exchange rate risk to mitigate potential impacts from multi-currency transactions at both the corporate and group levels across all countries of operation. This approach strengthens its financial position and enhances confidence among stakeholders and relevant parties. The Company has established the Financial Management Committee, which convenes to evaluate and select appropriate financial instruments tailored to each situation. Key measures include balancing incoming and outgoing cash flows in foreign currencies to minimize the risk of deficits or profit fluctuations. In addition, the Company plans to enter into foreign currency forward contracts based on estimated revenues, and relevant expenses, and debenture repayments to ensure maximum efficiency in financial management.

2.2 Interest Rate Risk

Risk Management for ESG
Development in the Aspect of:



Governance

The Company continuously monitors domestic and foreign interest rates and manages short- and long-term loans to align with its business nature, maintaining an optimal ratio of fixed and floating interest debts. In addition, the Company mitigates interest rate risk by converting floating rates to appropriate fixed rates and utilizing financial instruments such as interest-rate swaps to hedge against this risk, ensuring effective control of the debt-to-equity ratio in accordance with the nature of the business.

2.3 Taxation Risk

Risk Management for ESG
Development in the Aspect of:



Governance

To mitigate taxation risks, Banpu pays taxes within the period specified by law. The Company has established tax guidelines and prepared comprehensive and sufficient documentation for tax settlements. Its investment structure is also reviewed regularly. Additionally, all executives in each country are assigned to closely monitor changes in rules and policies of their respective countries, both at the central and local government levels. It includes hiring local legal consulting firms to advise on legal compliance practices. In the event of taxation disputes with a government agency, the Company would provide the agency with accurate tax information in relation to its business. When necessary, it also engages expert tax consultants to offer advice and handle dispute resolution.

2.4 Funding Risk

Risk Management for ESG
Development in the Aspect of:



Governance

The Company closely manages financial risks to support its business operations in alignment with its new strategic plan, which emphasizes a sustainable energy transition amid economic and financial challenges. The Company has established a prudent investment plan by securing funding at fair costs. It utilizes financial forecasting as a management tool, estimating and analyzing key financial ratios to maintain stability and alignment with business objectives. The Company also prioritizes good corporate governance to navigate changing financing constraints, including stricter lending criteria from financial institutions and an increased emphasis on ESG factors in business and financial

decision-making. By adapting to these trends, the Company could effectively mitigate funding risks, achieve its funding plans, and maintain fair funding costs while promoting sustainable growth.

3. Operational Risk

3.1 Risk from Volatility in Coal, Oil, Natural Gas and Electricity Prices

Risk Management for ESG
Development in the Aspect of:



Governance

Fluctuations in global energy prices, including coal, oil, natural gas, and electricity, are driven by supply and demand dynamics influenced by various factors, such as seasonal variations in energy demand, shifts in national energy policies, geopolitical conflicts affecting energy production or exports, natural disasters, and technological advancements impacting energy consumption. These factors have a direct and significant impact on the Company's business. To manage these risks, Banpu has established the Commodity Risk Management Committee (CRMC) to analyze price trends in coal, oil, and natural gas and implement risk management strategies. The CRMC utilizes financial derivatives, including coal swaps, oil swaps, and gas collar options, to mitigate the potential impact of energy price fluctuations. The Company closely monitors and assesses energy market conditions, setting price targets for the proportion of coal sold under fixed and index-linked pricing while determining the appropriate timing for implementing risk management strategies in alignment with its business plan.

To mitigate risks in the merchant power market, the Company has established a Hedging Risk Management Policy, employing appropriate risk prevention tools within the framework specified

in the policy. These tools include electricity forward contracts, fixed-price power purchase agreements, and heat rate call options. Apart from that, the Company accurately forecasts electricity demand at different periods to enhance planning efficiency and mitigate the potential impact of fluctuations in market demand.

3.2 Production Risk

Risk Management for ESG
Development in the Aspect of:



Governance

Banpu's business operations span the entire value chain, from upstream to downstream, with a focus on operational stability, reliable delivery of quality products and services, and enhancing competitiveness to earn the trust of all stakeholders. The Company has implemented comprehensive risk management measures to ensure operational stability in production, distribution, and services, as outlined below:

- Establishing an operational excellence framework to enhance efficiency, ensure production continuity, and improve machine and operator safety, while strengthening the preventive maintenance process to prevent disruptions.
- Developing digital technologies and systems that integrate intelligent AI solutions into the mining and power generation processes to increase efficiency, cut costs, and lower environmental impacts. It has piloted the use of EV trucks for coal transportation, setting new standards and paving the way for the future of mining technology.



- Developing digital technologies and systems that integrate intelligent AI solutions into mining and power generation processes to enhance efficiency, reduce costs, and minimize environmental impacts. The Company has also piloted the use of EV trucks for coal transportation to set new standards and pave the way for the future of mining technology.
- Improving power plant reliability and efficiency by leveraging advanced technology and deploying modern software to support plant operations and facilitate data-driven decision-making in preventive maintenance. These measures help reduce revenue losses from unplanned production stoppages while incorporating risk-based inspection and predictive maintenance.
- Regularly organizing staff training to enhance their knowledge and competency and promoting knowledge sharing across departments or companies within Banpu Group
- Procuring necessary insurance, such as property damage insurance and business interruption insurance, as part of the Company's mechanisms for risk management and mitigation of impacts on business operations and production in the event of unforeseen incidents.

Those measures help the Company maintain production continuity, reinforce the reliability of work processes, and mitigate risks, strengthening sustainable business operations.

3.3 Occupational Health and Safety Risk

Risk Management for ESG
Development in the Aspect of:



The Company is committed to providing a healthy and safe work environment for all employees and related people working for the Company, as poor health and safety management can lead to disruptions in production and supply chain. Therefore, to ensure that all Banpu work areas are safe and work environment complies with the principles of occupational health and safety, the Company has implemented occupational health and safety risk management measures as follows:

- Announcing the Occupational Health and Safety Policy and 3-Zero targets: Zero Incident, Zero Repeat of incidents, and Zero Compromise to non-compliance with occupational health and safety standards or legal requirements.
- Adopting the ISO 45001 Occupational Health and Safety standard as a guideline of occupational health and safety management as well as the framework of safety culture with emphasis on safety system, safety competencies, and safety behaviors of employees in Banpu Group and its subsidiaries
- Establishing an occupational health and safety unit to oversee compliance of occupational health and safety with local laws in each host country and Banpu's standards. The effectiveness of each country's occupational health and safety operations is reviewed on a monthly, quarterly, and annual basis.

- Deploying a hazard and risk identification process that covers both routine and non-routine tasks, utilizing hazard indicator tools, such as the Risk Assessment and Control Determination (HIRADC) in mining business in Indonesia, SLAM (Stop, Look, Assess, and Manage) in mining business in Australia, and the Safety Double Control of in China's thermal power business, including a reporting and recording system for surveying unsafe working conditions through the SOS application, which serves as a channel for reporting unsafe conditions in the Banpu's Bangkok office. The Company has established risk mitigation measures according to the Hierarchy of Controls, communication plans, and risk surveillance and monitoring. It monitors the work environment through regular assessment according to each operating area's risk factors, such as air quality, noise levels, concentrations of hazardous chemicals, and light intensity, to ensure full legal compliance. The Company also conducts safety risk assessments for operational activities and implements appropriate preventive measures for each activity.
- Establishing occupational health and safety performance as part of the KPIs of Banpu's Chief Executive Officer, including senior executives of all business units and subsidiaries.
- Administering health checks for employees and contractors based on job-specific risk factors while maintaining the confidentiality of employee medical information to comply with the Personal Data Protection Act (PDPA). In addition, mobile medical units are prepared for workplace emergencies, and medical evacuations are provided for international workers through the International SOS Service.

- Encouraging employees at all levels to engage in improving safety by voicing their opinions through various channels, such as the Safety Perception Survey, the Safety Committee, cross-country knowledge-sharing forums such as Sustainability Family meetings and the ESG Summit. The feedback gained is regularly reviewed and incorporated into short and long-term improvement plans.
- Developing a business continuity management system based on international standards such as ISO 22301. Every key business unit must have a business continuity plan and conduct an annual emergency drill. The Company monitors the Certification of Information and Data Accuracy and reviews the performance of the system through internal audits, external audits, and annual management reviews.

3.4 Environmental Risk

Risk Management for ESG
Development in the Aspect of:



Banpu has established environmental and other related policies as well as short- and long-term sustainable development goals to drive the Company toward achieving the UN's Sustainable Development Goals (SDGs). Regarding environmental stewardship, the Company adheres to environmental standards and prioritizes efficient resource utilization to conserve natural resources and minimize both direct and indirect environmental impacts. by incorporating climate change, waste management, land utilization, biodiversity, and water resources utilization.

In 2024, the Company implemented the following environmental risk mitigation measures.

Issue	Key Risk Mitigation Measures
Climate Change	<ul style="list-style-type: none">Established policies and goals for greenhouse gas (GHG) management to enhance energy efficiency, including the selection of low-emission technologies to reduce GHG emissions.Set up the Climate Change Committee and integrated climate change management into the key performance indicators (KPIs) of the CEO and senior management in all relevant business units.Conducted an assessment in line with the Task Force on Climate-related Financial Disclosures (TCFD) guidelines to identify operational risks and opportunities related to climate change and disclosed climate-related information.
Air Quality Management	<ul style="list-style-type: none">Regularly measured air quality in operational areas and surrounding communities to ensure compliance with air quality regulations.Limited and controlled air pollutant emissions by deploying modern, efficient air quality control technologies and developing measures to manage or mitigate impacts on air quality.
Production Waste Management	<ul style="list-style-type: none">Announced the Waste Management Policy as practice guidelines for all business units.Focused on waste minimization by conserving, reducing, reusing, recycling, recovering waste, and using waste as fuel to reduce waste sent to incineration or landfills.Established waste management standards in line with international practices and the requirements of each operating country
Land Utilization and Biodiversity	<ul style="list-style-type: none">Announced the Biodiversity Policy and established guidelines applying the Mitigation Hierarchy Principle, which aligns with the concepts set forth by the International Union for Conservation of Nature (IUCN).Carefully developed a mining plan to minimize impacts on geographic conditions, biodiversity, and ecosystems by incorporating a mine closure plan from the project's inception.Conducted an annual biodiversity risk assessment and used the results in rehabilitation planning to minimize biodiversity impacts.Developed a biodiversity management plan and assessed biodiversity value.Established a target to achieve a net positive impact on biodiversity upon mine closure for all sites with a high biodiversity risk, starting from the year 2025.

Issue	Key Risk Mitigation Measures
Water Resources Utilization	<ul style="list-style-type: none">Developed a water management plan covering water withdrawal, production water use, and water discharge while expanding its scope to the river basin level.Measured water quality before discharge into the environment by both the Company and external parties.Assessed water stress risks at operating locations using the World Resources Institute's Aqueduct Water Risk Atlas and developed plans and policies to prevent environmental and community impacts while establishing community collaboration in managing such risks.Conducted a water footprint assessment across the product life cycle for each business unit to optimize water management efficiency. The Company also implemented a project to reduce water consumption in the production process, promoted water recycling, and segregated surface water to prevent wastewater contamination .

3.5 Social and Community Risk

Risk Management for ESG

Development in the Aspect of:



Social

The Company engages in community development initiatives across all its operational locations, emphasizing collaboration with key stakeholders, including local communities, government agencies, and other relevant parties. The Company has established a Community Development Policy and management standards and integrated local government regulations and international frameworks such as the United Nations Sustainable Development Goals (SDGs) into its strategy. In partnership with stakeholders, the Company implements community development programs in six key areas: economy, education, hygiene and primary healthcare, environmental conservation, social and cultural promotion, and infrastructure development. Moreover, the Company has adopted the social return on investment (SROI) framework to measure the social impacts of its community development projects to maximize the efficiency of its operations in line with its Sustainability Policy.

In addition, the Company has established a Community Complaint Management System at all business units. This system ensures a systematic approach to handling community concerns. The Company also formed a Community Advisory Committee (CAC) and a Community Relations Unit to closely manage community engagement, ensuring that all development projects create meaningful and sustainable benefits for local communities.

The Company's approach includes indigenous people management and resettlement management where community resettlement is necessary. Moreover, all operational locations are required to conduct community perception surveys as a standard practice to assess local perception and acceptance levels, concerns, and suggestions. The insights gained from these surveys are used to improve community engagement strategies. Furthermore, the Company conducted community satisfaction surveys to evaluate the effectiveness of quality-of-life enhancement projects. The results of these



surveys inform ongoing improvements to maximize community benefits and overall satisfaction. The Company has also established a quality assurance review, conducted by employees independent of community development activities, to enhance transparency and optimize the efficiency of its initiatives. Regarding human rights, the Company is committed to conducting its business in compliance with internationally recognized human rights principles, including adherence to labor laws in every country where it operates. It prioritizes the rights, freedoms, equality, and dignity of all individuals, enforcing a strict zero-tolerance policy for discrimination based on gender, race, religion, color, or social status. The Company aims to foster a safe, inclusive, and equitable work environment and prevent human rights violations at all levels of its operations, including among suppliers, customers, subcontractors, communities, and vulnerable groups. The Company has developed a Human Rights Due Diligence Handbook as a guideline for assessing human rights risks and their impacts across all business operations. It organized a workshop where key internal stakeholders collaborated to identify and address specific human rights issues relevant to their operational areas and local contexts.

In addition, the Company has implemented a complaint-handling system with multiple accessible communication channels, ensuring that relevant individuals can file complaints conveniently and fairly. This system facilitates the effective and transparent resolution of human rights violations.

3.6 Climate Change and Natural Disaster Risks

Risk Management for ESG
Development in the Aspect of:



The escalating climate crisis has led to severe consequences, including more frequent and intense natural disasters such as torrential storms, widespread flooding, prolonged droughts, and rampant forest fires. These events are direct impacts of climate change, which disrupt ecosystems and destabilize the natural environment. Stakeholders at both national and international levels are increasingly recognizing the urgency of climate action and prioritizing efforts to mitigate its effects. As a result, the Company has conducted an assessment to identify climate-related risks and opportunities, considering both physical and transition risks in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) framework. This assessment informs the development of strategic plans, action plans, and mitigation measures to effectively address these risks, as follows:

- Establishing a policy and long-term targets for GHG management since 2010 to increase efficiency in energy consumption and to deploy clean energy technologies
- Announcing a Net Zero target by 2050 and aiming to reduce GHG emissions by 20% by 2030. The Company has systematically integrated GHG emissions and absorption management planning into its business strategy.
- Closely monitoring regulations and policies on GHG emissions to adapt to the changing business environment. This includes tracking developments from the Conference of the Parties (COP) under the United Nations Framework

Convention on Climate Change (UNFCCC), energy policies, and GHG reduction requirements in all countries where the Company invests.

- Developing a climate strategy focused on four key areas: GHG emission mitigation, adaptation to climate change, being a part of a low-carbon society, and participation in the climate change community. For each area, the Company has established clear approaches, timelines, and responsible units to ensure maximum efficiency in strategic plan implementation. To achieve this, the Company has undertaken the following measures:
 - Establishing the Climate Change Committee to drive and monitor climate-related risk management.
 - Considering project development costs by incorporating carbon pricing and natural disaster risks into project development cost assessments to support informed investment decisions. The Company also seeks investment opportunities in renewable energy and alternative energy sources to minimize GHG emissions and meet the demands of a low-carbon society, aiming to achieve its GHG emission targets in alignment with the sustainable energy transition.
 - Assessing climate-related risks, including the likelihood and impact of natural disasters, to evaluate potential effects on the Company's assets and operations. Risk management measures are prepared and submitted to the ESG Committee.

- Conducting an in-depth analysis of all production processes, assessing Scope 1 and Scope 2 GHG emissions while continuously improving the Scope 3 GHG emissions assessment for greater comprehensiveness.
- Incorporating natural disaster risk into its business continuity plan, requiring regular testing in various scenarios and severity levels to ensure resilience. The Company has also purchased property and business interruption insurance to mitigate potential financial impacts.
- Establishing a Task Force on Climate-related Financial Disclosures (TCFD) and disclosing climate-related information in accordance with the TCFD framework. The Company has also set short- and long-term climate targets in alignment with the Paris Agreement.

3.7 Cyber Threats and Personal Data Protection Risks

Risk Management for ESG
Development in the Aspect of:



In today's digital era, technologies play a pivotal role in organizational management, enhancing efficiency, agility, and competitiveness. The adoption of cloud computing, artificial intelligence, big data storage, and online collaboration tools streamlines work processes, optimizes efficiency, and significantly reduces costs. When leveraged effectively, these digital technologies provide a competitive advantage in a fast-paced and interconnected business landscape. However, the widespread integration of digital technologies also introduces cyber threats. As organizations rely more



on interconnected data and systems, they become more vulnerable to cyberattacks and data breaches, particularly concerning sensitive personal data. Such incidents can result in reputational damage and financial losses for both the organization and individuals. To address these risks, the Company has implemented cybersecurity measures to ensure the safe and efficient use of digital technologies, as follows:

- Announcing the Information and Cyber Security Policy in accordance with ISO/IEC 27001 Information Security Management Systems (ISMS) as practice guidelines for employees and educating employees on cyber threats as well as practices and prevention against cyber threats
- Enhancing cybersecurity governance and operations through external cybersecurity assessments of the power business, cyber-physical system (CPS) reinforcement, and continuous vulnerability detection across all applications used by the Company to enable timely corrective actions.
- Setting up the Security Operation Center to increase the timeliness of threat detection and alerting.
- Appointing a Global Information Security Officer (GISO) to oversee personal data protection and information systems, with support from the IT unit that is set up at each business unit in all countries.
- Activating the Two-Factor Authentication (2FA) for accessing the Company's e-mail and internal work systems.

- Rehearsing cyber-incident response and information technology disaster recovery drills annually to ensure a timely response and effective mitigation of potential cybersecurity threats or operational disruptions
- Raising employee' awareness of cybersecurity threats through training on best practices and phishing simulations to enhance phishing awareness when using information systems.
- Establishing a PDPA policy that explicitly specifies the purpose of collection and disclosure of personal data and guidelines for data protection to ensure customers, suppliers, and employees who share personal data with the Company that their privacy is safeguarded.

4. Regulatory Change and Compliance Risk

Risk Management for ESG
Development in the Aspect of:



As Banpu operates transnationally, ensuring compliance with the laws and regulations of each country is essential for maintaining smooth and sustainable operations. However, compliance risks may arise from various factors, including legal complexities, frequent regulatory changes, and misinterpretations of legal practices. Moreover, foreign-language legal texts may lead to misapplications of the law, potentially impacting the Company's financial stability and operations, resulting in fines, permit suspensions, or even revocations. Beyond financial consequences, non-compliance could also harm the Company's reputation and corporate image. To mitigate these risks, Banpu prioritizes compliance risk management and has assigned the Corporate

Compliance Department to oversee legal compliance across all units within the Banpu Group, ensuring strict adherence to applicable laws. The Company has established the Corporate Governance Policy and Code of Conduct, aligning with international standards and corporate governance principles. It manages regulatory risks by setting up a legal division or appointing legal consultants in each country to handle legal matters and ensure compliance with local laws and policies. In addition, the Company developed the Compliance In-Hand application to track and report regulatory changes, issue alerts, and communicate newly issued or amended laws to relevant internal departments. This ensures that all teams are aware of potential impacts and have clear guidelines for compliance.

5. Emerging Risks

To sustain future growth, the Company prioritizes the identification and assessment of "emerging risks" that could significantly impact its operations. These risks may stem from various factors, including technological advancements, economic and social trends, stricter regulations, and escalating environmental challenges. Assessing emerging risks is essential, as it enables the Company to proactively anticipate potential challenges and develop strategic responses to address them effectively and in a timely manner.

5.1 Risk of Competitive Disadvantage from Advancements in AI

Risk Management for ESG
Development in the Aspect of:



The world is rapidly entering the age of artificial intelligence (AI), with businesses worldwide acknowledging its transformative impact on operations and industry landscapes. However, integrating AI into traditional workflows presents significant challenges, from adapting legacy systems to support AI adoption and expanding its application safely to managing cultural shifts within organizations and ensuring responsible AI use. Failure to navigate these changes effectively can lead to reduced efficiency and diminished competitiveness. To address these risks, Banpu has adopted a proactive risk management approach focused on preventive measures and strengthening corporate culture as follows:

Prioritizing corruption risk management, Banpu joined the Thai Private Sector's Collective Action Against Corruption (CAC), conducted a risk assessment, and established corruption risk management guidelines. The Company established the Personal Data Protection Act (PDPA) Working Group to design systems and procedures that ensure compliance with the Personal Data Protection Act (2019) for the efficient, secure, and lawful collection, use, and disclosure of personal data. It communicated with and educated employees on these issues. It also implemented the Non-Discrimination and Anti-Harassment Policy to foster a work environment of mutual respect, diversity, and inclusion, ensuring that no form of discrimination or harassment is tolerated.



- Developing Banpu's Enterprise AI Strategy with key strategic approaches: 1. organizational process design, 2. development and implementation, and 3. establishing and managing sustainability.
- Appointing a dedicated team for AI business enhancement under the Digital and Innovation Unit to oversee AI strategic planning and development, ensuring alignment with the objectives of all departments. This team will provide guidance and support for AI-driven innovations, promote their application across various projects to enhance business value and monitor and evaluate AI initiatives for continuous improvement.
- Announcing the Generative AI Policy and establishing a steering committee to oversee AI implementation. The committee will meet every two months and develop a Generative AI manual for Banpu employees to enhance understanding and ensure the correct and effective use of AI. This is aimed at mitigating ethical risks and safety concerns while aligning with the company's sustainability and corporate governance policies.
- Educating management and employees through various channels, such as training sessions and digital content distribution. This includes engagement activities such as E-magazine, Banpu Global Innovation Award 2024, and ESG Summit 2024.
- Building employee capacity through specialized training and skill development programs to enhance adaptability and maximize the use of digital technologies and AI in business operations.
- Integrating AI into core processes to improve efficiency, reduce costs, and enhance decision-making. For instance, AI is used to forecast electricity dispatch prices in Japan and Australia while optimizing coal delivery planning to maintain high quality, minimize fines, and improve product credibility, which helps increase returns on investment.
- Establishing key committees such as the Sustainability Committee to oversee ESG initiatives and ensure compliance of sustainability disclosure with international reporting standards such as TCFD, GRI, and SDGs. The Climate Change Committee has been established and tasked with defining environmental strategies and targets; the ESG Committee ensures ESG operations align with corporate strategy, monitoring activities and reporting transparently to stakeholders. The Company regularly tracks progress using key indicators to assess ESG project achievements and provides updates to the relevant committees.
- Integrating ESG into corporate strategy. In 2024, Banpu introduced the "Energy Symphonics" strategy, which integrates diverse energy sources to develop innovative, sustainable energy solutions that meet the rising global energy demand while prioritizing environmental responsibility. The Company remains committed to addressing energy challenges and setting new benchmarks for reliable, affordable, and environmentally friendly energy.
- Implementing a materiality assessment process to evaluate and prioritize ESG risks, particularly those arising from economic downturns. The Company has also established investment criteria to ensure new projects align with corporate strategies, return targets, and sustainability objectives. Investment-related risks are assessed across all dimensions, including financial, market, operational, and ESG risks. Along with continuous post-investment monitoring and performance analysis ensure that projects generate adequate returns while supporting the Company's long-term goals.
- Reducing costs by leveraging digital technology and AI to maximize efficiency, improve accuracy, and streamline operations by eliminating redundant tasks.
- Implementing measures to mitigate supply chain risks by diversifying supply sources and promoting efficient resource utilization to minimize disruptions and support business continuity.

5.2 Risk of Economic Slowdowns Impacting the Achievement of ESG Goals

Risk Management for ESG Development in the Aspect of:



The global economy is showing signs of a slowdown due to rising inflation, economic challenges, particularly in key trading nations, and ongoing geopolitical conflicts in recent years. These factors are significantly disrupting supply chains and affecting the revenue-generating capabilities of businesses across industries. To mitigate these impacts, many organizations are cutting costs and reducing non-essential expenditures to maintain competitiveness. For Banpu, sustaining investment in long-term ESG-driven projects remains a significant challenge, as these initiatives often require high initial capital and may not yield immediate financial returns. Banpu's risk management approach is designed to balance sustainability objectives with competitiveness, ensuring that environmental impact is minimized while maintaining a sustainable equilibrium across social and governance (ESG) aspects. This approach includes:



DRIVING BUSINESS FOR SUSTAINABILITY

Sustainability Goals and Policy

Banpu moves towards on “Energy Symphonics” strategy to lead a responsible and sustainable energy transition to address the world’s surging energy demand while simultaneously looking after the planet. Believing in its business credo, “An industry will be strong only when it is developed in tandem with social and environmental responsibility,” the Company adheres to corporate governance and aims to strike a sustainable balance between economy, society, and environment. The Company adopted international practices in developing its sustainability strategy to enhance business competitiveness and create value for all stakeholders.

To create sustainable values for stakeholders, the Company set up the Environment, Social, and Governance Committee (ESG Committee), of which all members are independent directors. The Committee supports the Board of Directors on the supervision of ESG topics and convenes on a quarterly basis. The Company also set up the Sustainability Committee, which comprises senior management and heads of business units in all countries where it operates. The Chairperson of the Committee is the CEO, who is also a Board member.

	Roles and Responsibilities	Performance Indicators
Board of Directors	<ul style="list-style-type: none">Oversee compliance with relevant laws and regulationsEstablish the KPIs for CEO and evaluate the CEO's performanceReview and monitor management of significant ESG risksReview and monitor stakeholder engagement and materiality assessment	<ul style="list-style-type: none">Meeting attendancePerformance score of the Board of Directors
ESG Committee	<ul style="list-style-type: none">Oversee the Company's ESG policy, management, and performanceReview and monitor stakeholder engagement and materiality assessment to ensure that all stakeholder expectations are identified and included in the materiality assessment and are managed properlyReview and monitor the management of significant ESG risks to ensure effective ESG Risk managementOversee the Company's ESG disclosures	<ul style="list-style-type: none">Meeting attendancePerformance score of the ESG CommitteeComprehensiveness of key ESG risks considered

	Roles and Responsibilities	Performance Indicators
Chief Executive Officer (CEO)	<ul style="list-style-type: none">Ensure the implementation of the Sustainability Policy and integration of ESG strategy into business operationsEstablish KPIs for senior executives and evaluate their performance	<ul style="list-style-type: none">The number of material ESG topics included in the Company's ESG goalsThe number of ESG goals set as KPIs for senior executivesESG performance of the Company
Sustainability Committee	<ul style="list-style-type: none">Review ESG topics which are global concernReview stakeholder analysis and material topicsMonitor and evaluate ESG or sustainability performance for the past yearFormulate and review policy and management frameworks, and set goals to enhance competitiveness and ensure that the Company grows in tandem with social and environmental responsibility	<ul style="list-style-type: none">Meeting attendanceESG performance of the Company
Senior Executives and Heads of Business Units	<ul style="list-style-type: none">Review related policies and strategiesMonitor the ESG performance of the business unitsEnsure the achievement of ESG goals	<ul style="list-style-type: none">ESG performance of each business unit

Led by its vision to become “The Asian energy company at the heart of innovation, technology, and sustainability,” Banpu strives to create sustainable value and stakeholder confidence with its responsibility for society and the world. The Company adopted sustainability principles as well as the environmental, social, and governance (ESG) practices at national and international levels in developing its Sustainability Policy by:

- Integrating the UN Sustainable Development Goals (SDGs) and the UN Global Compact Principles in determining focal areas for sustainable development
- Taking the UN Guiding Principles on Business & Human Rights and Universal Declaration on Human Rights as inputs for developing the Human Resource Management Policy and the Human Rights Policy
- Using the Environmental, Social, and Governance performance results assessed by external rating agencies, such as MSCI ESG Ratings Assessment and S&P Global Corporate Sustainability Assessment, as part of the Company’s performance review



In driving sustainability, the Company integrated significant ESG topics as part of annual KPIs for the CEO and senior executives of every business unit. The Board of Directors is in charge of establishing the CEO's KPIs, covering both financial and ESG aspects, of which ESG KPIs are accountable for 30% of the total KPIs. ESG KPIs include, for example, employee engagement level, the number of significant complaints on corporate governance topics, the number of cybersecurity incidents, the amount of GHG emissions reduced, and the number of occupational fatalities. Senior executives' KPIs are developed to align with the CEO's KPIs. The performance of the CEO is evaluated by the Board of Directors while that of senior executives is evaluated by the CEO. Meanwhile, the sustainability performance indicators are also used as part of business unit heads' performance evaluation.



To ensure smooth sustainability management, the Sustainability Committee convenes biannually to review and evaluate the ESG performance of each business unit against the goals as well as to review the stakeholder analysis and materiality assessment. The results will then be reanalyzed along with the Board's advice on policies or approaches to formulate additional policies, management standards, or practices in order to enhance sustainability and maximize stakeholder value in the following year.

The Company has disclosed its sustainability strategies and performance, covering significant ESG topics, to stakeholders through a sustainability report since 2011. The previous sustainability reports are available both in hard copy and online versions, of which the latter can be accessed via the Company's website. The Company prepares its sustainability report based on the GRI Standards and has the report and

sustainability performance information verified by a third party agency to ensure that the reporting is in accordance with the GRI Standards and the performance information meets all the mandated requirements.

With a long-term commitment to ESG in its business operations, Banpu has been recognized by leading sustainability rating organizations both nationally and globally as follows:

International Recognitions

S&P Global

The Company has been recognized as a member of the Dow Jones Best-in-Class Indices since 2014.

National Recognitions



The Company received Thailand Corporate Excellence Awards 2024 in Sustainability Excellence from Thailand Management Association.



The Company received a rating of A (on a scale of AAA-CCC) in the MSCI ESG Ratings Assessment since 2019.



The Company received a rating of AAA in the SET ESG Ratings from the Stock Exchange of Thailand.



The Company received Highly Commended Sustainability Awards in Sustainability Excellence from the Stock Exchange of Thailand.



The Company remains one of the top listed companies with excellent corporate governance scoring according to the Corporate Governance Report of Thai Listed Companies since 2017.



The Company received a 5 coins rating on the AGM (Annual General Meeting) Checklist from the Thai Investors Association (TIA).



MANAGEMENT OF STAKEHOLDER IMPACTS IN BUSINESS VALUE CHAIN

Business Value Chain

Banpu operates businesses in Asia-Pacific region, harnessing the ecosystem in which 3 core business groups are integrated, namely energy resources, energy generation, and energy technology.

- Energy resources group consists of open-pit and underground coal mines based in Indonesia, Australia, and China to respond to customers in the industrial sectors and the power plants in Asia and Europe, and shale gas business based in the U.S. The produced gas will be collected and transmitted through pipelines for distribution to power plants and households in the U.S.
- Energy generation group consists of thermal and renewable power generation businesses deploying High Efficiency, Low Emissions (HELE) technologies to strengthen energy security of industrial sectors and households. The production bases are in China, Thailand, Japan, the U.S., and Lao PDR. The Company also operates renewable power generation from solar and wind energy to meet the demand for clean energy. Currently, the production bases are in China, Japan, Australia, and Vietnam.
- Energy technology group comprises rooftop and floating solar power generation businesses which are in Thailand, China, Vietnam, the U.S. and Indonesia; energy storage system business based in China in response to industrial sector’s energy demand and the new lithium-Ion battery assembly plant in Thailand; energy trading business through a digital platform to effectively respond to future electricity consumption; e-Mobility business for transportation systems according to the Mobility-as-a-Service (MaaS) concept; smart city & energy management business connecting clean energy utilization and energy optimization.

Stakeholder Analysis in Business Value Chain

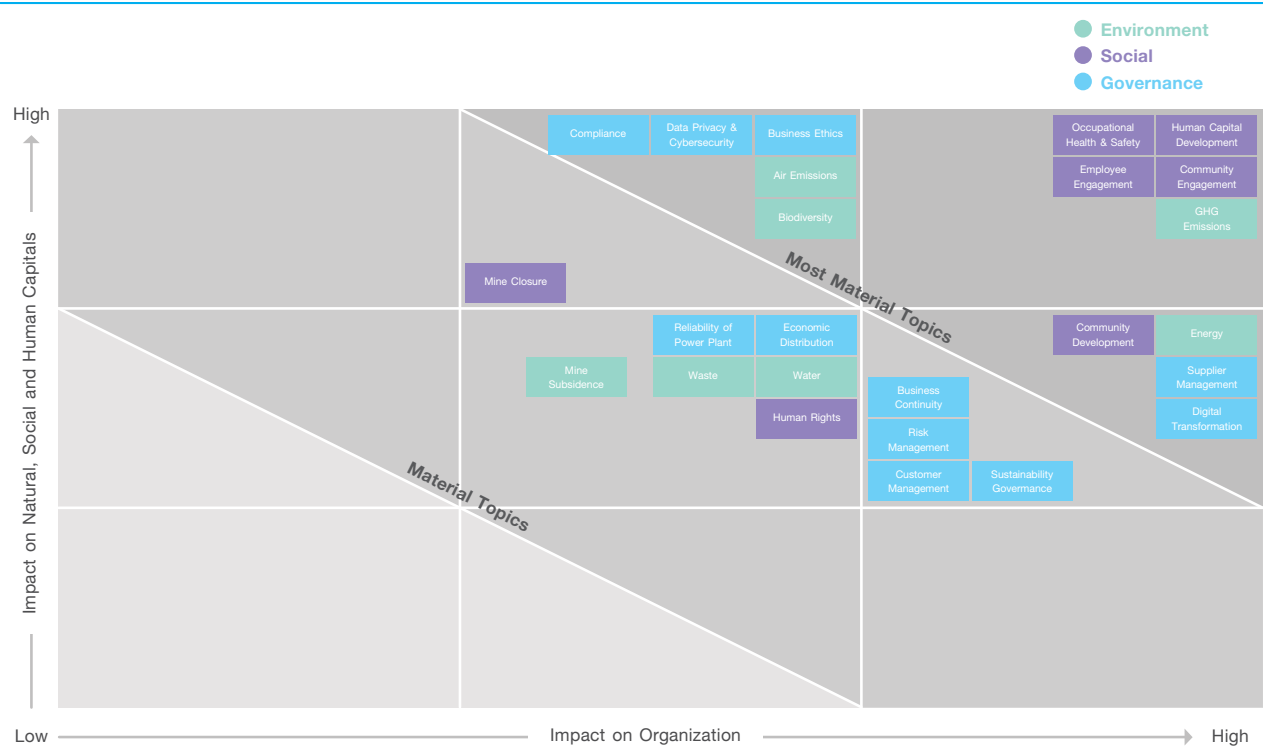
The Company implemented Stakeholder Analysis in accordance with AA1000 Stakeholder Engagement Standard (AA1000SES) with three key principles of stakeholder inclusivity, materiality, and responsiveness. Each business unit is responsible for stakeholder analysis in relevant areas to its operation. The results will be gathered and reanalyzed at the organizational level under the supervision of the Sustainability Committee.

Stakeholder	Engagement Channel	Stakeholder's Issue
Employee	<ul style="list-style-type: none">Internal communication by human resourcesEmployee involvement in various committeesWhistleblower channelSurvey on the level of alignment between employee behavior and the corporate cultureEmployee engagement surveyTownhall meetingLabor unions and welfare committee	<ul style="list-style-type: none">Business directionBusiness ethics and responsible business practicesHappiness in the workplaceFair compensation, welfare, and benefitsCareer opportunitiesCapability developmentSafety in the workplace
Community	<ul style="list-style-type: none">Community consultative committeeCommunity satisfaction surveyWhistleblower channelCommunity development officersPublic information on the websiteStakeholder survey	<ul style="list-style-type: none">Social and environmental impact from operational activitiesCommunity safety and residential safetyRespect for community rightsCommunity well-being and economic distribution
Customer	<ul style="list-style-type: none">Customer satisfaction surveyWhistleblower channelCustomer visitResponse to request for data disclosureReport on annual maintenance plan and emergency drillStakeholder survey	<ul style="list-style-type: none">Quality and price of productOn-time product deliverySocial and environmental impact from the use of productAvailability of products and servicesPersonal data breachesUse of customer data
Government & Regulator	<ul style="list-style-type: none">Occasional government visitSupport governmental initiatives and activitiesResponse to request for data disclosurePublication of annual report and sustainability reportPublic information on the websiteStakeholder survey	<ul style="list-style-type: none">Value creation for economy and societyBusiness ethicsData transparency and disclosureRegulatory complianceResponsible consumption of natural resourcesSupply chain managementSocial and environmental impact from operational activities
Supplier	<ul style="list-style-type: none">Occasional supplier meetingStakeholder survey	<ul style="list-style-type: none">Transparent procurement process and fair compensationFuture business opportunityPersonal data breaches



Stakeholder	Engagement Channel	Stakeholder's Issue
Contractor	Occasional contractor meeting	Transparent procurement process and fair compensation
	Annual contractor meeting	
	Stakeholder survey	Safety in the workplace Energy consumption reduction Future business opportunity
Financial Capital Provider	Analyst meeting	Business transparency
	Publication of annual report and sustainability report	Operational performance and business growth
	Stakeholder survey	
Business partner	Board meeting at subsidiaries and associated companies	Business transparency Operational performance and business growth
	Publication of annual report and sustainability report	Business continuity
	Report on annual maintenance plan and emergency drill	
Shareholder	Annual general meeting of shareholders	Qualification of Board of Directors and managements
	Publication of annual report and sustainability report	Business transparency Risk & opportunity management
	Whistleblower channel	Research & development for competitive advantage
Investor and Investment Analyst	Public information on the website	Operational performance and business growth
	Stakeholder survey	Qualification of Board of Directors and managements Business transparency Value creation for economy, society and environment Risk & opportunity management Operational performance and business growth
Media and NGOs and Academic Institution	Response to request for data disclosure	Value creation for economy and society
	Fact sheet summary	Business transparency
	Public information on the website	Transparency and disclosure of data Regulatory compliance Social and environmental impact from operational activities
	Stakeholder survey	

The assessment and prioritization of material topics are carried out according to the management standard developed consistent with the Global Reporting Initiative (GRI) Standards and AA1000 AccountAbility Principles Standard (AA1000APS), while taking into consideration the impacts on the Company, environment, human resources and society, covering the aspects of ESG (Environmental, Social and Governance) or interests of the Company’s stakeholder. The material topics are annually reviewed and approved by the Sustainability Committee and the Environment, Social and Governance (ESG) Committee respectively.





SUSTAINABILITY MANAGEMENT – ENVIRONMENTAL ASPECT

Climate Change

Policy and Practices

Climate change risk is one of the risks the Company has reviewed and prioritized; therefore, climate change management is set as one of the KPIs of the Chief Executive Officer and senior management in all involved business units. The Company set up a Climate Change Committee to implement climate change management, emphasizing four measures, namely, reduction of GHG emissions, adaptation, being part of a low-carbon society, and joining efforts with other organizations to combat climate change. The ESG Committee, consisting of three independent directors, has been set up to oversight into ESG aspects, including climate change and driving ESG performance to achieve its goals with the highest efficiency. In 2020, the Company declared its support for the Task Force on Climate-related Financial Disclosure (TCFD). It also set up the TCFD Working Group to assess climate-related risks and financial impacts of the Company. The Company has disclosed its first “Report on Climate Change” in 2022.

Performance

By 2025, the company has set a target to reduce greenhouse gas emissions by 7% from business as usual in its mining business and by 20% from business as usual in its power business (thermal power business and renewable energy business). The performance was on track to achieve the target.

The company has announced to be a Net Zero Company by 2050 and will reduce 20% of GHG emissions in 2030 from 2023 as a base year which is aligned with the Paris Agreement. In addition, the company has integrated the decarbonization plan into its business operations. This plan includes considering the emissions and management of greenhouse gases from business activities. Currently, the company is in the process of planning, studying, and developing projects to reduce greenhouse gas emissions in the operation including the use of alternative and renewable energy sources, as well as the implementation of Carbon Capture, Utilization, and Storage (CCUS) technology.

Air Quality Management

Policy and Practices

Banpu prioritizes limiting and controlling emissions of air pollutants, such as dust, sulfur dioxide, and nitrogen oxides, from its operations, as they can impact the environment and the health of people in surrounding communities. In the thermal power business, the Company controls pollution at the source by employing engineering controls like circulating fluidized bed furnaces and advanced technologies for air quality control systems. This includes capturing sulfur dioxide and nitrogen dioxide from air emissions through chimney headers and removing dust using electrostatic precipitators (ESP). Continuous air emission quality monitoring systems are installed on stacks to ensure compliance with legal air quality standards at all times. In mining operations, emissions are controlled and minimized through regular equipment maintenance, reducing incomplete combustion, and controlling pollutants at the source. Measures include using conveyor belts instead of trucks for transportation, spraying water on roads and around coal stockyards, regularly maintaining engines, and limiting truck speeds within

the area. Technologies have been deployed for truck traffic planning and water spraying in the operation areas to reduce dust dispersion more effectively and the ambient air quality monitoring program conducts both in the operation sites and surrounding communities of the open-pit mine site. Air quality management and mitigations are tailored for each underground mining site which the Company regularly measures air quality in operational areas, with the continuous dust monitoring program in underground mines to determine specific dust control measures. In the gas business, the Company has implemented ongoing emission reduction measures to ensure pollutants remain within legal limits. Monitoring, mitigating, and reducing hazardous pollutant emissions are integral parts of its strategy. For the energy storage business, air pollutant emissions, including total non-methane hydrocarbons (TNMHCs) and volatile organic compounds (VOCs), are strictly controlled and monitored. Air quality measurements are also conducted by third parties at specified times to ensure legal and regulatory compliance.

Performance

The Company has reported air pollution data from two sources, namely point and non-point sources, and implemented measures to continuously control pollution at its source. In 2024, the Company developed a digital system to improve the operational efficiency of combined cycle power plants in China, which aids in reducing environmental risks and addressing public complaints regarding air pollutant emissions. This includes replacing the deNOx catalyst in the air pollution control system to maintain the system’s efficiency in capturing pollutants. The Company has set goals for its thermal power plants in the United States to ensure air quality and regulate pollutant emissions. Additionally, the inspection and monitoring forms have also been developed to assess air quality from generators in these mining areas. This includes regular third-party air quality measurements at operation sites and in surrounding communities to ensure compliance with legal requirements.



Water Management

Policy and Practices

The Company has developed a water database system to monitor water consumption at every stage across all business units. This system includes the development of water flow and water balance diagrams covering the entire process from water abstraction to usage in production and wastewater discharge. The water management plan follows a step-by-step approach starting with elimination, reduction, and reuse/recycling, aiming to achieve targets in line with the policy of reducing water usage throughout the product lifecycle. The Company has implemented specific measures in each operational area to effectively mitigate potential impacts. The Company has also developed a “Standard Practice Manual: Water Management” and assessed the product water footprint across all business units. This includes assessing the risk of water stress at each business unit’s location using the World Resources Institute (WRI) Aqueduct Water Risk Atlas database. Recognizing the importance of water quality, the Company conducts water quality measurements in collaboration with third parties to ensure that the quality of treated water meets legal standards and related obligations before discharge.

Performance

The Company has developed a water database system across all business units and updated the Standard Practice Manual: Water Management. It has established specific measures for each area and developed Trigger Action Response Plans (TARPs) for water discharge in underground mining areas. Moreover, the Company set water use targets for

its thermal power plants in the U.S. for 2024. It also assessed water-related risks and impacts and prepared a proper water management plan using the World Resources Institute’s (WRI) Aqueduct tool, a global standard, and compared it to water stress assessment criteria. The assessment revealed that 41% of business units are in areas with a high risk of water stress. The Company also conducted an environmental impact assessment of water issues and assessed the product water footprint according to ISO14046 requirements. In addition, a water flow model and water management system for underground mines (GoldSim model) were developed to assess the impact of local rainfall, water use, and water balance. They are crucial for improving the accuracy of water use reporting and can be used to predict water impacts throughout the mine lifecycle. The Company has collaborated closely with stakeholders, particularly government agencies and surrounding communities, through various channels, such as stakeholder meetings, hearings, and stakeholder engagement surveys, to monitor the water situation and regulatory changes while taking responsibility and care for community water issues. The Company shares water resources with communities and involves them in monitoring water, sediment and tailing dams management in underground mines, promoting collaboration to mitigate the impacts of water scarcity and ensure sufficient water resources for all stakeholders. Key suppliers are encouraged to assess water stress, implement preventive measures, and minimize the impact of annual water use.

Waste Management

Policy and Practices

The Company strictly complies with waste management laws in every country where it operates and adheres to a waste management strategy based on a waste management hierarchy, which consists of the prevention and minimization of waste generation at the source, reuse, recycling, other recovery operations, and disposal. To optimize resource utilization while reducing waste and minimizing the environmental impacts of waste disposal through incineration or landfill, the Company has established waste management standards in line with international practices, as well as the requirements and regulations of each country where it operates. It has developed a site-specific waste process flow diagram covering the entire value chain to provide an overview of waste generation and management, to facilitate management planning and monitoring, and to serve as a reference for data collection. For mining waste, such as soil and sediment, the Company controls risk prior to production by conducting preliminary risk assessments. It has also established comprehensive standards for managing mining waste from the initial phase to mine closure.

Performance

The Company has fully complied with waste management laws in all countries where it operates and adhered to a waste management strategy based on the waste management hierarchy to minimize environmental impacts from waste disposal. In 2024, the Company improved waste management performance efficiency by updating policies and guidelines to reduce operational waste and promote reuse and recycling initiatives. For example, the Company conducted a recycling program for non-hazardous waste, including plastic, paper, food waste, and used vegetable oil, transforming them into products such as paving tiles, organic fertilizer, and soap for use in mining areas in Indonesia. This has significantly reduced the non-hazardous waste sent to landfills and emphasized achieving zero food waste to landfills by 2023. The program earned the Company the PROPER (Green) award from the Indonesian Ministry of Environment. Furthermore, the Company initiated a project to improve the efficiency of waste management processes (slag handling system renovation) at combined heat power plants in China. In the U.S., waste management targets were set for thermal power plants to enhance efficiency and reduce waste dispose to incineration or landfills. The Company is also preparing a comprehensive waste process flow diagram for the underground mining business in Australia, covering the entire value chain, to facilitate the waste management planning and monitoring and serve as a reference for data collection.



Biodiversity

Policy and Practices

Recognizing the potential impact on ecosystems and biodiversity, the Company has developed policy and adopted the mitigation hierarchy principle, which includes avoidance, reduction, restoration, regeneration, and transformation, following the concepts established by the International Union for Conservation of Nature (IUCN). A biodiversity risk assessment is conducted across all business units prior to the operational activities, taking into account the impacts of location and activities in the operational areas and the protected areas or areas with high biodiversity. The Company has conducted a species survey to conserve native local species and those listed on the IUCN Red List (assessments for species status and global extinction risk.) For business units in high-risk biodiversity areas, the Company assesses biodiversity value using standards aligned with the Convention on Biological Diversity and develops tailored Biodiversity Management Plans. The aim is for all mines with high biodiversity risk to achieve a net positive post-mining impact by 2025. Furthermore, the Company has integrated the issue of land subsidence into its underground mining planning for areas at risk of subsidence due to mining activities. This involves submitting mining plans, including subsidence management strategies, to the relevant government authorities for approval prior to the commencement of operations. The Company also conducts regular monitoring of mine subsidence and its potential consequences.

Performance

In 2024, the Company formulated a biodiversity impact assessment manual and conducted assessments in all business units to facilitate planning and establish guidelines for managing biodiversity impacts in particular areas. The assessments identified 4 operational areas with high biodiversity risks. Moreover, surveys of operational areas revealed that 11% are situated in protected zones or regions of high biodiversity. The Company also performed a global extinction risk assessment to identify species at risk of extinction according to the IUCN Red List.

Consequently, the Company has developed a site-specific biodiversity management plan for each operational area to ensure compliance with relevant laws and regulations, including continuous monitoring and inspection. This encompasses subsidence management planning, biodiversity and species reviews, and the implementation of biodiversity offset projects.

Furthermore, the Company has collaborated with external organizations, including government agencies, educational institutions, and research consultants, to provide employee training and devise effective biodiversity mitigation measures.

SUSTAINABILITY MANAGEMENT – SOCIETY ASPECT

Human Rights

Policy and Practices

At Banpu, we are committed to respecting, promoting, and protecting human rights for all individuals involved with our operations, including employees, suppliers, business partners, communities, and other stakeholders. We firmly safeguard the rights of all people, regardless of their race, color, sex, age, language, religion, political opinion, national or social origin, gender identity, sexual orientation, vulnerable groups, or any other characteristic. We adhere to the highest standards, in compliance with applicable laws and international standards, including the Universal Declaration of Human Rights (UDHR), the UN Guiding Principles on Business and Human Rights (UNGPs), ILO Declaration on Fundamental Principles and Rights at Work and OECD Due Diligence Guidelines for Responsible Business Conduct and local labor laws in our operating countries. We prohibit violence, discrimination, harassment, exploitation, or abuse, with a zero-tolerance policy for violations. Human rights principles are integrated into our decision-making, policies, and practices, with continuous training and awareness-raising for employees.

Human Rights Due Diligence (HRDD) is regularly conducted to ensure that our operations, supply chains, and business relationships respect and protect the rights of all individuals involved. Through comprehensive due diligence, we proactively identify and address human rights risks, monitor impacts, establish transparent communication, and maintain accessible grievance mechanisms for internal and external stakeholders. We ensure equitable remediation for affected individuals and communities, including those impacted by resettlement and decommission. Our commitment to due diligence is part of our broader strategy to maintain the effectiveness of our human rights initiatives and quickly adapt to changes in both local and global contexts. This approach ensures that we exceed stakeholder expectations, reinforcing our dedication to creating a positive and sustainable impact across all our operations.



Performance

In 2024, Banpu conducted Human Rights Risk Assessment (HRRRA) for the mining business in Indonesia, with thorough training and workshop sessions. HRRRA is a crucial process of Human Rights Due Diligence (HRDD) that helps organizations identify, prioritize, and address risks related to human rights violations. The first step is to identify the potential human rights issues within our operations, supply chains, and business relationships. This involves gathering information from a variety of sources, such as existing policies, self-assessment questionnaires, and document-based research. While the training introduced the concept of HRDD, its importance in identifying risks to the mining sector, and the connection between business practices and human rights, the workshop served as a significant method for gathering information for the HRRRA. During the workshop, key internal stakeholders collaborated to discuss and identify specific human rights issues in their operation areas and local context.

Once risks are identified, we assess the impact of each identified issue by evaluating its severity and likelihood. This involves assessing the potential impact on individuals and communities and considering criteria of the scale, scope, and remediability. Then, the risk matrix method is used to prioritize the most significant harm or have the highest probability of occurring for immediate attention.

The training and workshop resulted in a clear understanding of human rights risks within our operations and feasible strategies to address them. By combining qualitative insights from workshops, we successfully conducted a comprehensive assessment. This enables us to identify and prioritize human rights risks, develop effective mitigation strategies, and continuously improve our practices to uphold human rights across all our operations. Moving forward, Banpu will continue to monitor the effectiveness of these strategies, ensuring continuous improvement in our HRDD process.

Community

Policy and Practices

Banpu firmly believes that “an industry will be strong only when it is developed in tandem with social and environmental responsibility.” Accordingly, the Company implements community development initiatives at all locations where it operates. Central to these efforts is “an engagement process” that fosters collaboration among key stakeholders, including local communities, government agencies, and relevant organizations. These initiatives align with Banpu’s Community Engagement Policy, which aims to enhance the quality of life and well-being of local communities, empower them to achieve long-term self-reliance, and gain community acceptance.

The Company has established the Community Engagement Policy and standard practices to ensure consistent compliance and implementation across all business units. It also devised strategies and set targets for community engagement activities in alignment with the local government’s regulations and international standards, such as the UN’s Sustainable Development Goals (SDGs). In collaboration with local communities, community engagement activities are carried out in six major areas: economy, education, sanitation and primary health care, environmental conservation, social and cultural promotion, and basic infrastructure development. Moreover, the Company has employed the Social Return on Investment (SROI) framework to evaluate the social impacts of community development activities to maximize the efficiency of its operation in line with its Sustainability Policy.

• Community Engagement Implementation

The Company has developed a Standard Practice Manual on Community Engagement, which covers guidelines for improving the quality of life in local communities and mitigating social and community impacts. This manual provides community engagement officers with standardized operational procedures applicable across all areas of operation. Moreover, the guidelines are regularly reviewed and updated to ensure they effectively address changing circumstances and community needs.

• Community Baseline Data Collection

The Company has determined to collect baseline community data during the initial stages of business operations and update it regularly, aiming to gain an understanding of the community’s geography, demography, occupation, resources, living condition,

and development potential. These insights are subsequently presented to the Community Consultative Committee (CCC) for discussion and collaboration, enabling the development of tailored community engagement plans to address community needs while achieving objectives that foster mutual benefits.

• Application of Social Impact Assessment

The Company places great importance on the potential impacts of its operations on local communities. Therefore, a comprehensive social impact assessment is conducted across all business units before the commencement of any project. The insights gained from these assessments are used to design activities that align with community needs, primarily focusing on minimizing or avoiding adverse impacts. Furthermore, the Company ensures that the mitigation of impacts is compared to baseline



conditions before the conclusion of operations at the end of the concession period. If there are changes to the project during its lifecycle, the Company conducts a new social impact assessment to ensure alignment with the modified operational activities.

• **Promotion of Community Engagement**

The Company prioritizes community engagement throughout every stage of development—pre-development, development, and post-development, emphasizing involving community members in designing, implementing, monitoring, reviewing, and evaluating community activities. For example, the Company develops community engagement plans that align with community needs and complement government development initiatives. The Company and local communities have jointly established a Community Consultative Committee (CCC), comprising representatives from local communities, local government, and the Company. This committee collaboratively works on project planning, monitoring progress, and solving problems for the greatest benefit to society.

• **Building Collaboration with Local Communities**

The Company promotes contractor collaboration in community engagement work collaboration with contractors to support community engagement initiatives, as many of them have been carrying out community engagement implementations. This collaboration encompasses joint planning, budget allocation, resource management, and the exchange of knowledge, expertise, and information. By working together, the Company and its contractors enhance the efficiency of community engagement projects, deliver broader benefits to local communities, and minimize redundancies in program management.

• **Community Complaint Management**

The Company has established a Community Complaint Management System to ensure the systematic handling of community complaints in every business unit. This approach includes indigenous peoples management and the restoration of local communities in line with the resettlement management framework. Moreover, the Company requires regular reporting of complaint management outcomes to the Sustainability Committee and the ESG Committee.

• **Community Perception and Satisfaction Surveys**

The Company conducts community perception surveys as a standard practice at all operational areas to assess community perception, acceptance levels, concerns, and suggestions. The insights gained from these surveys are used to improve operations, ensuring they better serve the community, meet its needs, and enhance overall satisfaction. In Indonesia, an annual community satisfaction survey on community engagement program is conducted, providing valuable feedback on satisfaction levels and enabling the Company to enhance the effectiveness of its community development initiatives.

• **Quality Assurance Review**

These reviews are carried out by employees who are not directly involved in community engagement activities to ensure the highest transparency and efficiency. The annual review process enables the Company to identify areas for improvement, enhancing the overall effectiveness of its community engagement initiatives.

• **Community Engagement Data Assurance**

The Company has implemented a community engagement data assurance system to verify and ensure the accuracy of data, reflecting the genuine needs and concerns of the community. This system enables the Company to make well-informed decisions and operate more efficiently while ensuring transparency in disclosures and building trust among stakeholders. By preventing the dissemination of misleading information, this approach supports sustainable business operations and strengthens long-term relationships with the community.

Performance

In 2024, the company held a total of 49 meetings with local communities, which included 5 meetings with the community consultative committee in Indonesia, 13 meetings with the mining group level subcommittee in Australia, 30 meetings with the chamber of commerce, homeowners associations, and civic organizations in the United States, and 1 meeting with community representatives in Mongolia. The company focuses on community participation at every stage of its operations and has incorporated feedback from these meetings into its strategic planning for sustainable collaboration with local communities.

In addition, the Company has applied the Community Complaint Management Standard across all business units to ensure systematic management of community complaints, encompassing both indigenous peoples and individuals affected by resettlement activities. In 2024, however, the Company received no significant community complaint issues from any business unit. The Company is committed to addressing community complaints with transparency and fairness. The outcomes of complaint management are regularly reported to the Sustainability Committee and the ESG Committee.

The Company conducted community satisfaction surveys across 16 community development programs in 5 Indonesian mines. The average satisfaction

rating was 88.66% or at the “Very Satisfied” level. For other mines, the Company plans to carry out similar surveys in the coming year. The Company employs the Social Return on Investment (SROI) framework to evaluate the social impacts of community development initiatives and improve their effectiveness across all business units. In 2024, SROI assessments were conducted for 12 community development programs across 4 mine sites in Indonesia. Furthermore, the Company uses maturity measurement tools to assess community development initiatives, focusing on sustainability across six dimensions: change, inclusion, organization, cooperation, influence, and sustainability. In the same year, the Company applied these tools to community engagement projects in Indonesia, achieving comprehensive sustainability evaluations that covered 80% of the area.

The Company is preparing to implement a data assurance process for community engagement by aligning management standards across all business units. It is working closely with each unit to ensure readiness for this process. Preparations include reviewing and enhancing data collection, analysis, and reporting practices while maintaining transparent and ethical engagement with all stakeholders. Through these efforts, the Company aims to demonstrate its commitment to effective and responsible community engagement.



Occupational Health and Safety

Policy and Practices

Banpu is dedicated to ensuring the well-being of its employees and all individuals involved in its operations by fostering a safe and healthy work environment. To reinforce this commitment, the Company has established and announced the Occupational Health and Safety Policy and the “3 Zeroes” targets as follows:

- Zero Incidents – eliminate unsafe behavior or working conditions
- Zero Repeats – prevent recurrence of incidents
- Zero Compromise – adopt non-negotiable safety standards

Occupational Health and Safety (OHS) performance is a key performance indicator for the Chief Executive Officer (CEO) and senior management across all business groups and subsidiaries. To uphold high safety standards, the Company established the Occupational Health and Safety Division, ensuring compliance with the Banpu Group’s regulations, standards, and relevant local laws. Additionally, the Company has implemented ISO 45001 standard as a guideline for the Occupational Health and Safety Management System (OHSMS). A safety culture framework has also been adopted, emphasizing the development of safety systems, knowledge, and behaviors across Banpu Group and its subsidiaries.

To achieve the “3 Zeroes” targets and drive continuous improvement, the Company regularly assess the effectiveness of Occupational Health and Safety Management System (OHSMS) across all operational offices on a monthly, quarterly, and annual basis. This includes safety culture evaluations, ESG Committee meetings with independent directors, and Sustainability Committee meetings, led by the Chief Executive Officer (CEO). These reviews focus on monitoring and implementation of occupational health and safety policies, setting targets and strategies,

analyzing incident records, and ensuring compliance with relevant laws and regulations.

Hazard Identification, Risk Assessment, Incident Reporting and Investigation

Banpu has established comprehensive hazard identification and risk assessment processes covering both routine and non-routine tasks. A variety of tools are utilized to enhance workplace safety, including;

- **Indonesia (Mining Business):** Job Safety Environment Analysis (JSEA), Green Card/Yellow Card, Safety Health Environment Accountability Program (SHEAP), and Hazard Identification, Risk Assessment and Determining Control (HIRADC)
- **Australia (Mining Business):** Stop, Look, Assess and Manage (SLAM) system
- **China (Thermal Power Plant):** Safety Walk Down Program and Safety Double Control
- **Bangkok Office:** SOS application for reporting and recording both unsafe actions and unsafe conditions

Following risk assessment, the Company has developed an occupational health and safety work plan to minimize and control risks to acceptable levels. This includes:

- **Regular Monitoring and Review:** Work plans, hazard identification, and risk assessments are reviewed annually or when significant safety changes occur
- **Hierarchy of Controls:** Risk monitoring plans are developed and communicated by trained managers to ensure operators are informed of necessary precautions before work begins

- **Right to Refuse Unsafe Work:** Employees can halt operations if hazards or safety risks are identified until the issue is resolved. This will not be considered a disciplinary offense, and workers are encouraged to report unsafe conditions

In the event of an accident, employees or witnesses must report the incident to their supervisors for severity assessment and notification of relevant parties. For severe incidents, a dedicated expert team is assembled to investigate the root causes, identify preventive measures, and assess potential future risks. Findings, including corrective actions, are routinely reported in monthly management meetings to drive continuous safety improvements.

Occupational Health Management and Services

The Company actively monitors the work environment across all operational sites, assessing risk factors such as air quality, noise levels, chemical exposure, and light intensity to ensure full compliance with legal requirements. These assessments are conducted by external agencies to guarantee that employees and contractors work in safe, hazard-free environments.

For locations or sites with potential health and safety risks, the Company conducts health risk assessments and arranges health-checkups tailored to occupational health risk factors. These include specialized examinations for hearing loss and pulmonary function, performed by occupational health doctors. The scope of health assessments varies by country to address specific occupational hazards. All health information is treated with strict confidentiality the Company adhere to the Personal Data Protection Act (PDPA), ensuring employees’ personal information is safeguarded against unauthorized disclosure.

At the Bangkok Office, the Company provides first aid kits, essential emergency medical supplies, and access to in-house nurses for emergency care and health counseling. Employees also have convenient and prompt access to telemedicine services. For remote work locations, the Company has established a medical service center with doctors and specialists available 24/7 to provide treatment and occupational health advice. These services extend to contractors and visitors, ensuring comprehensive health support. Additionally, mobile medical units are on standby to assist during emergencies within working hours, including emergency patients transport via the International SOS service. The Company also carefully selects contractors that meet its occupational health standards, ensuring their services maintain high quality and comply with specific requirements through systematic management and control measures.

Employee Engagement, Consultation, and Communication

The Company actively engages employees at all levels in safety operations from the development phase, encouraging input on various aspects, including the safety system, knowledge and capability, and behaviors. Employees across all operating countries can voice their concerns and suggestions through multiple channels, such as Hazard Identification and Risk Assessment, Safety Perception Survey, Safety Committee meetings, and safety quarterly meetings. Additionally, the Sustainability Family meeting serves as a platform where representatives from sustainability-related departments across Banpu's global operations to review the past year's performance and discuss future plans. The ESG Summit further facilitates international knowledge-sharing, ensuring continuous evaluation and the development of both short- and long-term improvement plans.

Performance

	2024	2024 Target	2025 Target
Number of occupational fatalities - Employees	1	0	0
Number of occupational fatalities - Non-Employees	2	0	0
Lost time injury frequency rate - Employees	1.44	≤2.16	≤1.99
Lost time injury frequency rate - Non-Employees	0.26	≤0.15	≤0.14
Total recordable injury frequency rate - Employees	14.11	≤11.88	≤10.93
Total recordable injury frequency rate - Non-Employees	0.70	≤0.57	≤0.53

In 2024, one employee and two contractors were involved in fatal accidents. Investigations identified common underlying causes in two cases, including fatigue, lack of risk awareness, and inadequate vehicle maintenance. The third accident occurred due to a maintenance operation that did not adhere to safety procedures, and the absence of a designated maintenance area. In response to these incidents, the Company implemented additional preventive and mitigation measures to prevent recurrence, including:

- Continuously organizing fatigue management programs
- Providing defensive driving training
- Expediting the establishment of designated maintenance areas to ensure a safe environment
- Reviewing the risk identification and analysis process
- Reviewing related safe operating procedures

The Lost Time Injury Frequency Rate (LTIFR) for employees was 1.44, which remained below the target, while for Non-Employees, it was 0.26, above the target. The Total Recordable Injury Frequency Rate (TRIFR) for employees was 14.11, while for Non-Employees, it was 0.70, also above the target.

The Company conducted a detailed analysis to identify and categorize the most frequent injuries. Among employees, common injuries included abrasions and lacerations, muscle and ligament injuries, impact injuries and bruises, sprains and strains, as well as exposure to chemicals. Contractors experienced similar external injuries, such as abrasions and lacerations, muscle and ligament

injuries, impact injuries and bruises, sprains, and heat-related injuries. The primary causes of injuries were tripping, slipping, falling, being pinched or pulled by objects, over-exertion, impact, cuts from sharp objects, and exposure to heat and chemicals.

Based on the Company's safety risk assessment results, four high-risk activities were identified in 2024 as leading to high-consequence injuries and major injuries. To address these, the Company conducted thorough root cause analyses and accident investigations to identify underlying issues. Based on these findings, targeted preventive measures were implemented to mitigate the risks effectively, as outlined below:

High-Risk Activities	Preventive Measures
Working in Mining Areas	<ul style="list-style-type: none">Conduct comprehensive risk assessments and develop a structured Job Safety Analysis (JSA) to identify hazardous areas and hazard activities, and implement appropriate risk control measuresEnhance traffic safety management within mining sites by implementing routine roadway hazard clearance, including debris removal and surface inspections. Install standardized traffic control devices such as prohibition signs (e.g., "No Overtaking"), hazard warnings, and designated pedestrian crossingsEnforce strict site-specific safety protocols through structured communication channels including pre-shift safety talks and toolbox talksProvide secure and compliant transportation for personnel commuting to and from the mining site, ensuring vehicles meet regulatory safety standards and are equipped with emergency response tools
Struck-By Hazards (Hit by Object)	<ul style="list-style-type: none">Perform site hazard identification to identify and mitigate potential struck-by risks, including falling objects, vehicle interactions, and suspended loadsImplement safety induction programs to ensure all personnel are informed of operational hazards, restricted areas, and site safety regulationsMandate the use of task-specific Personal Protective Equipment (PPE) including impact-resistant helmets, high-visibility clothing, and protective eyewear, as per risk assessment results
Operation of Moving and Heavy Machinery	<ul style="list-style-type: none">Conduct pre-operation risk assessments and Job Safety Analysis (JSA), and enforce a Permit-to-Work (PTW) system for high-risk machinery operationsImplement routine preventive maintenance and pre-use equipment inspections, ensuring compliance with manufacturer specifications and safety regulationsEstablish a fatigue management program, incorporating work-rest cycles, operator fitness assessments, and real-time monitoring systems



High-Risk Activities	Preventive Measures
	<ul style="list-style-type: none">• Provide competency-based training for machine operators, including instruction on equipment handling, emergency shutdown procedures, and lockout/tagout (LOTO) protocols• Ensure all high-risk operations undergo hazard communication procedures, including risk notifications to operators and relevant site personnel
Chemical Handling and Operations	<ul style="list-style-type: none">• Conduct Chemical Hazard Risk Assessments to identify potential exposure risks and implementation substitution, elimination, and engineering controls where feasible• Enforce strict adherence to Safety Data Sheet (SDS) and chemical safe handling protocols including storage, labeling, and disposal procedures• Deliver hazard communication and chemical safety training• Require the use of chemical-resistant Personal Protective Equipment (PPE), including gloves, respirators, face shields, and protective suits

Since 2018, the Company has been conducting regular assessments of Safety Culture Maturity through a survey aligned with the United Kingdom Health and Safety Executive (UK HSE) Safety Culture Maturity Model. This model outlines five progressive levels of safety culture development.

- Level 1: Emerging - The focus on safety is primarily reactive, addressing technical issues and ensuring compliance with regulations.
- Level 2: Managing - Leadership demonstrates commitment to safety, actively working towards accident prevention.
- Level 3: Involving - Employee participation is recognized as a key factor in driving safety improvements.
- Level 4: Co-operating - A collaborative approach is fostered, engaging all staff to strengthen commitment and cooperation in enhancing safety.
- Level 5: Continually Improving - A proactive safety culture is maintained, emphasizing consistency and vigilance to prevent complacency.

The findings from these assessments play a key role in enhancing the safety culture within our work environments. These plans will prioritize critical aspects of safety management, including leadership commitment and accountability, active management engagement, the development and implementation of safe work procedures, the provision of appropriate Personal Protective Equipment (PPE), and comprehensive training programs to enhance workforce competency and risk awareness. In 2024, the Company extended this process to three solar power plants in China - Jinshan, Huineng, and Hui'en - making their first safety culture assessments.

Each of these sites achieved the 'Involving' level, demonstrating our continued progress in promoting safety across our global operations. Overall, the number of operations assessed has increased to 22 business units across four countries, including China, Australia, Indonesia, and Thailand. The Company is committed to further expanding the scope of these assessments and advancing the maturity level, ensuring a high standard of safety awareness and proactively mitigating potential incidents.

CORPORATE SOCIAL RESPONSIBILITY (CSR)

CSR Activities in 2024

Thailand

Banpu has consistently carried out Corporate Social Responsibility (CSR) activities that align with environmental and social issues. In 2024, the Company enhanced its purpose-driven CSR initiatives to better address social needs. These efforts also reinforce its core values, enabling the company to reflect its corporate identity and role in society more clearly.

The Company has established a clearer CSR framework centered on human empowerment under the theme “**Embracing Potential, Energizing People**”. This framework aims to empower individuals to maximize their potential, utilizing their potential to create benefits for themselves, their communities, and society. It also promotes equality, reduces disparities, and expands opportunities for a better future. The Company focuses on empowering people in four key areas:

EMBRACING POTENTIAL, ENERGIZING PEOPLE.



1. **Intellectual Enhancement:** Focus on developing, promoting, and expanding access to knowledge and skills, fostering versatile capabilities essential for life.
2. **Wealth & Well-Being:** Strengthen economic growth and enhance the well-being of the community and society.
3. **Earth Betterment:** Encourage active engagement and establish networks dedicated to protecting and preserving the environment, natural resources, and ecosystems.
4. **Energy Sustainability:** Ensure access to energy and clean energy—fundamental factors for stable and sustainable development.

From 10 to 15 September 2024, the Company hosted a photo exhibition titled “Portrait of Passion” at River City Bangkok, featuring the works of Mr. Phurit Netimongkolchai, one of Thailand’s leading photographers. The exhibition marked the launch of Banpu’s new CSR theme, “Embracing Potential, Energizing People,” highlighting the potential of people who participated in the Company’s CSR initiatives and the positive impact they created on their communities, society, and the environment. It also provided insights into the Company’s various CSR projects and activities. The six-day event attracted approximately 5,600 visitors.



Key CSR Activities in 2024 under the “Embracing Potential, Energizing People” Concept

Intellectual Enhancement

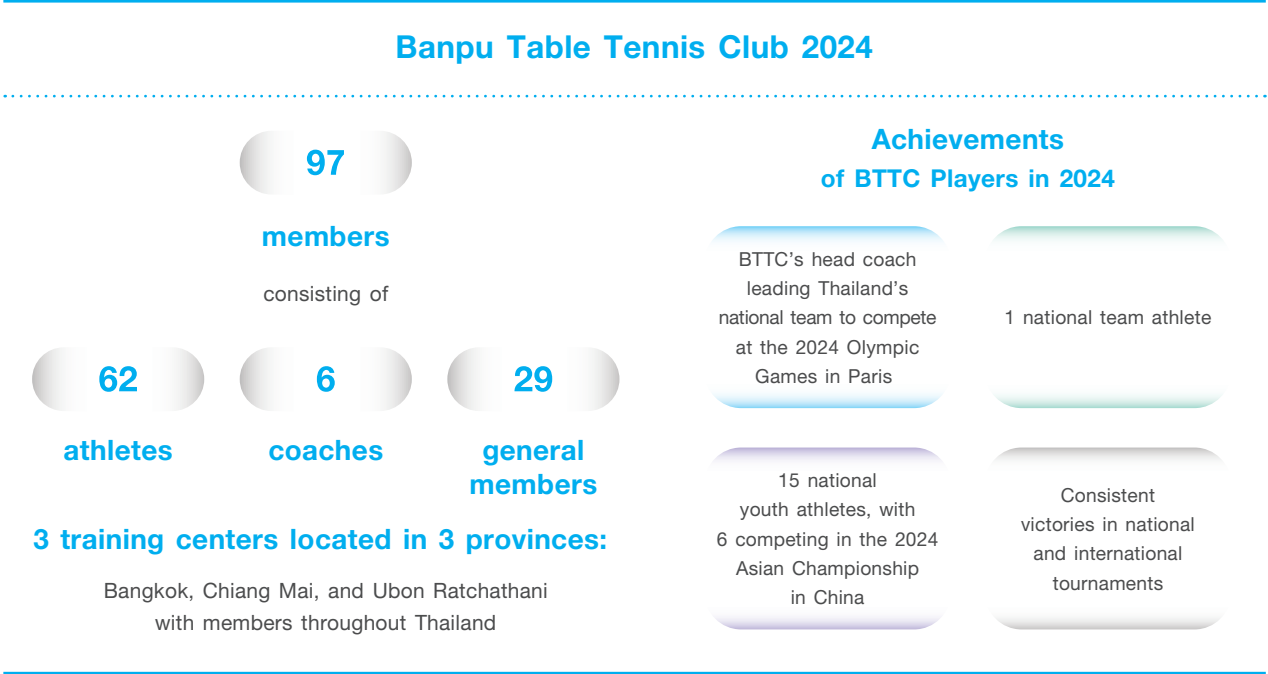
Banpu Table Tennis Club (BTTC)

The Banpu Table Tennis Club (BTTC) was established in early 2008, originating from Banpu’s subsidiary in China, which supported a national table tennis training center in Zhengding County. Leveraging this network, Banpu has facilitated the transfer of China’s table tennis skills and techniques to Thai youth players.

Over the past 16 years, the Banpu Table Tennis Club (BTTC) has been committed to developing of Thai table tennis athletes to be both skilled and good individuals. This dedication includes daily training support, participation in national and international tournaments, annual club activities, and other activities such as the “BTTC Training Camp.” In addition, volunteer athletes are invited to coach young and underprivileged table tennis players in remote areas, where access to proper training is limited.



In 2024, in addition to sending athletes to compete in nine national tournaments, the Banpu Table Tennis Club (BTTC) organized the “BTTC Training Camp.” The camp aimed to enhance athletes’ table tennis skills, and experience and improve their physical and mental performance, including proper nutrition. It also included activities to strengthen team unity within the club. Over 40 athletes and coaches participated in the five-day training camp at Khon Kaen University, Khon Kaen province.



Partnership School

The Partnership School Project is an initiative that fosters educational collaboration between the Ministry of Education and various sectors, including companies, foundations, and academic institutions. Its goal is to enhance school administration, improve academic achievement, and better prepare students for the future. The Company has supported three schools under this initiative, namely Non Sa-at Phitthaya School in Khon Kaen province, Chumchon Phon Ngam Phon Sawang School in Maha Sarakham province and Rong Kham Hong Thong Witthaya School in Roi Et province. Over the years, Banpu has provided ongoing support to these schools through various initiatives, as follows:

1. Elevating Academic Quality and Innovation

Banpu supports the Active Learning approach, which has significantly improved academic achievement, critical thinking, and communication skills among kindergarten and elementary students. This progress is evident in higher national test scores and student awards in arts and crafts competitions. Moreover, the Company continues to support the ‘1 Classroom, 1 Innovation’ initiative.

2. Improving Technology and Information Technology

The Company promotes IT education by providing adequate computer resources. All schools now integrate the IT system into their teaching and learning, school data management, and robotics classes.

3. Enhancing English Language Skills

Banpu has supported the teaching of English at the kindergarten level, extended English learning hours for elementary students, and encouraged schools to regularly organize activities that enhance students’ English proficiency.

Over the years, all Banpu-sponsored schools have operated in alignment with a continuity plan to maintain long-term quality standards while continuously improving educational excellence as model schools for others. This program has also fostered a strong sense of pride and satisfaction among parents and the local community. On 26 April 2024, Banpu officially handed over the Partnership School Project to the Education Service Area Offices overseeing the three schools. The event was attended by school executives, teachers, directors of the Educational Service Area Offices, the Banpu facilitating team, and other relevant parties, all coming together to celebrate the project’s success.



4. Developing Vocational and Life Skills

The Company has supported 12 vocational training and life skills enhancement programs: barbering, food and merchandise sales, artificial flower making, ornamental plant propagation, hydroponic farming, soil mix preparation for planting, selling drinking water, floral arrangements for events, souvenir making, running a cooperative shop, sports skill development, traditional dance, and both folk and Western music training.

5. Creating a Learning Community

The three partnership schools under the company’s support have become learning centers for other schools and community members to visit and learn from, with initiatives such as artificial flower-making workshops designed to help generate income for the community.

6. Developing a School Continuity Plan

Each partnership school has developed a continuity plan focused on school management, teaching quality, career and life skills, school revenue generation, and network creation. These schools continue to operate according to their plans to maintain their status as quality educational institutions for the long term.



Wealth & Wellbeing

Banpu Champions for Change (BC4C)

The “Banpu Champions for Change” (BC4C) project is a collaboration between Banpu and ChangeFusion Institute, a non-profit organization under the Rural Restoration Foundation of Thailand under the Royal Patronage. The project has been operational since 2011, with a mandate to support young social entrepreneurs who demonstrate creativity and potential for driving social change. These social entrepreneurs are encouraged to develop business ideas that not only generate income but also create a positive impact on society, communities, and the environment. The project aims to promote learning and understanding of social enterprise (SE), morals and ethics, and sustainability principles (ESG) in business. It builds an environment conducive to the growth of social enterprise while expanding SE networks and the SE ecosystem in Thailand, which in turn will create a quality society and lay a strong and sustainable foundation for the country’s economy.

The 13th Banpu Champions for Change – Incubation Program

The incubation program is the main activity of the project. The program is open to youths aged 20-35 years nationwide to apply as a team of up to four members. Each team will propose a social enterprise project plan based on their competencies and interests to address social, community, or environmental issues, aiming to seek funding from the project. Selected teams in each phase receive incubation and mentoring support. Additionally, participants will take part in workshops led by experts and mentors from diverse fields, such as management, finance, and social and environmental impact measurement, to enhance their capabilities. Each of the seven selected team will also receive an initial funding of THB 80,000 to kickstart business development and test operations in the real market for three months. The top three finalists will receive an additional grant of THB 250,000 to expand their businesses.



In 2024, seven social enterprises were selected as finalists (not ranked by scores) in the incubation program. They have offered solutions to social problems in various dimensions:

- Chan Rong:** Preserving mangrove forests in Krabi province and enhancing the value of “stingless bees” for community forest restoration. The project develops a variety of bee-related products and promotes sustainable tourism.
- Khontalay:** Protecting Ao Tung Noi in Prachuap Khiri Khan province by connecting local communities to expand sustainable fishing ecosystem and creative tourism, generating income from tourism-related products and services.



- **Karen Design:** Addressing the poverty of the Karen ethnic group in Mae Hong Son province by creating additional income through handicrafts, including “hand-woven fabrics and corn husk lamps.”
- **Refield Lab:** Designing green spaces using landscape architecture, engaging stakeholders to develop community spaces through nature-based solutions, and enhancing the local environment.
- **Zeefedz:** Reducing the environmental impact of shrimp farming with innovative organic feed supplements, minimizing antibiotic use and chemical residues while increasing farmers’ income.
- **CHICK VILLAGE:** Creating a community of chicken farmers to generate stable household income, reduce debt, and provide upskilling in commercial poultry farming and agrotourism.
- **PaperyBfly Bookhouse:** Empowering “Thai persons with disabilities” to become “writers” by providing a platform to showcase their writing potential, with future plans to expand into premiums and souvenirs.

The winners of the 2024 incubation program are Chan Rong, Khontalay, and Karen Design.

Banpu Champions for Change: Acceleration Program #3

Banpu supports social enterprises in the growth phase that have been operational for some time and aims to expand further through intensive activities designed to advance their enterprises. The program offers consultation and business data analysis by a team of experts, advice on developing a business profile, and technical assistance tailored to the unique needs of each social enterprise. It also organizes activities to bridge social entrepreneurs with businesspeople, connecting them with investor networks, business partners, and government agencies to create opportunities for SEs to access knowledge and funding sources.

In 2024, five social enterprises joined the Banpu Accelerator Program:

- **Toolmorrow:** Dispel myths with “Social Experiment” methods to strengthen family relationships through an online platform, reduce risky behaviors among young people, and help parents develop positive communication skills.
- **Wandee V Craft:** Transform individuals with disabilities into ‘Macramé’ knitting designers, providing them with opportunities to express their creativity and showcase their talents. Through designing unique patterns and creating handcrafted Macramé bags, turning their skills into profitable products with unique characters.



- **Sawanbondin Tea House & Experience:** Preserve Chiang Rai’s forests by purchasing community-based products. Sawanbondin offers tea brand, cafes, and farmstay that emphasize environmental conservation. The project encourages farmers to adopt organic tea-growing practices and commits to purchasing high-quality products from community forests.



- **The Next Forest:** Restore green spaces through the fusion of science and art, providing consultation services for enhancing local ecosystems. The project expands forest areas that sustainably absorb greenhouse gases.
- **Pleamprai Organic:** Transform organic agricultural products into “food supplements, cosmetics, and herbal extracts.” The enterprise builds a farmer network in Chaiyaphum province, ensuring their organic farming and herbal products meet commercial standards for market readiness.

In 2024, the Banpu Champions for Change (BC4C) Project organized an online knowledge-sharing session under the theme “In-depth Guide to Applying Government and Private Sector Funding for Social Enterprises.” The session aimed to equip BC4C entrepreneurs seeking to expand their businesses and increase their positive impact on society, communities, and the environment with insights into financial support policies from both government and private sectors. It covered key funding opportunities, application requirements, and best practices to enhance the chances of securing funding. The event featured three expert speakers: Mr. Chalermpong Klakhayan from the National Innovation Agency (NIA), Dr. Warin Ratchananusorn, Director from the Digital Economy Promotion Agency, and Mr. Ekkathat Phattharaphokkhaphat from Technology and Innovation-Based Enterprise Development Fund (TED Fund).

Additionally, The Banpu Champions for Change (BC4C) project organized roadshow activities in four regions and four provinces: the North - Chiang Mai, the Northeast - Nakhon Ratchasima, the South - Narathiwat, and the Central Region - Bangkok. These activities aimed to raise awareness of the project

and encourage local entrepreneurs to participate. As a result, this year, 15 teams from various provinces reached the finals, including 10 teams from outside Bangkok—a significant increase from previous years. This growth aligns with the program objective and the “Impactful Locals, National Boost,” concept, which emphasizes developing local businesses as a foundation for a strong Thai economy.





At the end of the year, the project organized a press trip for media representatives to witness the success of Khontalay, one of the three winning business models of the BC4C incubation program from Kui Buri district, Prachuap Khiri Khan province. The visit highlighted how Khontalay social enterprise effectively applied knowledge from the BC4C program to develop a clear and impactful business model. The enterprise demonstrates how local wisdom, and existing resources can be leveraged to create added value. By applying insights from BC4C, Khontalay established a solid business framework, ensuring both sustainable social impact and stable business growth.

In 2024, the [SE.school](#) website—Thailand's first social enterprise online learning platform—continued to serve as a hub for information, updates, and achievements of BC4C activities. New content was developed to make social enterprise operations easier to understand, further supporting BC4C's goal of building a knowledge base and ecosystem that facilitates social enterprise growth.

Earth Betterment

Power Green Camp: An Environmental Science Camp for Youths

Since 2006, Banpu has collaborated with the Faculty of Environment and Resource Studies, Mahidol University, to host the “Power Green Camp” under the concept of “Envi-Science Learning Through Actions.” This project aims to enhance knowledge and understanding of environmental science and natural resources, as well as to raise environmental awareness among young people. The camp encourages participants to systematically apply scientific knowledge to solve environmental problems. Additionally, it establishes an environmental network of youth who play a significant role in driving protection, restoration, and participation in addressing environmental issues at local, national, and international levels.



This year, **537 candidates from 277 schools in 65 provinces** applied to participate in the event. Applicants submitted video presentations addressing the theme: “How important do you think urban forests are to ecosystem diversity? As a youth leader in environmental conservation, what are your ideas or approaches to bringing sustainable management of urban green spaces into practice?” Following a rigorous selection process, 50 young individuals from 48 schools in 32 provinces were chosen to take part in theoretical and hands-on learning experiences, including:

- Exploring the importance of forests and biodiversity to understand the connections between forests, cities, and lives.
- Biodiversity and Herbal Walk to discover key plant species in urban forests – at Sireeruckhachati Nature Learning Park, Mahidol University, Salaya Campus.
- Field activities at a natural forest area in Saraburi province, including biobank studies, weather forecasting with trees, reforestation of native trees, and forest bathing.
- Field trip to Benchakitti Park, Bangkok: Participants learned how to design and develop urban forests, study water and air quality indicators, and survey sustainable recovery processes. They also explored the career of an Arborist, took part in tree-planting activities, and Scientifically

The 19th Power Green Camp was held from 28 April to 4 May 2024 under the theme “Urban Rewilding: Forest - Cities – Lives.” The camp provided young participants with insights into urban forest restoration and biodiversity enhancement, following the 3Rs learning model:

- **Reconnect:** Bring urban lives closer to the “forests” and learn about the relationship between living organisms and the surrounding nature.
- **Restore:** Learn how to conserve forests resources and restore the biodiversity of urban forests.
- **Redesign:** Study the systematic and sustainable design of green city.

designed sustainable cities through the “Youth Crafting Green Cities” activity.

- Envi-science group project competition to win scholarships and certificates in recognition of their achievements.

Over the past 19 years, a total of

1,185
students

have participated in

“Banpu’s Power Green Camp”

Among these,

238
participants

were trained to be

“Environmental Youth Leaders”

to serve as facilitators at the camps and help expand the environmental network.

Banpu Marine Debris Management Project

Banpu has joined the “Cooperation on Marine Debris Management at Estuaries” project, a collaborative effort involving the Ministry of Natural Resources and Environment, the Office of the Public Sector Development Commission, the Securities and Exchange Commission, and the Thai Listed Companies Association. This project aims to reduce marine litter, which will help mitigate environmental impacts. Banpu has initiated the “Banpu Marine Debris Management Project” for the lower Bang Pakong River Basin, covering Mueang, Ban Pho, and Bang Pakong districts, Chachoengsao province. In 2024, the activities carried out under this project are as follows:



- Installing buoyant trash nets at seven locations along the Bang Pakong River tributaries, capturing 2,967 kilograms of waste.
- Organizing waste collection along the Bang Pakong River, Banpu volunteers and the nearby communities collected 236 kilograms of waste. Combined with 2023-2024 efforts, a total of 5,716 kilograms of waste, equivalent to 8,780 kilograms of CO₂, was collected. The collected waste will be processed into alternative fuels, preventing it from polluting the Bang Pakong River and the Gulf of Thailand.



- Establishing a community waste bank in collaboration with sub-district administrative organizations. As of June 2024, the waste bank had purchased 4,523 kilograms of recyclable waste from the community, encouraging waste sorting and sales instead of disposal.
- Cohosting training on “Household and Marine Waste Management” with local governments, municipalities, and agencies in Chachoengsao province. The activity was attended by 80 participants.
- Organizing the “Marine Waste Journey” activity for 120 students from two schools in the Mueang Chachoengsao Municipal area.



Energy Sustainability

Ride for Chance, Ride for Change Project

In 2024, Banpu NEXT, a subsidiary of Banpu Public Company Limited, partnered with Lalamove, a leading logistics platform known for its commitment to a sustainable economy and operations, to launch the “Ride for Chance, Ride for Change” project. This project aims to create long-term employment opportunities for people with disabilities, promote access to clean energy solutions, and support the transition to a carbon-free society in line with the United Nations’ Sustainable Development Goals (SDGs).



The project focuses on creating sustainable, positive changes through the rapidly growing parcel delivery sector. It provides a fleet of electric motorcycles for disabled drivers and comprehensive training in driving, safety, customer service, and technology. Tailor-made assistance systems are also designed to boost the confidence of disabled drivers and help them overcome obstacles in their work. The promotion of electric motorcycles helps reduce air pollution and drive societal equality.



In 2024, a total of 20 persons with disabilities participated in the “Ride for Chance, Ride for Change” project, including 16 hearing-impaired persons and 4 with reduced mobility. All participants received electric motorcycles with first-class insurance, with exemptions from rider registration fees throughout the approximately 12-month project period.

Republic of Indonesia

PT. Indo Tambangraya Megah Tbk (ITM), a subsidiary of Banpu in Indonesia, prioritizes the implementation of Corporate Social Responsibility (CSR) and community development programs. In accordance with Banpu's policies and guidelines, ITM has carried out various CSR initiatives focusing on education, community development, environmental conservation, and improving the well-being of communities surrounding its seven mine sites on Kalimantan Island, namely Indominco Mandiri (IMM), Trubaindo Coal Mining (TCM), Bharinto Ekatama (BEK), Kitadin - Embalut (KTD), Jorong Barutama Greston (JBG), and Graha Panca Karsa (GPK). Significant activities carried out in 2024 are as follows:

Educational Development

Education plays a crucial role in improving community well-being. ITM has implemented various educational programs to support underprivileged students in pursuing higher education, improve the quality of teaching and learning, and promote equal and equitable access to education through the following initiatives:



- **Scholarships:** ITM provided scholarships to 312 underprivileged and high-achieving high school students around the operational areas on Kalimantan Island, including those from Indominco (IMM), Trubaindo Coal Mining (TCM), Bharinto Ekatama (BEK), and Tambang Raya Usaha Tama (TRUST).
- **Community Learning Activity Centers (Pusat Kegiatan Belajar Masyarakat: PKBM) - Non-Formal Education:** ITM implemented this program through its subsidiary "Indominco" (IMM) in six villages around the operational areas, including Suka Damai, Suka Rahmat, Danau Redan, Teluk Pandan, and Bontang Lestari. In 2024, the program focused on the Damai Mandiri Community Learning Center (PKBM Damai Mandiri) in Suka Damai Village, benefiting 297 participants.

- **Teacher Training Program:** PT BEK, a subsidiary of ITM in collaboration with the Sampoerna Foundation, conducted a teacher training program at seven schools, engaging 30 teachers and 14 school executives. The program aimed to enhance educators' skills in teaching methods and school management, benefiting 600 students in East Kalimantan and Central Kalimantan provinces.
- **Support for Learning Activities of Higher Education Students:** ITM has supported university students' learning activities through internship opportunities, research collaboration, and guest lectures in the fields of mining, technology, environment, social responsibility, and sustainable development. In 2024, ITM supported learning activities for students at 17 universities. Furthermore, ITM is dedicated to assisting students with disabilities in enhancing their life skills. As part of this commitment, two hard-of-hearing students were offered internships in different departments. Additionally, the Company has organized sign language training for its staff to facilitate effective communication with hearing-impaired interns.

Community Development

- **Economic Development:** In 2024, ITM allocated IDR 4 billion to support local economic development by funding various community projects, aimed at creating career opportunities and enhancing economic capacity. A total of 265 beneficiaries received support through the following initiatives led by ITM's subsidiaries:



- Indominco (IMM): Development of Small and Medium Enterprises (SMEs)
- Bharinto (BEK): Development of integrated agricultural system concepts
- Trubaindo Coal Mining (TCM): Development of Sarut Fabric Craftsmen
- Tambang Raya Usaha Tama (TRUST): Development of Souvenir Production
- Kitadin-Embalut (KTD): Development of Mushroom Cultivation
- Jorong (JBG): Development of Sasirangan Fabric Weavers



- **Community Health Improvement:** The Community Health Improvement Program, implemented by PT ITM and its subsidiaries, aims to enhance the well-being of local communities, with a focus on maternal and child health care and elderly support in areas surrounding the mining sites. ITM is also committed to raising awareness about the improvement of well-being through ongoing training and education for community members. In 2024, ITM allocated IDR 3.1 billion to support various community health programs, benefiting 5,076 individuals through initiatives led by its subsidiaries, including:
 - Kitadin-Embalut (KTD) and Indominco (IMM) provided free medical treatment to residents in communities surrounding the mining areas.



- Tambang Raya Usaha Tama (TRUST), Graha Panja Garza (GPK), and Kitadyn-Mbalut (KTD) supported programs focused on preventing stunting in young children.
- Bharinto (BEK) and Jorong (JBG) conducted personnel training to enhance maternal and child health programs (Posyandu Cadre Training.)

Environmental Conservation

ITM's environmental conservation programs aim to support nature preservation and enhance environmental quality in areas surrounding its operational sites. Through initiatives such as reforestation, sustainable natural resource management, and ecological balance preservation. Additionally, ITM drives community engagement and builds networks for environmental protection and ecosystem preservation. In 2024, ITM allocated IDR 1.6 billion for the following environmental conservation programs:

- **Power Green Camp:** ITM, in collaboration with the KIARA Foundation (Yayasan Konservasi Ekosistem Alam Nusantara), organized the Power Green Camp under the theme "Climate Warriors.". This initiative provides opportunities for young people to actively participate in environmental activities. Six students from universities in Jakarta and West Java were selected for training and workshops on environmental activities with local farmers and communities. The activities included biodiversity conservation on university campuses, mangrove planting, coastal waste cleanup, planting carbon-absorbing trees, and forest restoration. Other activities included the



development of the "Booklet of IPB Dramaga Campus Wildlife Monitoring," eco-enzyme workshops, and a national environmental webinar. In 2024, the project benefited around 300 people from three cities on Java Island.

- **Indigenous Forest Conservation for Food Security Program (Food for Green):** BEK participated in the "Food for Green" program, initiated by the government and the Kutai Barat Environmental Agency, to support indigenous forest conservation for food security between 2023-2024. The program also included tree-planting activities outside mining areas. Since 2023, BEK has implemented the program in three locations:

1. **Bentian Besar:** Developed 12.5 rai for planting mango, durian, rambutan, jackfruit, and other fruit trees.
2. **Barong Tongkok:** Developed 6.25 rai for planting durian, cempedak, rambutan, and other fruit trees.
3. **Besiq:** Developed 6.25 rai for planting durian, rambutan, orange, and other fruit trees.



- **Mangrove Planting Program for a Sustainable Ecosystem:** Indominco (IMM) initiated a mangrove planting and restoration program as part of the Community Development & Empowerment Program to address coastal erosion and restore biodiversity in surrounding communities. Employees and local community members participated in planting over 130,000 mangrove seedlings across 450 rai of coastline. Additionally, educational workshops were held to raise awareness about the importance of mangroves, helping the community understand the significance of their local environment and learn sustainable environmental management practices.
- **Indonesia's Climate Village Programme (PROKLIM):** ITM, in collaboration with the government to empower communities in addressing and adapting to climate change. The collaboration promotes knowledge-sharing and supports community projects, aiming to integrate knowledge for sustainable community development.
- **Survey of Fruit Trees Species in Urban Communities:** ITM, in partnership with the National Research and Innovation Agency (Badan Riset dan Inovasi Nasional: BRIN), is conducting a project to develop cultivation methods for rehabilitating areas surrounding the NPR mine in Central Kalimantan.

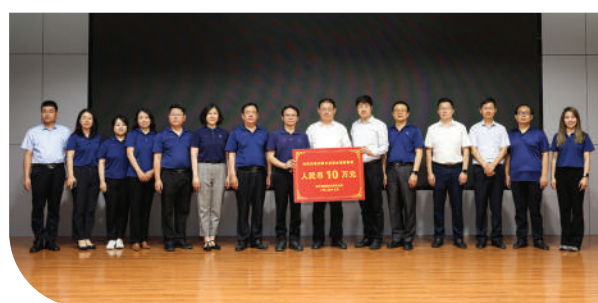
People's Republic of China

Banpu Investment (China) Ltd., or BIC, a subsidiary of Banpu in the People's Republic of China, supports and promotes social activities, community development, and environmental conservation. This includes efforts to continuously promote investment in the provinces where the Company operates in accordance with Chinese government policies. These efforts have strengthened positive relationships with stakeholders and aligned BIC's business operations with Banpu Group's Social Responsibility Policy. BIC is committed to being a good corporate citizen in all locations where it operates. Significant activities carried out in 2024 are as follows:



Educational Support

- Tangshan Banpu Heat & Power Co., Ltd., a subsidiary of BIC, has provided financial assistance to students with physical disabilities at Luannan-Banpu Special Education School for the 17th consecutive year. In 2024, the Company donated educational equipment, tablets, and renovation materials valued at CNY 65,000 to facilitate teaching and learning for children with autism spectrum disorder.
- Zouping Peak CHP Co., Ltd., a subsidiary of BIC, donated CNY 100,000 to the "Liu Hui Public Welfare Fund," jointly established by the Handian Township Government and the Zouping Charity Foundation, to support local educational development and cultural heritage preservation.
- Hui'en Solar Power Plant celebrated National Children's Day by donating school bags, marker pens, and other school supplies to 264 children at the local kindergarten in Dasheng City.



Environmental Conservation

- BIC organized a river and beach cleanup along the Wenyu River in Beijing, with participation from over 40 employees. The collected waste was sent to the Zouping Combined Heat and Power Plant, where it underwent hydrothermal carbonization. This process involves converting biomass using heat, with water acting as a catalyst and high pressure of around 20-25 bar, resulting in hydrochar. The hydrochar can then be used to produce biofuels or improve soil quality.

Community Development

- BIC donated kitchen equipment, appliances, and other essential items valued at CNY 190,130 to three villages surrounding the Gaohe Mine, aiming to create a healthy living environment at elderly care centers within these communities.
- Shijiazhuang Chengfeng Cogen Co., Ltd., a subsidiary of BIC, donated 900 sets of cotton-padded clothes valued at CNY 198,000 to sanitation workers in Zhengding District.
- Deyuan Solar Power Plant donated CNY 20,000 to the local community to support economic development and empower local residents. Additionally, the plant provided employment opportunities and vocational training to community members.



- Jixin Solar Power Plant donated CNY 200,000 and collaborated with local authorities to renovate a road that serves as an important transportation route for the community.
- Haoyuan Solar Power Plant supported the installation of streetlights in Ma Zi Yu Village, near the plant, to improve safety for both local residents and power plant employees.

Vietnam

Banpu Vietnam LLC (BPVT), a subsidiary of Banpu in Vietnam, has continuously focused on engaging with the community and society. The company strives to create a balance between business growth and community and environmental development. Significant activities carried out in 2024 are as follows:

Community Development

Banpu Vietnam LLC (BPVT) supported local communities surrounding the Nhon Hai Solar Power Plant in Ninh Thuan province by creating income-generating opportunities through grass-cutting and solar panel cleaning. Moreover, the Company allowed local farmers to collect grass for their livestock, helping to reduce their financial burden.



Mongolia

Hunnu Coal Limited (Hunnu), a subsidiary of Banpu in Mongolia, consistently pursues community engagement through strategic initiatives that prioritize sustainability and the preservation of a unique cultural legacy in accordance with the Mongolian government's plans and strategies. Significant activities carried out in 2024 are as follows:

Educational Support

- A student representative from the Gurvansaikhan sub-province received a scholarship and tuition support under the "Human Resource Development Program" organized by Dundgovi province.
- Scholarships were awarded to eight student representatives participating in the 2023-2024 Scholarship Program of the Bayan-Ovoo sub-province.

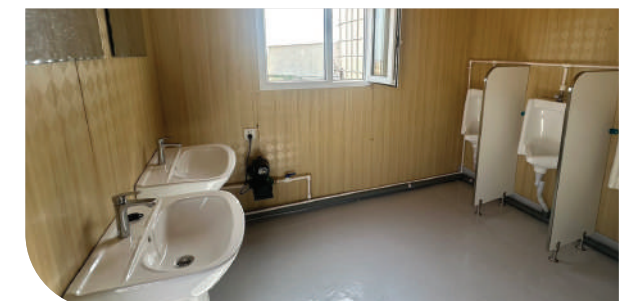


Environmental Conservation

- the "Spring Protection Fence", project in response to feedback from local communities, environmental officials, and the governor of the Bayan-Ovoo sub-province in Bayankhongor. The project involved constructing two 230-meter-long fences around Orvog Spring in Nalikh Village to prevent livestock from getting stuck in the mud and dying, particularly during the rainy season.

Community Development

- A bio-toilet was installed at the Naadam Celebration Center in celebration of the 100th anniversary of the Bayan-Ovoo sub-province to address the lack of public restrooms in the area.





Australia

Centennial Coal Company Pty Limited (CEY), a subsidiary of Banpu in Australia, prioritizes transparent engagement, shared value creation, and strong community relationships to foster trust among local communities—a key stakeholder in its operations. Significant activities carried out in 2024 are as follows:

Educational Support

- Centennial, in partnership with Lithgow Workies Club and Westfund, supported the breakfast program for Coorwull Public School to promote student health and well-being of students, helping them maintain strong and healthy bodies.



Community Development

- In 2024, the Mandalong Mine Community Fund donated AUD 50,000 to support local communities through non-profit organizations. Established in 2015, the Fund benefits residents of Cooranbong, Dora Creek, Mandalong, Morisset, and Wyee Towns. This year, projects selected by the Mandalong Community Consultative Committee (CCC) included Cooranbong Valley Community Preschool, Mandalong Community Association, Mandalong Rural Fire Brigade, Meals on Wheels (Morisset Branch), and the Rotary Club of Morisset.
- CEY participated in community networking events and supported volunteer activities beyond mining-related initiatives. These included organizing charitable events to raise funds for community-driven causes, engaging local schools to present awards for environmental activities, and volunteering for Meals on Wheels, which provides meals to frail, elderly individuals, and people with disabilities.

United States of America

BKV Corporation (BKV), a subsidiary of Banpu in the United States of America, is committed to being a force for good in society and fostering positive and sincere relationships with stakeholders. In the areas where it operates, BKV promotes community development and actively engages with local stakeholders, allowing BKV to better understand the interests and concerns of community members. The highlighted activity in 2024 is as follows.

Educational Support

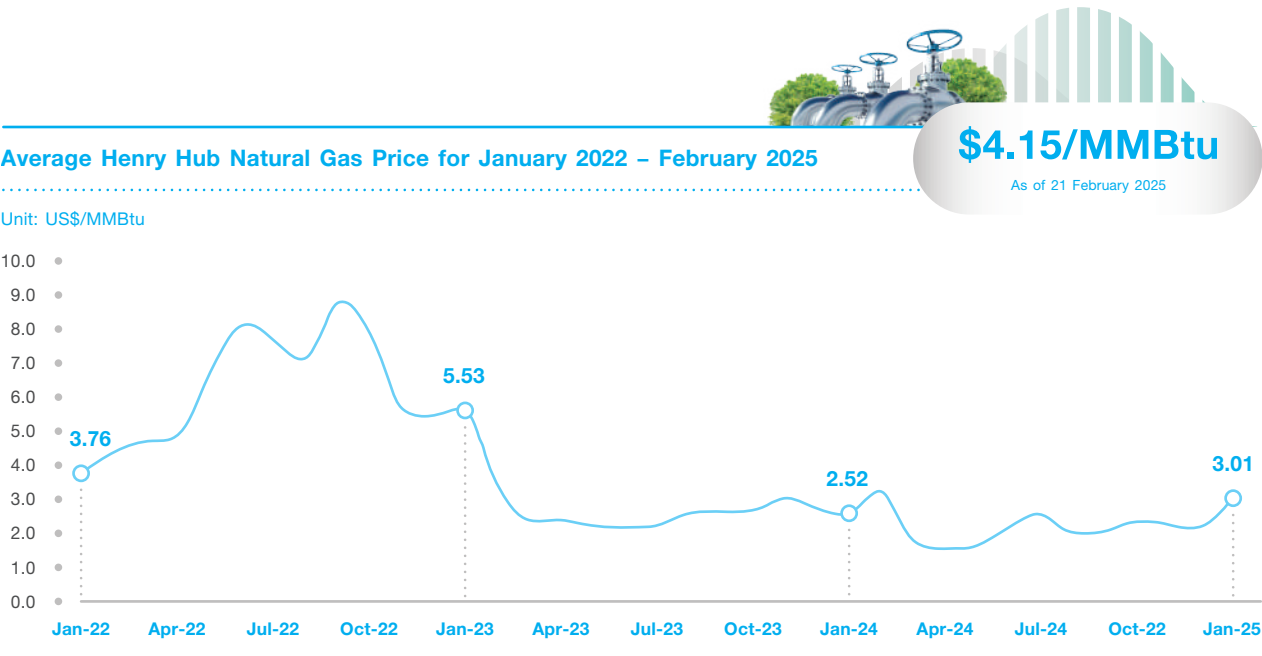
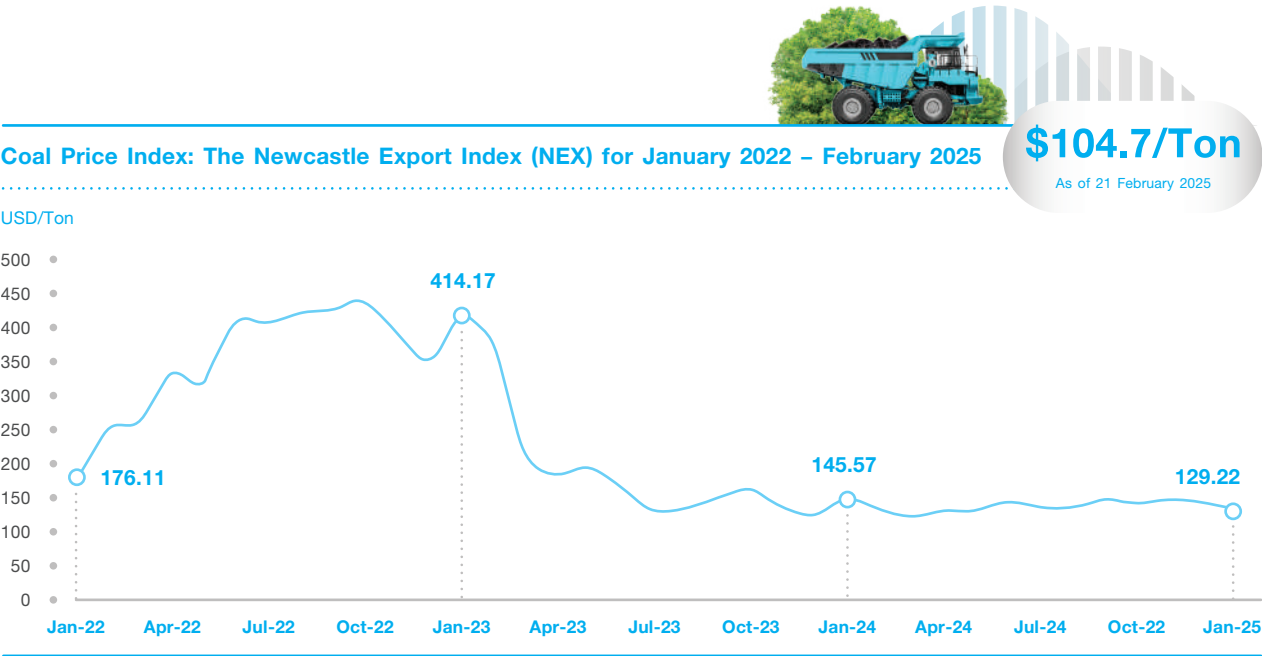
In 2024, BKV partnered with Pascual LeDoux Academy, providing a USD 20,000 grant and offering employees the opportunity to volunteer for the Community Leads and Students Succeed (CLASS) program under the Denver Public Schools Education Foundation. This collaboration aims to enhance education quality and improve student achievement by focusing on four key areas: student academic ability, social-emotional learning, family engagement and support, and leadership development in Denver Public Schools.

MANAGEMENT’S DISCUSSION AND ANALYSIS

THE GROUP PERFORMANCE FOR THE YEAR 2024

1. Energy Commodities Price Index

The market thermal coal and natural gas price since January 2022 as per below graphs that illustrate the coal and gas price indexes in the past periods.



2. Management Discussion and Analysis

In 2024, the global energy landscape was shaped by economic slowdowns, high interest rates, and geopolitical uncertainties, leading to shifts in energy demand patterns. With supply remaining strong while demand softened, energy prices gradually stabilized after years of high volatility. However, the outlook for future energy remains promising due to growing demand for electricity for Data Centers and the rapid expansion of Artificial Intelligence (AI) technology, are expected to be the new driver of the energy industry. Additionally, shifts in energy policies across various countries are influencing the investment climate and the future direction of energy use. To achieve continuous and sustainable growth from long-term opportunities, the company has introduced a new strategy, “**Energy Symphonics**”, as its roadmap for steering the business toward 2030. This approach focuses on integrating diverse energy sources to develop sustainable energy solutions, guided by 4 key missions.

- 1) Net Zero emissions by 2050, and reduce greenhouse gas emissions by at least 20%, and reduce coal-related earnings to less than 50% of consolidated EBITDA by 2030.
- 2) Gas-Power-CCUS, focuses on growth in its “winning formula” of integrating gas upstream, gas-fired power, and CCUS to deliver low carbon gas solutions in the US reflected through the successful listing of BKV Corporation (BKV) on the New York Stock Exchange (NYSE), highlighting the company’s growth potential across the entire natural gas value chain in the US.
- 3) Renewables+, by accelerating its renewables business across Asia-pacific region and beyond, with synergistic investments in BESS, downstream businesses, and utilizing carbon credits. This aims to solve intermittency of renewable, while enhancing value.

- 4) Next-Gen Mining: Banpu is pursuing an approach of Intelligent Mining, implementing an integration of smart solutions and AI to its mining operations to increase efficiency, reduce costs, and minimize environmental impact.

These 4 missions address the world’s surging energy demand while simultaneously looking after the planet, reshaping the standards for reliable, affordable, and sustainable energy.

Throughout 2024, the company implemented various measures, including operational efficiency improvements, cost reductions, and strategic portfolio management, that enabled the company to generate profit from operation of USD 83.3 million and gain from financial derivatives totaling USD 64.6 million. However, the divestment of the Nakoso power plant in Japan as part of the group’s asset management strategy, resulted in an impairment loss of USD 48.03 million, and an unrealized foreign exchange translation loss of USD 87.99 million was incurred due to the appreciation of the THB against USD, therefore the company reported net loss of USD 23.66 million.

The company reported an EBITDA¹ of USD 1,330 million, comprised of coal business of USD 863 million (down by 8% from previous year), Natural gas business of USD 232 million (up 74% from previous year), Power business of USD 233 million (down 44% from the previous year), and Energy Technology business of USD 2 million.

¹Note: EBITDA included realized profit (loss) on realized commodity hedging.



For Energy Resources Business

Indonesia coal business reported a sales volume of 24.04 million tons, up by 15% from previous year, driven by the commercial operations of the TIS and GPK mines, along with improved production efficiency across all sites. The average selling price was 95 USD/ton, down by 17% from previous year, in line with the downward trend in global coal market prices. However, continuous cost reduction measures including optimization of overburden removal distance and reduction of stripping ratio resulted in a decrease in average cost of sales to 55.74 USD/ton, a 10% decrease from previous year, resulting in a healthy gross profit margin of 42%.

Australia coal business, Australia coal business, reported a sales volume of 7.92 million tons, reflecting a 14% increase from previous year. The average selling price was 170.98 AUD/ton, down by 1% from previous year. While export prices declined in line with market trends, the domestic selling prices reported a significant increase, driven by the successful negotiation of new domestic coal supply contracts. This resulted in a domestic selling price (exclude traded coal) of 170.52 AUD/ton, a 38% increase compared to 123.39 AUD/ton in the previous year. The average cost of sales was 168.16 AUD/ton, down by 1% from previous year. The company continues to implement measures to control production costs.

China coal business reported a share of profit of USD 80.32 million, reflecting a decline by 48% from previous year. This decrease was primarily driven by lower production and a decline in domestic selling prices, in line with the slowdown in China's economy.

Gas business in the US reported total sales volume at 288.40 billion cubic feet (Bcf), representing an 8% decline from previous year. The average local selling price was 2.08 USD/Mcf, down by 14% from previous year, primarily due to domestic natural gas inventories exceeding the five-year average. However, as domestic natural gas producers gradually reduced production levels and delayed new well developments, coupled with the anticipated increasing demand from Data Centers and projected growth in LNG exports, natural gas prices showed signs of recovery as current Henry Hub futures rebound to around \$3.0–\$4.0/MMBtu.

For the Carbon Capture, Utilization, and Storage (CCUS) business, growth expansion continued to make significant progress. In December 2024, the company received Final Investment Decision (FID) approval to develop a new CCUS facility in partnership with a leading midstream energy company at an existing natural gas processing plant in the Eagle Ford Shale, Texas. The facility is expected to capture CO₂ up to 90,000 tons per year and is projected to achieve commercial operations in 1Q 2026.

For Energy Generation Business

Thermal power business including the HPC power plant reported a profit share of USD 84.53 million, with an equivalent availability factor (EAF) of 86%. BLCP power plant reported a profit share of USD 28.64 million, with an EAF of 95%. The combined heat and power (CHP) plants in China reported a profit of RMB 132 million, reflecting a significant increase driven by enhanced operation efficiency, effective cost reduction measures, and additional revenue from the sale of Carbon Emission Allowances (CEA) resulting

from reduced carbon emissions. Shanxi Lu Guang (SLG) power plant reported a profit sharing of RMB 31 million. Temple I and II natural gas power plants in the U.S. reported a total electricity sales volume of 7,360 GWh, marking a 36% increase from previous year. However, due to milder and less volatile weather conditions, average electricity prices remained relatively low, coupled with a decline in spark-spread, resulting in a profit of USD 3.5 million, including USD 58 million from derivative hedging gains. Also, in December 2024, the company completed the divestment of its stake in the Nakoso power plant in Japan.

The renewable business overall continued to generate steady cash flow. Solar farms in China reported a profit of RMB 43 million. Solar farms in Japan reported TK dividend distributions totaling JPY 1,428 million. Solar farms in Australia reported a net loss of AUD 1 million. Solar farms and wind farm in Vietnam reported a loss of USD 0.6 million.

For Energy Technology Business

Operated by Banpu NEXT, the company has continued to expand across all business segments, particularly in Energy storage solutions. This includes the launch of the lithium-ion battery production line at the SVOLT Thailand factory in Si Racha, Chonburi, which expected to deliver 850 batter units to customers in Thailand in 2025. Additionally, Banpu NEXT announced the opening of the DP NEXT battery assembly plant in Amata City Industrial Estate, Chonburi, to supply batteries tailored for electric buses, electric trucks, and large commercial vehicles. The first phase of the plant has a total production capacity of 200 MWh.

For Battery farm project, the Iwate Tono Battery Farm Project in Japan with capacity of 58 MWh has reported 99% completion and is expected to begin commercial operations as planned in 2Q 2025. Furthermore, in December 2024, the company secured development rights and METI subsidies for 2 additional battery farm projects in Japan, with a total capacity of 208 MWh. For the renewable energy sector, the company has invested USD 35 million for a 33.33% stake in AMP Co.,Ltd. (AMP Japan), a leading developer of renewable energy projects in Japan, managing projects from the early development stage to commercialization.

Banpu NEXT remains committed to continuous growth and expansion, supporting the group's carbon reduction strategy toward achieving Net Zero by 2030.

3. Group Performance Analysis

The analysis and explanation of Banpu Group performance for the year ended 31 December 2024 and 2023 were as follows:

Consolidated Statement of Income for the year ended 31 December 2024 and 2023

Consolidated financial performance (Unit: Million USD)	2024	2023	Change	
			Amount	%
Sales and service income	5,148	5,083	65	1%
Cost of sales and services	(3,900)	(3,665)	(235)	-6%
Gross profit	1,248	1,418	(170)	-12%
Selling expenses	(236)	(168)	(68)	-40%
Administrative expenses	(379)	(388)	9	2%
Royalty fee	(329)	(379)	50	13%
Share of profit from joint ventures and associates	196	268	(72)	-27%
Losses from remeasurement of previously held equity interest	-	(6)	6	100%
Bargain purchase from business combination	-	89	(89)	-100%
Impairment of investment in a joint venture	(48)	-	(48)	-100%
Net gains (losses) from changes in fair value of financial instruments	117	(89)	206	231%
Net gains (losses) on exchange rate	(88)	2	(90)	-4500%
Other income (expenses)	128	128	-	0%
Finance cost	(401)	(384)	(17)	-4%
Profit before income taxes	208	491	(283)	-58%
Income taxes	(97)	(119)	22	18%
Profit for the year	111	372	(261)	-70%
Owners of the parent	(24)	160	(184)	-115%
Non-controlling interests	135	212	(77)	-36%
Basic earnings (losses) per share (Unit : USD)	(0.002)	0.018	(0.020)	-111%

Banpu group performance for 2024 reported net loss at \$24 million, decreased by \$184 million or 115% compared to 2023. This was due to the declining marketprices of coal and natural gas, despite an increase in coal sales volume and a decrease in average cost per tonn, and a decrease in operating performance from gas-fired power plant in USA due to milder and less volatile weather conditions resulting in average electricity prices remained relatively low. Furthermore, the group recognized unrealized loss on exchange rate resulting from an appreciation of THB currency against USD currency compared to the previous year and from impairment of investment resulting from divestment in Nakoso power plant to align with the portfolio management strategy. The group has strategically managed its costs and expenses, allowingthe group to navigate the uncertainties of the energy market and maintain a consistent cash flow stream.

In addition, since 2Q2024 the Group has changed an accounting policy for the presentation of realized gains (losses) on derivatives for the forecasted transactions that are hedged, from separately present the realized gains (losses) on derivatives to include them in the forecasted transactions that are hedged, which are sales and cost of sales. The details were disclosed under note to financial statements no.9. Segment information.

The Group performance for 2024 were describe as details follows:

Sales and Cost of Sales

(Unit: Million USD)	Revenue			Cost of Sales		
	2024	2023	Inc.(Dec.)	2024	2023	Inc.(Dec.)
Coal Business	3,290	3,321	-1%	2,278	2,189	4%
Natural Gas Business	726	706	3%	604	715	-16%
Power & Steam Business	777	860	-10%	700	588	19%
Others	355	196	81%	318	173	84%
Total	5,148	5,083	1%	3,900	3,665	6%

Sales

Sales reported at \$5,148 million (equivalent to THB 181,549 million), increased by \$65 million compared to 2024. That an increase derived from natural gas business \$20 million and others \$159 million, while a decrease was from power and steam sales business \$83 million and coal business \$31 million. Details were described as follows:

1. Sales from coal business of \$3,290 million or 64% of total revenue separated by source of coal as below:

• Indonesia coal mines of \$2,294 million

• Australia coal mines of \$914 million

• Coal trading business of \$82 million
2. Sales from natural gas business in USA of \$726 million or 14% of total revenue.
3. Sales from power and steam of \$777 million or 15% of total revenue derived from CHP power plants and solar power plants in China, solar power plants in Australia, wind and solar power plants in Vietnam and gas-fired power plants in USA.
4. Others of \$355 million or 7% of total revenue. This was mainly from energy trading business in Japan and battery business in Singapore.

1. Coal Business

Coal Business		2024	2023	Inc.(Dec.)
Sales Volume	Million Tonnes	32.81	29.90	10%
Average selling price	\$/Tonne	100.25	111.07	-10%
Average Cost of sales	\$/Tonne	69.43	73.20	-5%

Coal sales of \$3,290 million, decreased by \$31 million or 1%, was a result of an increase in coal sales volume of 2.91 million tonnes or 10%. Average selling price decreased by \$10.82 per tonne or 10% compared to 2023 whereas average cost of sales decreased by \$3.77 per tonne or 5% compared to 2023 as following details:

Indonesia Mines		2024	2023	Inc.(Dec.)
Sales Volume	Million Tonnes	24.04	20.95	15%
Average selling price	\$/Tonne	95.00	113.92	-17%
Average Cost of sales	\$/Tonne	55.74	61.97	-10%

Coal Business
in Indonesia

- Sales volume**

Coal sales volume was 24.04 million tonnes, increased by 3.09 million tonnes or 15% compared to 2023 from the commercial operations of the TIS and GPK mines, along with improved production efficiency across sites.
- Average selling price**

Average selling price per tonne was \$95.00, decreased by \$18.92 or 17%, resulting from coal market price decreased compared to 2023.
- Average cost of sales**

Average cost of sales per tonne was \$55.74, decreased by \$6.23 or 10% compared to 2023. This was due to mine production plan management, an increase in coal production volume, and focusing on managing production cost and expenditure in order to cope with volatility of coal market prices.

Australia Mines		2024	2023	Inc.(Dec.)
Sales Volume	Million Tonnes	7.92	6.98	13%
Average selling price	A\$/Tonne	170.98	173.56	-1%
Average Cost of sales	A\$/Tonne	168.16	172.47	-2%

Coal Business in Australia

- Sales volume**

Coal sales volume was 7.92 million tonnes, increased by 0.94 million tonnes or 13% compared to 2023, derived from an increase in domestic sales resulting from higher production and sales volume from Springvale mine
- Average selling price**

Average selling price per tonne was A\$170.98, decreased by A\$2.58 or 1% compared to 2023 as the following details:

Australia Mines	Sales Volume (Unit: Million Tonnes)			Avg. Price/Tonne (A\$/Tonne)		
	2024	2023	Inc.(Dec.)	2024	2023	Inc.(Dec.)
Domestic	5.91	4.95	19%	166.49	123.39	35%
Export	1.70	2.02	-16%	203.12	296.38	-31%
Total	7.61	6.97	9%			

- Average selling price of domestic and export sales**

Average domestic selling price per tonne was A\$166.49, increased by A\$43.10 or 35%. This was due to higher domestic selling prices according to sales contracts. The average export selling price per tonne was A\$203.12, decreased by A\$93.26 per tonne, or 31% driven by coal market price decreased compared to 2023, even though a depreciation of AUD currency against USD currency impacted to higher export sales from currency conversion. The average exchange rate of AUD/USD in 2024 was 0.6596 (2023: 0.6645).
- Average cost of sales**

Average cost of sales per tonne was A\$168.16, decreased by A\$4.31 or 2% was from an increase in coal production volume from Springvale, Airly and Mandalong mine and a decrease in amortization of Longwall deferred mining cost.

2. Natural Gas Business

Natural Gas Business		2024	2023	Inc.(Dec.)
Sales Volume	Bcf ***	288.40	313.73	-8%
Average Local Price*	\$/Mcf	2.08	2.41	-14%
Average Cost of Gathering, processing & transportation	\$/Mcf	0.92	0.95	-3%
Average Cost**	\$/Mcf	1.30	1.48	-12%

* Average local price is an average of all products
** Average cost excluded Cost of Gathering, processing & transportation
*** Bcf - Billion Cubic Feet

Natural Gas
Business in USA

Sales from natural gas business in 2024 reported at \$725 million which included gain on natural gas swap and option contracts of \$125 million, increased by \$20 million or 3% compared to 2023. Details were as follows:

- Sales Volume**

Natural gas sale volume was 288.40 billion cubic feet, decreased by 25.33 billion cubic feet or 8% compared to 2023 from postponing investment in new gas wells and efficiency improvement of current operation, aiming to retain gas reserves for future sales at favorable price.
- Average Local Price**

Refer to lower Henry Hub index price compared to the previous year, the average local price per Mcf. in this year was \$2.08, decreased by \$0.33 per Mcf or 14% from 2023, resulting from warmer climate and a decrease in demand from LNG plants impacted from storm during 2024. However, Henry hub price was likely to gradually increase following the announcement of production cuts by several producers, and from new LNG producer that started since 4Q2024 and first half of 2025.
- Average cost of Gathering, processing & transportation**

Average cost of Gathering, processing & transportation per Mcf was \$0.92, decreased by \$0.03 or 3% compared to 2023, resulting from a continuous focus on cost management measures.
- Average Cost of Sale**

Average cost of sales (excluding gathering, processing & transportation cost) per Mcf was \$1.30, decreased by \$0.18 or 12% compared to 2023 from depreciation and amortization, and from a decrease in production tax per unit aligned with downward trend of Henry Hub prices, also from cost management measures as previously mentioned.

3. Power Business

Sales from Power of \$777 million or 15% of total revenue was from sales from CHP plants \$174 million, solar power plants in China of \$24 million, solar power plants in Australia of \$10 million, wind power plant and solar power plant in Vietnam of \$12 million and gas-fired power plants in USA of \$557million.

Details of sales from CHP plants, solar power plants in China and gas -fired power plants in USA were de-scribed as follows:

Power Business		Combined Heat & Power Plants (CHP)			Solar Power Plants			Gas-fired power plant		
		2024	2023	Inc.(Dec.)	2024	2023	Inc.(Dec.)	2024	2023	Inc.(Dec.)
Power Sale Volume	GWh	932.56	989.95	-6%	214.19	229.54	-7%	7,360.24	5,415.74	36%
Steam Sale Volume	Million Tonnes	6.33	6.43	-2%	-	-	-	-	-	-
Average PowerTariff	Unit/kWh	0.41	0.40	2%	0.80	0.81	-1%	39.79	76.73	-48%
Average Steam Price	RMB/Tonne	136.83	140.72	-3%	-	-	-	-	-	-

Combined Heat and Power (CHP) Plants in China

Sales from power and steam from 3 CHP plants in China of \$174 million, decreased by \$12 million or 7% compared to 2023 mainly from a decrease in both power and steam sales.

- Sales Volume**

Power sales volume of 932.56 GWh, decreased by 57.39 GWh or 6% was from a decrease in industrial customer demand.

Steam sales volume of 6.33 million tonnes, decreased by 0.10 million tonnes or 2%, was primarily due to a decrease in industrial customer demand as well.
- Average Selling Price**

Average power tariff was RMB 0.41 per kWh, increased by RMB 0.01 per kWh compared to 2023 from adjusted price.

Average steam price per tonne was RMB 136.83, decreased by 3.89 or 3% from 2023. This was because a part of steam price was adjusted to align with a decrease in coal cost.

Solar Power Plants
in China

- Cost of Sale

Cost of sale was \$148 million, decreased by \$27 million or 15% mainly from a decrease in average coal cost per ton. The average coal cost per ton for 2024 was 895 RMB (2023: 1,035 RMB), decreased by 140 RMB or 13% compared to 2023.

Sales from solar power plants in China reported at \$24 million, decreased by \$2 million or 9% compared to 2023. Details of sales volume, average power tariff and cost of sales were as follows:

- Sales Volume

Sales volume of 214.19 GWh, decreased by 15.35 GWh or 7% compared to 2023, resulting from weather conditions and curtailment.

- Average Power Tariff

Average power tariff was RMB 0.80, close to 2023.

- Cost of Sale

Cost of sales was \$9.14 million, close to 2023.

Gas-fired Power Plants
(Temple I & II) in USA

Sales from gas-fired power plants reported at \$557 million which included realized gain on electricity forward contracts of \$44 million, total decreased by \$64 million or 10% compared to 2023. This was mainly from a decrease in average sales price. The details were as follows:

- Sales Volume

Sales volume was 7,360.24 GWh, increased by 1,944.50 GWh or 36% compared to 2023, resulting from acquisition of Temple II gas fired power plant since 3Q 2023.

- Average Power Tariff

Average power tariff was \$39.79 per kWh, decreased by \$36.94 per kWh, or 49% from milder temperatures than expected.

- Cost of Sale

Cost of sale was \$527 million, which included realized loss on natural gas and natural gas liquid swap contracts of \$30 million, increased by \$129 or 32% compared to 2023 was mainly from an increase in natural gas consumption due to an acquisition of Temple II gas-fired power plant.

Administrative Expense

Administrative expenses reported at \$379 million decreased by \$9 million or 2% from a decrease in expense relates to business expansion and business acquisition during the previous year. However, the group focuses on the effective cost reduction program and carefully managed expenses e.g., consulting fee and administration expense.

Royalty Fees

Royalty fees reported at \$329 million, decreased by \$50 million or 13%. The fee comprised of royalty fees from Indonesia mines \$260 million, decreased by \$72 million due to a decrease in coal sales price compared to 2023. Whereas royalty fees from Australia mines that was \$69 million, increased by \$22 million resulting from an increase in coal sales volume compared to 2023.

Profit sharing (Unit : Million USD)	2024	2023	Inc.(Dec.)	
			Amount	%
BLCP	29	30	(1)	-3%
Hongsa & Phufai Mining	85	88	(3)	-3%
Shanxi Luguang	4	4	-	0%
Coal business in China	80	154	(74)	-48%
Holding Company of Solar Power in Japan and others	(2)	(8)	6	75%
Total	196	268	(72)	-27%

Share of Profit
from Joint Ventures
and Associates

Profit sharing from joint ventures and associates reported at \$196 million, decreased by \$72 million or 27% compared to 2023 mainly due to details described as below:

- Recognition of profit sharing from BLCP of \$29 million, decreased by \$1 million from exchange rate translation and operating performance.
- Recognition of profit sharing from HPC power plant and PhuFai mining in Laos of \$85 million, decreased by \$3 million. This was from an increase in operating performance of \$1 million despite there was an increase in profit sharing in THB currency. This was a result of a depreciation of THB against USD, impacting to a decrease in profit sharing when convert from THB currency to USD currency. Average exchange rate of THB/USD as of 31 Dec 2024 was THB 35.2935 (2023: 34.8022 THB) while there was a recognition loss on foreign exchange rate of \$2 million.

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- 3) Recognition of profit sharing from SLG power plant of \$4 million, which similar to 2023.
- 4) Recognition of shares of profit from coal business in China of \$80 million, decreased by \$74 million, driven by a decrease in coal market price compared to 2023.

Gain (loss) from
Financial Derivatives

- Net gain from financial derivatives of \$117 million comprised of:
- 1) Realized gain from financial derivatives of \$23 million derived from electricity call options of \$19 million, electricity forward contract \$1 million, electricity swaption of \$3 million.
- 2) Unrealized gain on fair value remeasurement of financial derivatives at the end of the year of \$42 million comprised of gain on electricity call option \$38 million, foreign exchange rate forward contracts \$4 million, electricity forward contract \$1 million, electricity swaption \$2 million, interest rate swap contract of \$2 million, whereas loss on natural gas and natural gas liquid options of \$3 million, electricity forward contract of \$2 million.
- 3) Gain on fair value remeasurement of investment in equity instruments and debt instruments measured fair value through profit and loss of \$52 million.

Gain (loss) on Foreign
Exchange Rate

Net loss on foreign exchange rate of \$88 million was mainly from unrealized loss on foreign exchange rate translation of THB loan due to an appreciation of THB currency against USD currency. Average exchange rate of THB/USD as of 31 Dec 2024 was THB 33.9879(31 Dec 2023: THB 34.2233).

Impairment of
Investment
in Joint Venture

Impairment of investment in joint venture of \$48 million was a result from divestment of investment in a joint venture, Nakoso power plant in Japan to align with the group's investment portfolio management in transition to a low-carbon energy producer.

Other Income

Other income of \$128 million comprised of management fee income and others, detailed as follows:

- 1) Interest income of \$57 million.
- 2) Management fee income charged to related parties and joint ventures of \$1 million.
- 3) Dividend income of \$10 million, was mainly from profit sharing from solar power business in Japan under TK (TOKUMEI KUMIAI) agreement.
- 4) Gain on sales of investment in USA of \$7 million
- 5) Others of \$53 million. Those were steaming connection fee income from new residential steam customers from CHP power plants in China, sales of ashes, slag and scraps from mines and power plants, warehouse management fee income and breach of contract penalty and others.

Income Tax

Income tax of \$97 million, decreased by \$22 million or 18% compared to 2023 was mainly from:

- 1) A decrease in corporate income tax of \$47 million, aligned with operating profits during the year.
- 2) An increase in deferred tax expense of \$25 million, resulting from an increase in deferred tax liabilities from the difference between tax and accounting basis on financial statement translation.

4. Statements of Consolidated Financial Position

Statements of Consolidated Financial Position as of 31 December 2024 in comparison with the Statements of Consolidated Financial Position as of 31 December 2023.

Financial Position (Unit: Million USD)	31-Dec-24	31-Dec-23	Inc.(Dec.)	
			Amount	%
Assets	12,399	13,000	(601)	-5%
Liabilities	7,698	8,172	(474)	-6%
Equity	4,701	4,828	(127)	-3%



4.1 Total assets of \$12,399 million, decreased by \$601 million compared to total assets as of 31 December 2023 with details described as below:

Financial Position (Unit: Million USD)	Assets		Inc.(Dec.)	
	31-Dec-24	31-Dec-23	Amount	%
Cash and Cash equivalent	1,596	1,575	21	1%
Investment in debt instruments measured at amortised cost	95	-	95	100%
Investment in debt instruments measured at fair value through profit or loss	5	23	(18)	-78%
Trade accounts receivable and note receivables, net	492	529	(37)	-7%
Inventories and spare parts and machinery supplies, net	210	244	(34)	-14%
Current portion of deferred exploration & development expenditure and deferred overburden expenditures/ stripping costs, net	52	119	(67)	-56%
Derivative assets due in one year	22	114	(92)	-81%
Other current assets	278	471	(193)	-41%
Total Current Assets	2,750	3,075	(325)	-11%
Investment in associates and joint ventures accounted for using the equity method	2,032	1,972	60	3%
Investment in debt instruments measured at FVPL	305	209	96	46%
Investment in debt instrument measured at amortised cost	-	60	(60)	-100%
Investment in equity instrument measured at FVPL	30	16	14	88%
Investment in equity instruments measured at FVOCI	156	167	(11)	-7%
Property, plant and equipment, net	4,281	4,602	(321)	-7%
Deferred exploration and overburden expenditures/ stripping, net	819	789	30	4%
Mining property rights, net	765	863	(98)	-11%
Goodwill, net	453	485	(32)	-7%
Right-of-use assets, net	56	56	-	0%
Derivative assets	38	50	(12)	-24%
Other non-current assets	714	656	58	9%
Total Non-Current Assets	9,649	9,925	(276)	-3%
Total Assets	12,399	13,000	(601)	-5%

- Cash and cash equivalents of \$1,596 million, increased by \$21 million.
(As explanation in no.5 Consolidated Statement of Cash Flows)
- Investment in debt instrument measured at amortized cost of 95 million, increased from a reclassification from non-current portion.
- Investment in debt instrument measured at fair value through profit or loss of \$5 million, decreased by \$18 million was from additions of \$83 million net with redemptions of \$96 million, and loss from impairment of \$5 million.
- Accounts receivable and note receivable of \$492 million decreased by \$37 million. This was from coal business in Australia of \$60 million, coal business in Indonesia of \$7 million, and others of \$11 million, whereas an increase from solar business in China of \$12 million, gas business in USA of \$6 million, and energy trading business in Japan of \$23 million.
- Other current assets of \$278 million decreased by \$193 million. A decrease was mainly from restricted deposit of \$139 million, prepaid royalty of \$66 million, others of \$12 million, was primary from business in Indonesia, Australia and China.
- Investment in joint ventures and associates at equity method of \$2,032 million, increased by \$60 million or 3% was from:
 - 1) An increase from addition of investment in associates in Thailand and Vietnam of \$33 million.
 - 2) An increase from recognition of profit sharing from joint ventures and associates by \$196 million.
 - 3) A decrease from recognition of other comprehensive income from cash flows hedge from investment in joint ventures and associate of \$5 million.
 - 4) A decrease from disposal of investment in joint venture and associate of \$ 37 million.
 - 5) A decrease from dividend recognition during the year of \$118 million.
 - 6) A decrease from the effects of foreign exchange rate translation at end of the year of \$9 million.



- Investment in debt instrument measured at fair value through profit or loss of \$305 million, increased by \$95 million or 46% was from additions of \$52 million, a decrease from reclassification to equity instrument measured at fair value through profit or loss of \$4 million, and an increase from fair value remeasurement at end of the year of \$50 million net with redemption during the year of \$3 million.
- Investment in equity instrument measured at fair value through profit or loss of \$30 million, increased by \$14 million or 87 % was from additions of \$9 million, an increase from reclassification to debt instrument measured at fair value through profit or loss of \$4 million, and an increase from fair value remeasurement at end of the year of \$2 million net with redemption during the year of \$1 million.
- Investment in equity instruments measured at fair value through other comprehensive income of \$156 million, decreased by \$11 million or 7% was from:
 - 1) A decrease from fair value remeasurement of investment at the end of the year of \$ 2 million.
 - 2) A decrease from effects of foreign exchange rate translation at the end of the year and others of \$20 million.
 - 3) An increase from additions of investment in solar power plant business in Japan of \$2 million.
 - 4) An increase from reclassification from investment in joint venture to investment in equity instrument of \$9 million.
- Property plant and equipment of \$4,281 million, decreased by \$321 million or 7% derived from:
 - 1) An increase from additions of machine and equipment of coal business, natural gas business and power business total of \$296 million.
 - 2) A decrease from reclassification to asset held for sales of \$ 10 million.
 - 3) A decrease from sales and write-off of \$140 million.
 - 4) A decrease from depreciation of \$378 million.
 - 5) A decrease from the effects of foreign exchange rate translation at the end of the year \$89 million.

- Current portion and non-current portion of deferred exploration and development expenditure of \$52 million and \$819 million, respectively, totaling of \$872 million, decreased by \$36 million from additions of \$734 million, net with amortization of \$717 million and the effects of foreign exchange rate translation at end of the year of \$53 million.
- Mining property rights, net of \$765 million, decreased by \$98 million or 11%, resulting from amortization during the period of \$28 million and the effects of foreign exchange rate translation at the end of the year of \$70 million.
- Goodwill of \$453 million, decreased by \$32 million or 7% from the effects of foreign exchange rate translation at the end of the year.
- Current portion and non-current portion of financial derivative assets of \$22 million and \$38 million, respectively, totaling \$60 million. This was a result from fair value remeasurement of financial derivative at the end of the year, which comprised of
 - 1) Interest rate swaps of \$10 million.
 - 2) Electricity swaptions of \$32 million.
 - 3) Electricity forward contracts of \$4 million.
 - 4) Natural gas swaps and options of \$6 million.
 - 5) Coal swaps of \$5 million.
 - 6) Cross currency swaps and interest rate swaps and others of \$3 million
- Other non-current assets of \$714million increased by \$58 million or 9%. This was mainly from an increase in prepaid income tax in Indonesia of \$28 million, prepaid royalty expense partly reclassified from current portion of \$66 million, deferred tax asset of \$43 million, whereas a decrease in vat receivable of \$43 million, customer contracts and right in patents and right to operate power plant of \$12 million, restricted deposit of \$10 million, and others of \$14 million.

4.2 Total liabilities of \$7,698 million, decreased by \$474 million compared to total liabilities as of 31 December 2023 with movement details as described below:

Financial Position (Unit: Million USD)	Liabilities		Inc.(Dec.)	
	31-Dec-24	31-Dec-23	Amount	%
Short-term loans from financial institutions	880	727	153	21%
Trade payables	140	140	-	0%
Current portion of long-term loans from financial institutions, net	748	885	(137)	-15%
Current portion of debentures, net	172	204	(32)	-16%
Accrued overburden and coal transportation costs	117	89	28	31%
Financial derivative liabilities due in one year	51	78	(27)	-35%
Other current liabilities	588	636	(48)	-8%
Total current liabilities	2,696	2,759	(63)	-2%
Long-term loans from financial institutions, net	1,813	2,252	(439)	-20%
Debentures, net	2,560	2,431	129	5%
Derivative liabilities	52	5	47	947%
Provision for decommissioning, restoration, and mine and natural gas rehabilitation	298	278	20	7%
Other non-current liabilities	279	447	(168)	-38%
Total non-current liabilities	5,002	5,413	(411)	-8%
Total liabilities	7,698	8,172	(474)	-6%

- Short-term loans from financial institutions of \$880 million, increased by \$153 million or 21%, was from additions of \$1,735 million, repayment of \$1,589 million and the effects of foreign exchange rate translation at the end of the year of \$7 million.
- Current portions of long- term loans from financial institutions of \$748 million, decreased by \$137 million or 15%. This was a net result from a reclassification from non-current portion of \$534 million, repayment of \$685 million, an increase from addition of deferred finance charge net with its amortization of \$1 million, and an increase from the net of realized and unrealized effects on exchange rate translation during the year and at end of the year total of \$13 million.

- Current portion of debenture of \$172 million, decreased by \$32 or 16% was from reclassification from non-current portion of \$171 million, redemption of \$191 million and decreased the net of realized and unrealized effects on exchange rate translation during the year and at end of the year total of \$12 million.
- Accrued overburden and coal transportation expenses of \$117 million, increased by \$28 million or 31% was mainly from mining operations of subsidiaries in Indonesia.
- Other current liabilities of \$588 million decreased by 48 million. This was primary from a decrease in fixed asset purchase payable of \$30 million, accrued interest expense \$15 million, and others of \$3 million.
- Long- term loans of \$1,813 million, decreased by \$439 million or 20%, was a net result of:
 - 1) An increase from additional loan during the year of \$936 million.
 - 2) A decrease from reclassification to the current portion of \$534 million.
 - 3) A decrease from repayment of \$819 million.
 - 4) An increase from deferred charge net with amortization of \$6 million.
 - 5) A decrease from effects of foreign exchange translation of \$28 million.
- Debenture of \$2,560 million, increased by \$129 million or 5%. This was from reclassification to current portion of \$171 million, additions of \$267 million, and increase from the effects of foreign exchange rate translation at end of the year of \$33 million.
- Current portion and non-current portion of derivative liabilities reported at \$51 million and \$52 million, respectively, totaling \$103 million. This was a result of changes in fair value of financial derivatives at the end of the year, that consisted of:
 - 1) Cross currency swap and interest rate swap of \$5 million.
 - 2) Natural gas and natural gas liquid swap and options contracts of \$68 million.
 - 3) Electricity forward contracts of \$16 million.
 - 4) Foreign exchange rate forward contracts of \$10 million.
 - 5) Electricity call option of \$4 million.

4.3 Shareholders' equity of \$4,701 million decreased by \$127 million compared to shareholders' equity as of 31 December 2023, with movement details as described below:

Financial Position (Unit: Million USD)	Equity		Inc.(Dec.)	
	31-Dec-24	31-Dec-23	Amount	%
Equity attributable to owners of the parent	3,322	3,823	(501)	-13%
Non-controlling interests	1,379	1,005	374	37%
Total equity	4,701	4,828	(127)	-3%

- A decrease from 2024 net loss of \$24 million.
- A decrease from fair value reserves for financial assets measured at fair value to other comprehensive income, cash flows hedge and net investment hedge of \$116 million.
- An increase from changes in ownership interests of subsidiaries of \$254 million.
- An increase from maturity of put option and fair value over non-controlling interest of \$22 million.
- An increase from issuance of new ordinary shares for share-based payment \$5 million.
- A decrease from dividend payment declaration of \$193 million.
- A decrease from the effects of foreign exchange rate translation of subsidiaries' financial statements and others of \$194 million.
- An increase from non-controlling interest of \$119 million.

4.4 Net debt-to-equity ratio as of 31 December 2024 reported at 0.79 times (31 December 2023: 0.90 times).

5. Statement of Consolidated Cash Flows

Statement of consolidated cash flows for the year ended 31 December 2024 presented a decrease of net cash flow by \$21 million (including the effect from unrealized loss on exchange rate translation at the end of the year of \$51 million). The details were as follows:

Statement of Consolidated Cash Flows (Unit: Million USD)	Amount
Net Cash flows generated from operating activities	535
Net Cash flows used in investing activities	(118)
Net Cash flows used in finaning activities	(345)
Net increase (decrease) in cash and cash equivalents	72
Exchange differences on cash and cash equivalents	(51)
Cash and cash equivalents at the beginning of the year	1,575
Cash and cash equivalents at end of the year	1,596

5.1 Net cash generated from operating activities of \$535 million; with major items as follows:

- Collections from sales of \$4,252 million.
- Payments to contractors and suppliers of \$2,556 million.
- Interest payments of \$407 million.
- Payments of income tax of \$163 million.
- Royalty fee payments of \$330 million.
- Other payments of \$261 million.

5.2 Net cash used in investing activities of \$118 million; with major items as follows:

- Payments for machines and equipment of \$345 million.
- Receipts from sales of fixed assets and intangible assets of \$28 million.
- Receipts from financial assets measured at fair value through profit and loss of \$100 million.
- Payment for financial assets measured at amortized cost of \$35 million.
- Payment for financial assets measured at fair value through profit and loss of \$145 million.
- Receipts from sale of a subsidiary of \$103 million



- Payments for additions of investment in an associate and joint ventures of \$33 million.
- Payments for deferred exploration and development expenditure of \$112million.
- Receipts from placement of restricted deposits at banks of \$143 million.
- Receipts from dividends of \$124 million.
- Receipts from interest income and others of \$54 million.

5.3 Net cash used in financing activities of \$345 million; comprised of

- Receipts from short-term and long-term loans from financial institutions and from debentures of \$2,937 million.
- Repayments of short-term and long-term loans from financial institutions, redemption of debentures and lease payment of \$3,302 million.
- Dividend paid to shareholders of \$193 million.
- Receipts from increase in share capital of a subsidiary from non-controlling interests of \$3 million.
- Net proceeds from the initial public offering of a subsidiary of \$265 million.
- Payments for net share settlements related to share-based payment of a subsidiary of \$53 million.
- Cash payments for treasury stocks of a subsidiary of \$2 million.

6. Coal Reserves

The quantity of sales and remaining of coal reserves for the year ended 31 December 2024:

Coal Mine (Unit: Million Tons)	Quantity of Coal Sales and Reserves			
	Coal reserves as of 31 Dec 2023	Reserves movement during 2024	Sales volume Jan - Dec 2024	Coal reserves as of 31 Dec 2024
1. Indonesia				
1.1 Jorong	6.70	(4.30)	0.23	2.17
1.2 Indominco	16.98	25.42	7.51	34.89
1.3 Kitadin	-	-	-	-
1.4 Trubaindo	29.72	27.78	2.79	54.71
1.5 Bharinto	128.86	(22.26)	8.05	98.55
1.6 GPK	21.50	42.80	0.91	63.39
1.7 NPR Project	77.40	-	-	77.40
1.8 TIS	-	3.03	0.15	2.88
2. Australia	246.16	(17.24)	7.23	221.69
3. China				
3.1 Gaohe	90.79	-	8.83	81.95
3.2 Hebi Zhongtai	12.04	-	1.12	10.92
Total	630.15	55.23	36.83	648.54

7. Natural Gas Reserves

The quantity of sales and remaining of natural gas reserves for the year ended 31 December 2024:

Quantity of Natural Gas Sales and Reserves	Natural Gas
	(Unit: Million Cubic Feet)
Natural Gas reserves as at 31 December 2023	5,149,724
1) Adjustment on reserve estimation	415,611
2) Production and Sales 2024	(288,405)
Natural Gas reserves as at 31 December 2024	5,276,930

(Natural Gas Reserves from Marcellus and Barnett shales refer to Reserve Report 's Ryder Scott)

FINANCIAL RATIO

OTHER REFERENCES

Banpu Public Company Limited and Its Subsidiaries

For the Year Ended 31 December				
		2024	2023	2022
Liquidity Ratio				
Current Ratio	(Times)	1.02	1.11	1.32
Quick Ratio	(Times)	0.81	0.77	1.02
Cash Flow Liquidity Ratio	(Times)	0.40	0.34	0.82
Account Receivable Turnover	(Times)	10.08	8.49	13.48
Average Collection Period	(Days)	35.70	42.39	26.70
Inventory Turnover	(Times)	23.68	22.25	27.48
Average Inventory Period	(Days)	15.20	16.18	13.10
Account Payable Turnover	(Times)	27.84	27.92	32.67
Account Payable Days	(Days)	12.93	12.89	11.02
Cash Cycle	(Days)	37.98	45.68	28.78
Profitability Ratio				
Gross Profit Margin	(%)	24.25	27.89	52.99
Operating Profit Margin	(%)	6.68	11.53	43.23
Cash to Profit Margin	(%)	3.20	1.59	0.69
Net Profit Margin	(%)	1.99	6.67	19.15
Returns on Equity	(%)	(0.66)	4.42	40.21
Efficiency Ratio				
Returns on Assets	(%)	0.88	2.90	13.76
Returns on Fixed Assets	(%)	13.07	16.66	47.22
Fixed Asset Turnover	(Times)	0.44	0.43	0.72
Financial Ratio				
Debt to Equity	(Times)	1.64	1.69	1.87
Net Debt to Equity	(Times)	0.79	0.90	0.74
Interest Coverage Ratio	(Times)	3.53	3.98	15.24
Dividend Payout	(%)	na.	73	21

Ordinary Share Registrar	Thailand Securities Depository Company Limited 1 st Floor, The Securities Exchange of Thailand 93 Ratchadapisek Road, Din Daeng, Bangkok 10400 Tel. +66 2009 9000 Contact Center +66 2009 9999
Debenture Registrar	Bangkok Bank Public Company Limited 333 Silom Road, Bangrak, Bangkok 10500 Tel. +66 2230 2895, +66 2230 1478
Bond Representative	Siam Commercial Bank Public Company Limited 9 Ratchadapisek Road, Chatuchak, Bangkok 10900 Tel. +66 2795 7974-77 Bangkok Bank Public Company Limited 333 Silom Road, Bangrak, Bangkok 10500 Tel. +66 2230 1894
Auditor	Ms. Amornrat Pearmpoonvatanasuk Authorised Auditor No. 4599 PricewaterhouseCoopers ABAS Company Limited 15 th Floor, Bangkok City Tower 179/74-80 South Sathorn Road, Bangkok 10120 Tel. +66 2844 1000
Financial Advisor	-None-
Advisor or Manager under Management Agreement	The Company did not hire any advisors or managers under any permanent management agreement. Advisors, including financial advisors, were hired on a case-by-case basis as necessary to support its operations from time to time. The Company's management is mainly supervised by the Board of Directors.
Financial Institutions	The Company is regularly in contact with around 30 local and international commercial banks and financial institutions.

SIGNIFICANT LITIGATION DURING THE YEAR

On 19 April 2022, an Indonesian subsidiary was sued for the breach of Cooperation Agreement with the Plaintiff dated 4 September 2004. The Plaintiff was claiming compensation for total losses amounting to Indonesian Rupiah 7.3 trillion or equivalent to US Dollar 484.75 million. On 13 December 2022, the District Court dismissed the Plaintiff's claim in its entirety. The Plaintiff then appealed to the High Court the District Court's verdict, which was again dismissed on 23 February 2023. Later on, the Plaintiff filed a cassation against the Hight Court's Decision to the Supreme Court. On 27 September 2023, the Supreme Court dismissed the cassation. On 15 May 2024, the Plaintiff submitted a petition for Judicial review through the District Court, and the Indonesian subsidiary submitted its Counter Memorandum. Later on, the Panel of Judges of the Supreme Court rejected the Plaintiff's petition for the judicial review on 2 October 2024. The case was finally concluded and closed.





SECTION 2

CORPORATE GOVERNANCE



CORPORATE GOVERNANCE POLICY

The Board of Directors of Banpu Public Company Limited has enforced “The Corporate Governance Policy and Code of Conduct” for directors, executives, and employees at all levels since 2002. The Board annually reviews the policy to ensure compliance with the business context, laws, regulations, rules, and guidelines of related agencies. The Corporate Governance and Nomination Committee is delegated by the Board to conduct a preliminary review of the policy and propose it to the Board. In 2024, the Company amended two key topics in the Corporate Governance Policy and Code of Conduct: 1) Revision of the Anti-Corruption Policy to align with the guidelines of Thai Private Sector Collective Action Against Corruption (CAC) and 2) Revision of the Corporate Governance Policy and the Practice of the Board of Directors of Banpu Public Company Limited to extend the retirement age for directors to 75 years.

In addition, the Board of Directors ensures continuous communication and awareness-raising on the importance of implementing policies and continuously monitoring compliance with the Corporate Governance Policy and Code of Conduct.

The Company monitored and evaluated the effectiveness of implementing the Corporate Governance Policy and Code of Conduct in the organization based on the 2024 employee engagement survey results, using the “Committed” value as an indicator. The results classified by job levels and locations were at a satisfactory level.



For complete information on the
“Corporate Governance Policy and Code of Conduct,”
Please scan the QR code or click on
[Click Here](#)

Communication of Corporate Governance Policy



To ensure strict compliance with the Corporate Governance Policy and Code of Conduct, as well as best practices in corporate governance, Banpu organized communication activities in 2024 under the theme “CG Whistle Guard.” The activities aimed to raise awareness among employees at all levels about their roles and responsibilities, ensuring alignment with corporate governance principles while fostering a corporate culture of integrity through the following activities:

1. Training on Corporate Governance Principles

The Company organized an orientation session for new employees via the Orientation Application, with corporate governance as one of the key topics to educate them on practices aligned with Banpu’s Corporate Governance Policy and Code of Conduct.

2. Internal Communication under the “CG Whistle Guard” Theme

The Company conducts ongoing internal communications to reinforce the importance of strict compliance with the Corporate Governance Policy and Code of Conduct. In 2024, in collaboration with ITM Indonesia, the Company launched a communication campaign under the theme “CG Whistle Guard.” This campaign aims to enhance understanding of the Whistleblower Policy, the whistleblower protection mechanism, and practices in accordance with the Policy.



3. CG Day 2024

CG Day is organized annually with various activities to support and promote employees’ understanding of corporate governance principles and compliance with the corporate value “Adhere to Integrity and Ethics.” CG Day 2024 was held in a hybrid format to accommodate current work patterns. The event featured a vision-sharing session led by senior management from Banpu Group and a keynote presentation by Assist. Prof. Dr. Torplus Yomnak on ‘Strengthening Integrity: Anti-Corruption Reform for Effective Governance,’ which aligns with the Company’s core values.



4. Evaluating Understanding of CG through CG E-learning and CG E-testing Systems

The Corporate Governance Division and the Banpu Academy Department jointly developed the CG E-learning and E-testing systems to ensure employees understand and comply with the Corporate Governance Policy and Code of Conduct. The e-learning is provided on the “B SUCCESS” platform, Banpu’s learning management system.

5. Anti-Corruption

In 2024, the Company was recertified as a member of the Thai Private Sector Collective Action Against Corruption (CAC) for the third consecutive term. Over the past year, the Company has amended its Anti-corruption Policy to align with the updated CAC’s guidelines. The Company also conducted its annual assessment of corruption risks and established preventive measures, covering all businesses in every country where it has invested, including its subsidiaries and joint ventures. The results were reported to the Risk Management Committee. Moreover, the Company continuously educates its employees about relevant policies and practices to combat corruption, such as the Corporate Governance Policy and Code of Conduct and the Standard Practice Manual for Accepting and Offering of Gifts, Hospitality, or Other Similar Forms of Reward. All employees can access these policies through internal communication channels. In the past year, letters were sent out to external parties requesting their cooperation in refraining from giving gifts to Banpu’s directors, executives, and employees (No Gift Policy).



Policy and Practice on the Board of Directors, Shareholders, and Stakeholders

The Board of Directors formulated the Corporate Governance Policy as guiding principles for directors, executives, and employees based on the Securities and Exchange Commission of Thailand (SEC)'s Corporate Governance Code 2017, comprising eight key principles as follows:

Principle 1 Establish Clear Leadership Role and Responsibilities of the Board

Since 2009, the Board of Directors has explicitly defined the Board's duties and responsibilities in "The Practices for the Board of Directors of Banpu Public Company Limited B.E. 2552." The Practices have been periodically amended, with the most recent amendments in 2024, to align with the changing business environment, rules and regulations, and corporate governance guidelines.



For complete information on the
"The Practices for the Board of Directors of
Banpu Public Company Limited,"
Please scan the QR code or click on

[Click Here](#)

Banpu's Board of Directors is fully aware of its roles and responsibilities in leading and driving the Company forward. The Board is responsible for establishing strategies and policies for a business undertaking with accountability, prudence, care, and loyalty to ensure the Company's best interests through adherence to the environmental, social, and governance (ESG) principles. The Board of Directors' scope of duties and responsibilities is as follows:

1. The Board of Directors plays a significant role in establishing the vision and missions of the organization, which are the key objectives for sustainable business operations. The Board

monitors, oversees, and reviews business performance yearly to ensure the goals are achieved. It also approves the establishment of financial and operational key performance indicators (KPIs) as well as regularly oversees and monitors the management's performance against the plans. Besides, the Board requires the Company's vision and missions to be reviewed at least every five years to ensure that the Company's business operations are on track toward sustainable development.

2. The Board of Directors and the executives have jointly developed a long-term business direction and strategic plan every five years for more than 20 years to ensure alignment with the Company's vision and missions. The Board of Directors appointed the Chief Executive Officer to be in charge of business management as well as strategy development and implementation. The CEO's authority and responsibilities were clearly stipulated. The CEO's authority is cascaded down through executives of lower levels in business units both in Thailand and abroad according to the Company's Delegation of Authority.
3. The Board of Directors established the Corporate Governance Policy and Code of Conduct, which are coherent with the Company's vision and missions, business credo, values, principles, and best practices. This provides clear guidelines and makes it convenient for directors, executives, and employees to follow. They are also advised of standard practices they are expected to follow for how to treat employees, shareholders, customers, partners, creditors, competitors, and society at large. The Company stipulated that all directors, executives, and employees shall acknowledge, understand, and comply with the Corporate Governance Policy and practices as defined in the Code of Conduct. The Company

keeps employees, both domestic and overseas, informed of this through publications and activities organized all year round to promote understanding and awareness of the importance of compliance with the Code of Conduct. The executives of each department are responsible for creating understanding among their subordinates and promoting compliance with the Code of Conduct, while employees at all levels are expected to act as role models.

Apart from the practices prescribed in the Code of Conduct, the executives and employees have jointly built "Banpu Heart," the Company's corporate culture, to strengthen corporate shared values among employees at all levels, both in Thailand and abroad.

Principle 2 Define Objectives that Promote Sustainable Value Creation

Based on the Board of Directors' guidance and suggestions, the management formulates and presents the business direction, a long-term strategic plan, an annual work plan, an annual budget, and an annual workforce plan to the Board. The Board then has an open discussion with the executives to reach a mutual agreement before approval.

In 2024, the Board of Directors and the executives reviewed and approved the strategic plan and business direction for 2025-2029 to ensure that they respond to the rapidly changing business environment. The Company also conducted a risk assessment to prepare its business operations for future situations.

The Company has adopted a Sustainable Development Plan to guide its business strategy for the next five years, reflecting its commitment to leading a responsible and sustainable energy transition. The strategy centers around three major goals: Energy Security—providing a reliable and sustainable energy supply; Energy Equity—ensuring affordable and accessible energy for all; and Energy Sustainability—Minimizing environmental impacts.

In November 2024, the Company unfolded its Energy Symphonics strategy to drive business growth through 2030. This strategy focuses on developing sustainable energy solutions by integrating multiple energy sources to meet rising global energy demand while safeguarding the planet. The Company has set to achieve Net Zero emissions by 2050 and to reduce greenhouse gas emissions by at least 20% by 2030. It plans to lower coal-related EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) to below 50%. Performance monitoring has been included as a standing item on the agenda of the Board's monthly meeting. The Board oversees the implementation of the strategy, requiring management to review their performance against both the annual plan and the strategic plan. Where necessary, the Board provides guidance and feedback for continuous improvement.

Principle 3 Strengthen Board Effectiveness

Establishment and Review of Board Structure

The Board of Directors determined and reviewed the Board structure in relation to the number of directors, the proportion of independent directors, the diversity of qualifications, and the specialization of each director to ensure suitability for the Company's business. Sub-committees were also set up to support the Board's duties.

Appointment of Board Members


Independent Directors

Independent Directors, who account for 38% of the Board, are as follows

1. Mr. Teerana Bhongmakapat
2. Mr. Pichai Dusdeekulchai
3. Mr. Teerapat Sanguankotchakorn
4. Mr. Piriya Khempon
5. Mrs. Watanan Petersik

Independent directors are an important mechanism for good corporate governance. For the Company and shareholders' best interests, there should be a sufficient number of independent directors to balance the decision-making of the Board and to share opinions independently without influence from any individual or party. An independent director serves a maximum of three terms or nine years, as stipulated in The Practices for the Board of Directors of Banpu Public Company Limited B.E. 2552, Amendment No.6 B.E. 2565, Clause 6 Term of Office and Retirement.

Banpu defined independent directors more strictly by imposing more stringent requirements than those stipulated by the SEC, particularly on the director's shareholding. Qualifications of "Independent Directors" are available on Banpu's website.



For complete information on the
"Qualifications of Independent Directors,"
Please scan the QR code or click on
[Click Here](#)

Nomination of Directors and Senior Executives

The Corporate Governance and Nomination Committee is responsible for the nomination of candidates to replace directors whose terms will expire or are terminated for other reasons. The nomination procedure is as follows:

1.

Review the structure and the composition of the Board in order to strengthen the Board of Directors as a whole.
2.

Review general and specific qualifications as well as independent directors' qualifications and set additional criteria for candidate screening and nomination in accordance with the Company's business strategy and in compliance with the Stock Exchange of Thailand's (SET) rules

and regulations. After the screening process, the Corporate Governance and Nomination Committee will submit the list of proposed candidates for approval by the Board of Directors and nominate them for election at the Annual General Meeting of Shareholders (AGM).

The Corporate Governance and Nomination Committee is responsible for nominating directorial candidates to replace vacancies. The Committee considers candidates from the director pool and allows each board member to nominate the candidates. In addition, the Board determines and discloses the Board Diversity, then announces via the Company's website to invite minority shareholders to nominate qualified candidates within a specified duration and conditions. All candidates will then undergo a nomination process in which knowledge, capability, experience, general qualifications, and board skills mix contributive to board composition and collaboration are considered. The number of nominated candidates will be twice as many as the number of vacancies, and the nomination must be approved by the Board. The Shareholders' meeting will approve the appointment of directors with a minimum of 50% of the voting rights of the total shareholders attending the meeting and having the right to vote. The voting is carried out for each individual director.

The Corporate Governance and Nomination Committee regularly monitors CEO and executive succession planning. The Committee evaluates candidates based on their essential skills, experience, and specific qualifications aligned with the company's operations. This is to ensure the development of a robust succession pipeline, fostering the preparation of knowledgeable and competent executives for critical roles in the future. (For further information on this topic, please refer to the section "Succession Planning and High Potential Management" on page 295.)

Performance Evaluation of the Board of Directors

The Company requires a performance evaluation of the Board of Directors, sub-committees, and individual directors, with details on criteria, procedures, and evaluation results disclosed in the annual report and the Corporate Governance and Nomination Committee's report. The Company also requires the Board to conduct an annual self-assessment to review its performance, problems, and obstacles in the past year to identify ways to enhance its efficiency based on good governance principles. The Secretary of the Corporate Governance and Nomination Committee is in charge of distributing the performance evaluation forms for the evaluation of the full Board and evaluation of individual directors. Upon completion, the forms will be returned to the Secretary of the Corporate Governance and Nomination Committee for tabulation and analysis. The analysis of the annual performance will then be summarized and reported to the Board of Directors as per the evaluation objective. The overall evaluation results are as follows:

Performance Evaluation of the Full Board

The evaluation form for the Board of Directors contains questions grouped into five main categories as follows:

1.

Structure and composition of the Board
2.

Roles, duties, and responsibilities of the Board

Performance Evaluation of the Board of Directors	Average Scores	Evaluation Results
Full Board	4.68	Excellent
Individual Directors	4.56	Excellent
Sub-Committees		
The Audit Committee	4.75	Excellent
The Corporate Governance and Nomination	4.72	Excellent
The Compensation Committee	4.84	Excellent
The Environment, Social and Governance Committee	4.29	Very Good

3.

Nomination of directors
4.

Remuneration of the Board of Directors
5.

Board meeting and performance of the Board

Performance Evaluation of the Sub-committees

The evaluation form for the four sub-committees, namely the Audit Committee, the Compensation Committee, the Corporate Governance and Nomination Committee, and the Environment, Social and Governance (ESG) Committee, consists of items in four major categories as follows:

1.

Qualifications of the directors
2.

Duties and responsibilities of the directors
3.

Duties and responsibilities of each sub-committee according to the Charter
4.

Meeting and reporting

Performance Evaluation of Individual Directors

The evaluation form consists of seven major categories as follows:

1.

Structure and composition of the Board
2.

Roles, duties, and responsibilities of the Board
3.

Ethics and corporate governance
4.

Development of directors
5.

Relationship with the management
6.

The Board of Directors' meetings
7.

Overall performance of directors

Development of the Board of Directors and the Senior Executives

According to the SEC’s Corporate Governance Code for Listed Companies (CG Code) 2017, the Board of Directors should ensure that each individual director understands their roles and responsibilities as well as the nature of the business. The Board should also support all directors in regularly updating and refreshing their skills and knowledge necessary to carry out their roles as directors.

At Banpu, the Board of Directors requires that an orientation session be held for all new directors to ensure that they are aware of what the Company expects of them in their roles, duties, and responsibilities. Through orientation, the directors also learn about the Corporate Governance Policy and practices, the nature of Banpu’s business and operations, and risk management. In addition, the Company arranges site visits to different operational units for new directors to prepare them for their oversight roles.

The Board of Directors has the policy to expand all directors’ horizons on various topics, such as corporate governance, industrial outlook, businesses, and new technologies and innovations. Directors are encouraged to attend seminars and take useful courses held by the Thai Institute of Directors Association and other reputable institutions to improve their performance. Apart from that, seminars led by the executive team are held for directors to transfer related technical knowledge and experience about the Company’s business. Knowledge-sharing sessions regarding new technological advancements in energy are also organized for the executives so that they can share such experiences and knowledge with Board members. In 2024, the Board of Directors attended seminars and training programs as follows:

Name	Training Course/ Seminar	Institution/ Speaker	Date of Training/ Seminar
Mr. Chanin Vongkusolkit Chairman of the Board of Directors	• Green Taxonomy	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	6 February 2024
	• IFRS Sustainability Disclosure Standard	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	23 February 2024
	• Transition Finance	• Banpu Public Company Limited and the Asian Development Bank	27 May 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers’ Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Battery Energy Storage Business	• Banpu Public Company Limited	26 November 2024
Mr. Teerana Bhongmakapat Independent Director Chairman of the Audit Committee and Member of the Compensation Committee	• Transition Finance	• Banpu Public Company Limited and the Asian Development Bank	27 May 2024
	• Global Trends and Thailand Implementation on Climate Change	• Ministry of Natural Resource and Environment	17 June 2024
	• Law and AI: How to Adapt When AI Impacts Organizations	• Dr. Paiboon Amonpinyokeat	21 June 2024
	• Cybersecurity and AI Tech Awareness	• Banpu Public Company Limited	12 July 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers’ Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Battery Energy Storage Business	• Banpu Public Company Limited	26 November 2024
	• Digital Risk Awareness	• Banpu Public Company Limited	6 December 2024

Name	Training Course/ Seminar	Institution/ Speaker	Date of Training/ Seminar
Mr. Piriya Khempon Independent Director Chairman of the Environment, Social and Governance Committee and Member of the Corporate Governance and Nomination Committee	• Green Taxonomy	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	6 February 2024
	• IFRS Sustainability Disclosure Standard	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	23 February 2024
	• Global Trends and Thailand Implementation on Climate Change	• Ministry of Natural Resource and Environment	17 June 2024
	• Cybersecurity and AI Tech Awareness	• Banpu Public Company Limited	12 July 2024
	• The Board’s Roles in Climate Governance	• Institute of Thai Directors (IOD)	5 August 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers’ Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Battery Energy Storage Business	• Banpu Public Company Limited	26 November 2024
	• Digital Risk Awareness	• Banpu Public Company Limited	6 December 2024
Mr. Anon Sirisaengtaksin Director and Member of the Corporate Governance and Nomination Committee	• Green Taxonomy	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	6 February 2024
	• Transition Finance	• Banpu Public Company Limited and the Asian Development Bank	27 May 2024
	• Global Trends and Thailand Implementation on Climate Change	• Ministry of Natural Resource and Environment	17 June 2024
	• Law and AI: How to Adapt When AI Impacts Organizations	• Dr. Paiboon Amonpinyokeat	21 June 2024
	• Cybersecurity and AI Tech Awareness	• Banpu Public Company Limited	12 July 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers’ Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Digital Risk Awareness	• Banpu Public Company Limited	6 December 2024
Mr. Buntoeng Vongkusolkit Director and Chairman of the Compensation Committee	• Economic Update and Climate Change from Financiers’ Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024



Name	Training Course/ Seminar	Institution/ Speaker	Date of Training/ Seminar
Mr. Pichai Dusdeekulchai Independent Director Member of the Audit Committee and Member of the Environment, Social and Governance Committee	• Green Taxonomy	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	6 February 2024
	• Transition Finance	• Banpu Public Company Limited and the Asian Development Bank	27 May 2024
	• Cybersecurity and AI Tech Awareness	• Banpu Public Company Limited	12 July 2024
	• The Board's Roles in Climate Governance	• Institute of Thai Directors (IOD)	5 August 2024
	• PwC Thailand Audit Committee Seminar	• PricewaterhouseCoopers Consulting (Thailand) Ltd.	4 September 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers' Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Audit Committee Forum – Navigating the New Global Internal Audit Standard	• KPMG Thailand	26 November 2024
	• Digital Risk Awarenes	• Banpu Public Company Limited	6 December 2024
Mr. Teerapat Sanguankotchakorn Independent Director Member of the Compensation Committee and Member of the Environment, Social and Governance Committee	• Transition Finance	• Banpu Public Company Limited and the Asian Development Bank	27 May 2024
	• Global Trends and Thailand Implementation on Climate Change	• Ministry of Natural Resource and Environment	17 June 2024
	• Law and AI: How to Adapt When AI Impacts Organizations	• Dr. Paiboon Amonpinyokeat	21 June 2024
	• Cybersecurity and AI Tech Awareness	• Banpu Public Company Limited	12 July 2024
	• The Board's Roles in Climate Governance	• Institute of Thai Directors (IOD)	5 August 2024
	• NCSA Cyber Clinic 2024	• National Cyber Security Agency	23 August 2024
	• AI for All	• Mahidol University	29 September 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers' Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Battery Energy Storage Business	• Banpu Public Company Limited	26 November 2024
	• Digital Risk Awareness	• Banpu Public Company Limited	6 December 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers' Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Battery Energy Storage Business	• Banpu Public Company Limited	26 November 2024
Mrs. Watanan Petersik Independent Director and Member of the Audit Committee	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers' Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Battery Energy Storage Business	• Banpu Public Company Limited	26 November 2024
Mr. Metee Auapinyakul Director	• Economic Update and Climate Change from Financiers' Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024

Name	Training Course/ Seminar	Institution/ Speaker	Date of Training/ Seminar
Mr. Ongart Auapinyakul Director	• Global Trends and Thailand Implementation on Climate Change	• Ministry of Natural Resource and Environment	17 June 2024
	• Economic Update and Climate Change from Financiers' Viewpoin	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
Mr. Verajet Vongkusolkrit Director and Member of the Corporate Governance and Nomination Committee	• Green Taxonomy	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	6 February 2024
Mr. Sarayuth Saengchan Director and Member of the Corporate Governance and Nomination Committee	• Green Taxonomy	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	6 February 2024
	• IFRS Sustainability Disclosure Standard	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	23 February 2024
	• Transition Finance	• Banpu Public Company Limited and the Asian Development Bank	27 May 2024
	• Global Trends and Thailand Implementation on Climate Change	• Ministry of Natural Resource and Environment	17 June 2024
	• Law and AI: How to Adapt When AI Impacts Organizations	• Dr. Paiboon Amonpinyokeat	21 June 2024
	• Cybersecurity and AI Tech Awareness	• Banpu Public Company Limited	
	• ESG Summit 2024	• Banpu Public Company Limited	12 July 2024
	• Economic Update and Climate Change from Financiers' Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	9 October 2024 26 October 2024
	• Battery Energy Storage Business	• Banpu Public Company Limited	26 November 2024
Mr. Sinon Vongkusolkrit Director and Chief Executive Officer	• Green Taxonomy	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	6 February 2024
	• IFRS Sustainability Disclosure Standard	• Banpu Public Company Limited and PricewaterhouseCoopers Consulting (Thailand) Ltd.	23 February 2024
	• Global Trends and Thailand Implementation on Climate Change	• Ministry of Natural Resource and Environment	17 June 2024
	• Cybersecurity and AI Tech Awareness	• Banpu Public Company Limited	12 July 2024
	• ESG Summit 2024	• Banpu Public Company Limited	9 October 2024
	• Economic Update and Climate Change from Financiers' Viewpoint	• Standard Chartered Bank (Thai) Public Company Limited	26 October 2024
	• Battery Energy Storage Busines	• Banpu Public Company Limited	26 November 2024

Principle 4 Ensure Effective CEO and People Management

Succession Planning Policy

The Board of Directors has devised a succession plan for the CEO and senior executives to ensure that the Company has knowledgeable and competent executives to fill critical positions in the future. The CEO is invited to report the succession plan to the Corporate Governance and Nomination Committee and the Board at least once a year. The Charter of the Corporate Governance and Nomination Committee also prescribes that the Committee has a duty to ensure that a development plan for senior executives (for vice president level and higher) is in place to prepare high-potential candidates for critical roles if a senior executive (for vice president level and higher) retires, resigns, or is unable to perform the duties.

In 2024, the Corporate Governance and Nomination Committee continuously reviewed and monitored the progress of the succession planning for the CEO and senior executives. Candidates are considered based on their skills, experience, and specific qualifications necessary and appropriate to Banpu’s operations. This was to ensure that the Company would have a succession plan in place and prepare knowledgeable and competent executives for critical positions in the future. (For further information on this topic, please refer to the section “Succession Planning and High Potential Management” on page 295 and “Report of the Corporate Governance and Nomination Committee” on page 305.)



For complete information on the “Corporate Governance and Nomination Committee Charter,”

Please scan the QR code or click on

[Click Here](#)

Principle 5 Nurture Innovation and Responsible Business

The Company focuses on maintaining sustainability throughout the supply chain and thus prioritizes adherence to good governance principles in business operations along with effective management of risks and opportunities. International standards are integrated into the formulation of a sustainable development strategy that encompasses economic, social, and environmental dimensions to enhance the Company’s competitiveness and create value for all stakeholders through a two-tier management system as follows:

- **Strategic Integration of Sustainability**

The Board of Directors reviews sustainability risk issues and advises the CEO on appropriate mitigation measures.

- **Operational Integration of Sustainability**

The Sustainability Committee oversees, monitors, and evaluates sustainability performance as well as determines and reviews policies to enhance sustainable development.

The Company annually sets sustainability indicators as well as short-term and long-term performance goals for both the executives and operational employees while integrating sustainability into the corporate culture and cultivating it in all countries where it operates. The Company also regularly discloses management processes and business performance to stakeholders through the appropriate channels.

Moreover, the Company announced an Innovation Policy to align with its vision of being an innovation-driven company, focusing on using innovations to drive all businesses of Banpu Group and serve as an integral part of advancing business growth. The Innovation Policy has been implemented as follows:

- Establish an infrastructure that allows and encourages all employees to propose ideas for improvement of the Company’s processes and technologies.
- Support innovation activities to continuously enhance the Company’s productivity.
- Put innovative culture into practice by creating a motivation and work environment that inspires creativity and innovation.
- Develop training programs or projects specifically designed to improve creative thinking skills by including innovation as part of the programs.
- Create infrastructure that promotes innovation, keeps abreast of future trends, and develops products, services, processes, or tools that could quickly and effectively respond to future demands.

Roles of Stakeholders

Banpu is committed to fostering fairness for all stakeholders. The Company set forth guidelines on stakeholder treatment in the Corporate Governance Policy and the Code of Conduct to be followed by directors, executives, and employees to ensure equitable treatment and balance in aligning mutual interests. Important guidelines pertain to conflicts of interest, the responsibility to shareholders, and policies on the treatment of employees, customers, trading partners, creditors, competitors, and society at large. Directors, executives, and employees shall acknowledge, understand, and strictly comply with the guidelines in order to ensure that all stakeholders are treated fairly and their rights are protected.



For complete information on the “Whistleblower Policy and Protection of Whistleblowers,”

Please scan the QR code or click on

[Click Here](#)

In addition, Banpu has established a whistleblower channel, allowing all groups of stakeholders to file complaints regarding breaches of corporate governance and the Code of Conduct via the Company’s website on the “Whistleblowing” page under the Corporate Governance section. Complaints will be sent directly to the Chairman of the Corporate Governance and Nomination Committee at GNCchairman@banpu.co.th and/or to the Secretary of the Corporate Governance and Nomination Committee at GNCSecretariat@banpu.co.th. The Company regularly monitors those cases and reports the progress to the Corporate Governance and Nomination Committee on a quarterly basis and to the Board of Directors on an annual basis. The Company keeps a record of complaints and outcomes as well as follow-up data in the system. Preventive measures were also established to prevent the recurrence of similar complaints. Banpu’s Whistleblower Policy was formulated and has been effective since 2015 to protect whistleblowers and foster a culture of transparency. Guidelines on case investigation are as follows:

1. In case there is sufficient evidence to support the allegation of misconduct, a full investigation into the case will be carried out. The investigation pattern may vary depending on the circumstances. The investigation will be carried out under strict terms of confidentiality, and the whistleblower may be contacted for further information.
2. The investigation team will inform the whistleblowers of the investigation’s results and outcomes through appropriate communication channels.
3. Senior management will decide on the actions to be taken against the wrongdoer, e.g., disciplinary punishment or any other appropriate measures.



4. The Company affirms that whistleblowers who report in good faith any wrongdoing or suspected violation of law, rules, and regulations and the Code of Conduct will not be adversely affected.



For complete information on the
“Whistleblower Channels,”
Please scan the QR code or click on
[Click Here](#)

In addition, the Company announced a “No Gift” Policy to prevent receiving gifts and other benefits from stakeholders, and informed all stakeholders via the Company’s website. The Company also requires the registration of any gifts received through the internal portal system. The Board members, executives, employees, and subsidiaries shall be aware of and comply with the policy, which has been established in accordance with the Anti-Corruption Policy. The Company has stipulated the practice of giving and receiving bribery, gifts, and entertainment in the Code of Conduct. The details are outlined in the following sections.

Giving and Receiving Bribes

1. Directors, executives and employees are prohibited from, either directly or indirectly, demanding to solicit or receive any money, object of any value, compensation, or any other benefit from trading parties, contractors, suppliers, advisors, or those with whom the Company is conducting business.
2. Directors, executives and employees are strictly prohibited from offering any benefit to government officers, customers, labor unions, or any other external parties in an attempt to persuade them to commit a fraudulent action.

Gifts, Gratuities, and Business Entertainment

1. Directors, executives and employees should refrain from giving gifts or gratuities to or receiving them from any trading partner or others with whom the Company is doing business. Gifts given

or received during festive occasions are excluded from this requirement, provided that they have an appropriate value allowed by law, regulations, announcement, local culture, local norm or business practices and are not related to any business obligations.

2. Directors, executives and employees should refrain from giving or receiving unusually lavish entertainment to or from those with whom the Company is doing business.

Employees

Banpu values employees as the cornerstone of success. Hence, the Company has formulated policies and practices toward employees in its Code of Conduct to ensure that employees of all nationalities and languages are treated fairly regarding opportunities, compensation, appointments and transfers, capacity development, and maintaining a safe working environment for their lives and properties. Banpu has implemented adequate and appropriate Safety, Occupational Health, and Environmental measures to prevent loss from an accident as well as occupational illness or injury. The Company has announced its HR Philosophy, which is established based on the following three principles:

1. Equitability Principle
2. Performance-based Principle
3. Competency-based Principle

Accordingly, the Company assumes responsibility for enhancing employees’ adaptability to changes in the business landscape and the global economy, emphasizing flexibility, mobility, and positive creativity while prioritizing professionalism beyond the chain of command. In other words, Banpu focuses on developing “professional employees” while ensuring fair and equitable treatment of employees regardless of nationality, ethnicity, language, and gender. Moreover, with the “Banpu Heart” culture, the Company aims to create a cohesive workplace where all its people unite as one to work together under a shared vision and toward the same goals.

The Company is committed to aligning human resource management with its vision, changing business landscape, and the goal of becoming a Versatile Energy Provider. Hence, capacity building and fostering agile working are among the Company’s top priorities as they facilitate smooth collaboration, promote reskilling and upskilling, and give employees equal opportunities to thrive across functions and countries. In 2024, Banpu continued to improve the “Banpu People Value Proposition” for more effective human resource management.

The Company has a Compensation Policy to provide bonuses and promotions according to the Company’s performance both in the short and long term. It is committed to providing employees with fair compensation in the form of salary, welfare, and other benefits, e.g., health insurance, provident fund, and flexible benefits.

The Company has a fair human resource management system in which personnel are recruited and hired based on professional experience regardless of gender, age, ethnicity, nationality, and religion. This can be witnessed from the diversity of Banpu’s workforce in terms of ethnicity, religion, language, culture, age, knowledge, perspective, and work experience both at the head office in Thailand and overseas.

Moreover, to support its employees, the Company periodically reviews its related human resource policies, regulations, and support measures for emergency situations to ensure compliance with changes in relevant laws, such as labor law, and shifts in social and environmental conditions that would affect the way of working, such as:

- The Company issued the Work Anywhere Policy, allowing employees to work remotely from anywhere twice a week and choose their work schedule and the working style that suits the nature of their work. They can work from the office, work from home, or from anywhere as long as the goals are met.

- The Company formulated an internship program to ensure that intern students got the most out of their internship while being paid for their work. They also had the opportunity to attend training programs, including English presentation skills and financial planning, to better prepare for their professional careers.
- The Company hired disabled masseurs to provide relaxation massages in support of the government’s policy on the employment of persons with disabilities. Other supports included a direct donation to the Fund for Empowerment of Persons with Disabilities or hiring persons with disabilities through government agencies to work in communities.
- Regarding employee treatment, the Company does not prevent employees from forming a labor union according to the Labor Relations Act. Although the labor union has not been organized, employees can file complaints with the Welfare Committee, which will review the complaints and subsequently report the cases to the management.
- Employees can consult or file complaints directly with their supervisor or HR Manager or opt for an online channel to remain anonymous when filing certain complaints, such as discomfort at work, conflicts within their team or with the team leader, non-transparent practices, and sexual harassment. The Company has put in place procedures for investigating complaints and imposing disciplinary penalties against misconduct as stipulated in the Company’s work rules.
- In response to crises such as floods, fires, or pandemics, the Company has prepared a set of emergency aid guidelines to support its employees through allowances, temporary shelters, survival kits, vaccines, and other forms of assistance where applicable.

The Company puts top priority on providing employees with inclusive and regular learning opportunities to enable them to realize their full potential. It has also set up a Job Evaluation Committee, an Organization Development Committee, and a Succession Plan Committee and has given full support to the Compensation Committee and the Corporate Governance and Nomination Committee in maintaining transparency and driving the workforce toward steady and sustainable growth.

In addition, the Company allows employee representatives to recommend employee benefits through the Welfare Committee on a quarterly basis. Over the past year, the Company has improved welfare and human resource management in aspects relating to employees as follows:

- Communicating with employees about career planning, focusing on three main components: career path, career aspirations, and career development through the “Design Your Own Career Workshop.” This initiative aimed to assist employees in understanding how to plan their career growth by engaging in the experimental process of designing career paths and planning self-development according to their goals. The activity would foster dialogue with their supervisors and contribute to a personalized development plan that aligns with the organization’s vision and goals.
- Providing additional welfare beyond the basics to take care of employees holistically, such as annual flu vaccinations, access to psychiatrist service, “Health at Work” online medical consultation service, virtual one-on-one exercise sessions, office syndrome massages, flexible benefits with greater variety, onsite physical therapy, and dental care. The Company also conducted general wellbeing and psychosocial assessments to be used as inputs for designing activities for employees throughout 2024.

- Organizing the Boost Me Up Series for the fourth consecutive year, both onsite and online, focusing on such topics as mental health, physical health, nutrition, and financial planning. Activities included Tax Planning/Tax Tricks Workshop, Listen to Your Heart, Sustainable Weight Loss—Let’s Make It Last, and more.

Apart from that, when recruiting for business operations roles at each work site, the Company prioritizes hiring local candidates who possess relevant knowledge and skills. However, if a suitable candidate cannot be found locally, the Company will consider hiring candidates from outside the area.



For complete information on the “Employees,”
Please scan the QR code or click on
[Click Here](#)

Customers

Banpu endeavors to respond effectively to customers’ needs. Policy and guidelines on customer treatment are stipulated in the Code of Conduct. The Company is strictly committed to delivering quality products and services according to customers’ expectations at a fair price, providing customers with accurate and adequate information in a timely manner, and strictly complying with the terms and conditions agreed upon with customers. The Company has established a grievance process to allow customers to file complaints about the quality, volume, and safety of products and services. It also provides advice on how to effectively use its products and services in the customers’ best interests.



For complete information on the “Customer & Product Stewardship,”
Please scan the QR code or click on
[Click Here](#)

The Company highly prioritizes protecting customers’ personal information and is committed to preventing its misuse for personal gain. To achieve this, the Company has established a Privacy Policy and Privacy Notice as well as data protection mechanisms in compliance with the Personal Data Protection Act (PDPA) under the supervision of the Corporate Compliance Division. The Company also provides a channel on its website for customers to inquire about and file complaints regarding their personal information rights. In 2024, the Company received no complaints related to customers’ personal information.

In addition, the Company conducted satisfaction surveys and interviews to gain insight into customer needs and concerns. It employs tailored approaches for each business to foster strong relationships with a diverse customer base as follows:

Type of Business	Customer Relationship Management Approach
Coal Business	<ul style="list-style-type: none">Regular customer meetingsOrganizing knowledge-sharing seminarsQuarterly performance reportingInviting customers to visit the Company
Thermal Power Business	<ul style="list-style-type: none">Regular customer meetingsTechnical consultations
Renewable Power Business	<ul style="list-style-type: none">Organizing knowledge-sharing seminarsPerformance reporting
Solar Rooftop Business	<ul style="list-style-type: none">Technical consultationsAssessment of return on investment24-hour after-sales service

Suppliers/Creditors

The Company has the policy to treat its suppliers and/or creditors equitably and fairly by taking into consideration its best interests whilst acting on the basis of mutual benefit. The Company ensures that conflicts of interest are avoided and contractual obligations are fulfilled, providing accurate information and reports and engaging in problem-solving through constructive business negotiations based on business relationships.

- The Company shall not demand, receive, or pay any improper benefits to its suppliers and/or creditors.

- Should it become known that bribes have been demanded, or payment of any improper benefit has occurred, then full information will be disclosed to the business partners and/or creditors involved, and the Company shall collaborate with the parties concerned to resolve the problem on a fair and timely basis.
- The Company shall strictly comply with all the terms and conditions agreed upon in a transaction. In the event that any particular condition cannot be met, the Company will inform any creditor(s) concerned beforehand and seek a mutually acceptable solution.




For complete information on the “Supplier Management and Supplier Code of Conduct,”
Please scan the QR code or click on
[Click Here](#)

Competitors

Company has established policies and practices towards competitors in its Code of Conduct to align with international standards within a legal framework for business competition. It refrains from unlawfully acquiring or infringing upon competitors' trade secrets. Committed to fair business practices, the Company strictly adheres to the guidelines set forth in its Code of Conduct. In 2024, the Company had no disputes with competitors.

Community and Society

The Company has the policy to conduct business in a way that benefits both the economy and society while maintaining a balance between business growth and community, social, and environmental development. As a responsible corporate citizen, the Company strictly complies with all relevant laws and regulations. Banpu strives to improve societal well-being through its own initiatives and in collaboration with government agencies, local communities, and non-governmental organizations.



For complete information on the
"Community and Society,"
Please scan the QR code or click on
[Click Here](#)

Furthermore, the Sustainability Policy has been implemented and benchmarked against global standards, such as the reporting on the greenhouse effect (ISO 14001). The Company has also developed effective safety, occupational health, and environmental management guidelines, which include the management of potential risks from its operations that may affect employees, business partners, society, the environment, and the communities where the Company operates.

The Company has developed a management framework by integrating stakeholder analysis into the corporate strategy development process. In addition, the Company has standardized stakeholder engagement management and community complaint management to ensure they are aligned across all of Banpu's businesses and to ensure that all complaints are properly resolved.

Banpu places great importance on human empowerment. In addition to staff capacity building, the Company continues to empower people through its Corporate Social Responsibility (CSR) initiatives. A portion of its earnings is allocated to implementing CSR programs at both local and corporate levels and in all countries where it operates.

Principle 6 Strengthen Effective Risk Management and Internal Control

Risk Management Policy

The Board of Directors ensures that the Company maintains a comprehensive risk management system covering risk factors related to vision, goals, business strategies, finance, production, and other aspects. The Board is entrusted with the duty to consider the appropriateness of the Company's risk management system, risk likelihood, and level of impact. Measures for the prevention and management of risks are established, and persons to be accountable for addressing risks have been appointed. Besides, the Board has determined measures for reporting, monitoring, and evaluating. The Risk Management Committee was set up at the management level to regularly present a risk management plan and performance to the Audit Committee and periodically report them to the Board. The Committee reviews the risk management system and evaluates the performance at least once a year and when the risk level changes.

Internal Control Policy

The Board of Directors ensures the Company has a comprehensive internal control system covering all aspects of its operations, including finance, operations, and compliance with applicable laws and regulations. Moreover, the Board ensures that a sufficient and effective checks and balances mechanism is in place to safeguard shareholders' interests and Company assets. Additionally, the Board clearly defines the authorization levels and responsibilities for executives and employees, incorporating the checks and balances mechanism. Operational procedures are made available in writing. The Global Internal Audit Department works independently and reports directly to the Audit Committee, which audits the operations of all functions, including core business functions and support functions, to ensure regulatory compliance.

Governance of Subsidiary and Affiliated Companies

The Company has managed its subsidiaries and devised business procedures to ensure operational effectiveness and proficiency, as follows:

The Company and Its Subsidiaries' Investment Policy

1.

The executives shall study and assess the preliminary findings of the Investment Committee before reporting the results and investment outlook summary to the Board of Directors. The Board then considers and approves the project, which involves funding, development, and expansion, as well as the subsidiary's key policies. The Board of Directors also has the authority to approve the establishment or dissolution of a subsidiary as necessary to ensure that Banpu's portfolio can be most efficiently managed.
2.

The Board of Directors shall consider and approve investment transactions that fall under the criteria and the regulations set by the SEC, such as connected transactions and the acquisition or disposition of assets.
3.

The Board of Directors shall have a governance mechanism to oversee subsidiaries and safeguard the Company's investments. The Board is responsible for the consideration of suitable executives to serve as directors of the Company's subsidiaries to ensure that the management is aligned with the Company's policies and all transactions comply with securities and exchange laws and regulations, as well as the SET's announcements.
4.

The subsidiaries shall report their performance and key business transactions. They shall also conduct sensitivity analysis, evaluate the operational performance against goals, and provide a summary review with recommendations for improvement. This process serves as the foundation for policy formulation and business enhancement to ensure continuous development and growth of the group's businesses.

Contact Channels

Stakeholders may submit their opinions about the Company through the following channels:

Headquarters	27 th Floor, Thanapoom Tower, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400
Telephone	+66 2694 6600
Website	www.banpu.com
Company Secretary	Telephone : +66 2694 6859
	Email : bodsec@banpu.co.th
Investor Relations	Telephone : +66 2694 6684
	Email : investor_relations@banpu.co.th
Corporate Communications	Telephone : +66 2694 6680
	Email : cc@banpuco.th

Internal Control Policy
and Group-level Management Policy

The Board of Directors and the management require the Global Internal Audit Department to report directly to the Audit Committee to ensure independence when performing their duties. The Department is also required to report the audit results to the Board on a quarterly basis.

The level of control over a subsidiary is proportionate to the Company's shareholding. The Board of Directors is responsible for appointing an executive to serve as a director in each subsidiary to ensure that the business direction aligns with Banpu's policies and strategies. Director selection is decided based on knowledge, relevant competencies to the subsidiary, work location (in case of a foreign subsidiary), health, and readiness of the director. Director positions in Banpu's subsidiaries are reviewed at least once a year.

The Board of Directors is responsible for overseeing the operations of its subsidiaries and establishing mechanisms to ensure alignment with the Company's policies. This is achieved by appointing executives as directors of the subsidiaries to safeguard the Company's investment interests. Subsidiary operations are managed, and decisions are made by the relevant management within their established terms of reference, ensuring compliance with the Company's policies and the responsibilities outlined in the Delegation of Authority. Any matters requiring the Board of Directors' approval or those that could significantly impact the Company's financial position and performance are presented as an agenda item to Board meetings.

Budget Policy

The preparation of the operational and investment budgets of a subsidiary must be in accordance with the budget guidelines of each subsidiary and

consistent with the Company's budget guidelines. Budget preparation and review must be completed within the specified timeframe, and the corresponding information must be submitted accordingly. Any investment project valued over THB 1,500 million or spending that exceeds the approved budget by over 15% is subject to the Board of Directors' approval.

Principle 7 Ensure Disclosure
and Financial Integrity

Conflict of Interest

The Company places great importance on preventing directors, executives, and employees from using their positions for personal gain. As stipulated in the Code of Conduct, directors, executives, and employees are to avoid connected transactions that could lead to a conflict of interest with the Company. If necessary, the transactions are to be carried out at arm's length, and directors or employees having an interest in the transactions must not be involved in the approval process. If any transaction is considered a connected transaction under the SET's notification, rules, procedures, and announcements regarding the disclosure of connected transactions for listed companies must be strictly complied with.

The Board of Directors also stipulated that directors, executives, or employees shall be prohibited from exploiting their position or access to confidential information for personal gain. They are not permitted to engage in business activities that compete with the Company or to use insider information to trade the Company's shares. If an executive or an employee is to be involved in a special project whose information has not yet been disclosed to the public, or the project is under negotiation, and its information has to be kept confidential as it could affect the Company's share prices, such executive or employee must sign a confidentiality agreement, which shall remain effective until the information is officially disclosed to the SET and the SEC.

The Company announced the Market Sensitive Information Policy and Standard Practice Manual in 2017. It is the duty of directors, executives, employees, consultants, and subsidiary companies to understand and follow the policy and practices as follows:

1. Establish an internal control system to prevent the leak of confidential information
2. Embed practices of protecting confidential information in the culture of the Company and reinforce them regularly. Individuals need to be aware of their obligations to maintain the confidentiality of company information.
3. Limit the number of people with access to confidential information to the minimum number possible in the circumstance (need-to-know basis). Systems and controls are in place to quarantine confidential information from contractual parties and other service providers that share access to the company's systems.
4. Take responsible care where market-sensitive information is received or forwarded to a third party. All parties must be aware of their responsibilities related to the use and control of confidential information.

5. To have in place appropriate information technology and control system.

Disclosure of Information to Investors

The Board of Directors oversees the disclosure of information and its transparency to ensure that both financial and non-financial information relating to the Company's business and operating results is revealed in a complete, accurate, adequate, regular, and timely manner. In addition, the information must reflect the Company's actual performance and its true financial status, as well as its business outlook, while strictly complying with the laws, rules, and regulations relating to information disclosure of both the SEC and the SET. The Company also shares the information with shareholders and investors through other communication channels. The Investor Relations Department directly communicates with shareholders, investors, and securities analysts both domestically and abroad, while the Corporate Communications Department disseminates corporate information to shareholders, investors, and the public through the local and international media.

In 2024, the Company organized the following activities to disclose information to international investors, institutional investors, retail investors, securities analysts, and the press:

Information Disclosure and Presentation	Time(s)
1. International Road Show (via virtual meeting)	3
2. Local Road Show (Company visit)	9
3. Local Road Show (via virtual meeting)	8
4. Local Road Show (onsite meeting)	3
5. Quarterly and Annual Analyst Meetings	4
6. Opportunity Day for listed companies to release quarterly performance to investors	4
7. Information session for investors via conference call	25
8. Email, LINE Official account, and phone call	3-5 times a day
9. Press conference on the Company's performance	3
10. Press release on the Company's performance and business strategies	4
11. Activities for the press and news releases on Corporate Social Responsibility (CSR) Programs	22

The Company’s information and news are also made available and equally accessible to all stakeholders.

Interested persons may contact or make inquiries to the Company’s Investor Relations at:		
Telephone: +66 2694 6684	Email: investor_relations@banpu.co.th	LINE: banpu-ir

Report of the Board of Directors

The Board of Directors is responsible for Banpu’s and its subsidiaries’ consolidated financial statements and the financial information that appears in Banpu’s Annual Report. The financial statements are prepared in accordance with the Generally Accepted Accounting Principles (GAAP) in Thailand. The Company always makes sure that an appropriate accounting policy is chosen and carefully pursued on a regular basis. The Audit Committee and auditors jointly review the accounting policy related to the preparation of financial statements to ensure that it remains practical. The Board of Directors emphasizes that the team in charge carefully exercises its discretion in preparing the information and that important information is adequately disclosed in the notes to the financial statements.

The Board entrusted the Audit Committee with the responsibility to oversee the quality of financial statements and the internal control systems and to ensure that any opinions of the Audit Committee on these issues have been included in its report, which is also presented in the Company’s Annual Report. The Board of Directors considered that the financial statements of the Company and its subsidiaries as of 31 December 2024 are accurate, complete, adequate, and reliable.

Policy on the Use of Inside Information

The Company places great importance on information disclosure and transparency and has established a policy and practices on information disclosure and transparency of financial statements under the Corporate Governance Policy. The Company also makes it a priority to disclose to shareholders, investors,

securities analysts, and the general public the financial and non-financial information about the Company’s businesses and performance in an accurate, complete, adequate, reliable, and timely manner.

The Board of Directors is committed to strict compliance with laws and regulations regarding information disclosure and transparency. Sales or purchases of shares by any director or executive are duly reported to the SEC. Changes in the securities holding of directors or executives are also subject to be reported at the Board of Directors’ meeting on a monthly basis.

The Company’s measures to prevent the use of inside information are stipulated in the Code of Conduct under the section “Conflict of Interests and Keeping Confidential Information,” especially under the topic “Use of Company Information.”

The Company considers that it is the responsibility of its directors, executives, and employees to strictly comply with the policy on the use of inside information, especially the inside information that has not been disclosed to the public or any data or information that may affect the Company’s businesses or its share price. The Directors shall follow guidelines stated in the Practices for the Board of Directors B.E. 2552 and the Code of Conduct as follows:

1. Directors, executives and staff must not use the information they receive from their directorship or employment for personal benefit or for conducting business or other activities in competition with the Company.

2.

Directors, executives and employees shall not give inside information to any third party for the purpose of their dealing in the shares of the Company.
3.

Business secrets shall not be disclosed to any third party, especially to competitors, even after a director, executive, or employee member has left the Company.
4.

Directors and executives that match the definition given by the SEC, including any individuals obtaining insider information that significantly affects the Company’s share price, shall refrain from purchasing and selling the Company’s shares during the blackout periods and shall follow the following practice:
 - The Company’s directors and executives (including their spouses and minor children yet becoming sui juris), including individuals obtaining insider information that significantly affects the Company’s share price, shall refrain from trading the Company’s shares one month before and until 24 hours after the financial statements or other information affecting the Company’s share price are made public.
5.

Directors and executives, as defined by the Securities and Exchange Commission, shall report their shareholding and its change with the method regulated by the Securities and Exchange Commission.

Additionally, the Company stipulated in the Corporate Governance Policy that directors, executives, and employees must not exploit their relationship with the Company for personal gain, conduct business that competes with the Company, or carry out any connected transaction that may lead to a conflict of interest with the Company. If the transaction is necessary, it should be carried out at arm’s length

with fairness and transparency, and directors or employees having an interest in the transactions must not be involved in the approval process. If any transaction is considered a connected transaction under the SET’s notification, the rules, procedures, and announcements on the disclosure of connected transaction information for listed companies must be strictly complied with. Besides, the Practices for the Board of Directors includes a set of guidelines for directors on the handling of information not yet disclosed to the public and requires directors and executives to report changes in their holding of the Company’s shares in the Board of Directors meetings on a monthly basis.

Regarding the development of internal control for the use of inside information, the Company has deployed several IT systems to support the control, such as the external access prevention system and the role-based access control system, to safeguard the use of Company information. If an executive or an employee is to be involved in a special project of which the information has not yet been disclosed to the public, or the project is under negotiation, and its information has to be kept confidential as it could affect the Company’s share prices, such executive or employee is to sign a Confidentiality Agreement, which shall be effective until the information is disclosed to the SEC and the SET. The use of inside information is prescribed as one of the Company’s rules under the Disciplinary Action section. According to the rule, which applies to employees at all levels, any employee who fails to comply with or violates the disciplinary requirements is considered to have breached the Company’s rule and is subject to disciplinary actions and punishments according to the nature of the offense. The rule states that anyone “disclosing the Company’s confidential information with an intention to jeopardize the reputation or credibility of the Company or its products, which consequently leads to a financial loss or a loss in a business opportunity for Banpu” may be subject to severe punishment up to dismissal.



In 2024, there were no reports of non-compliance with or violations of insider trading and share trading regulations stipulated by the SET and the SEC.

In addition, the Board of Directors and executives had disclosed their holding of the Company's securities on the date they were initially appointed and reported any changes in securities, including those of their spouses and minor children, as well as connected persons, to the Board of Directors for acknowledgment.

Principle 8 Ensure Engagement and Communication with Shareholders

Shareholder's Rights

The Board of Directors emphasizes the importance of rights and equality between shareholders and institutional investors. It has been clearly specified in the Corporate Governance Policy that shareholders are entitled to receive share certificates, transfer shares, and acquire adequate information in a timely fashion and in a format conducive to decision-making. Shareholders are also entitled to attend shareholders' meetings, cast their votes to decide the Company's important policies, elect and remove directors, approve appointments of auditors, and receive their shares of profit.

At each shareholders' meeting, the Board of Directors facilitates shareholders by furnishing them with complete, clear, sufficient, and timely information. The Board encourages shareholders to attend the meeting and cast their votes or to appoint an individual or an independent director as their proxy to cast votes on their behalf in case they cannot attend. Moreover, shareholders are allowed to equally express opinions, seek explanations, or pose questions.

The 2024 Annual General Meeting of Shareholders (AGM) was convened and live-streamed on 1 April 2024 at 13.30 hours at the meeting hall of the Company's Head Office, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok, with full attendance of all 13 directors. In 2024, the Company assigned Thailand Securities Depository Co., Ltd., its share registrar, to send invitation letters to shareholders in advance and posted the invitation on the Company's website at www.banpu.com/AGM_EGM/ 28 days prior to the meeting date. The minutes of the AGM were posted on the Company's website 14 days after the meeting took place so that the shareholders could propose amendments if they found the minutes to be inaccurate within the 30-day period after the minutes were posted.

To provide minority shareholders with the opportunity to propose agenda items for the Annual General Meeting (AGM) and nominate director candidates, the Company issued a notification through the Stock Exchange of Thailand (SET). Shareholders were invited to submit director nominations via the Company's website from November 24 to December 30, 2023, for the 2024 AGM. The Company ensured transparency by providing detailed information on the nomination process, including guidelines, procedures, shareholder eligibility criteria, required forms, and submission channels. This information was made accessible through the SET's electronic news system. Following the nomination period, no proposals or director nominations were received from shareholders.

Equitable Treatment of Shareholders

Shareholders' Meeting

The Board of Directors has the policy to engage shareholders in decision-making and to ensure that shareholders receive comprehensive and adequate information for decision-making in a timely fashion. As such, Banpu sent out a notice of Annual General Meeting, together with supporting documents for each agenda item, to shareholders prior to the meeting, with opinions from the Board of Directors accompanying each agenda item. A total of 13 directors attended the meeting, including the Chairman of the Audit Committee, the Chairman of the Corporate Governance and Nomination Committee, the Chairman of the Compensation Committee, and the Chairman of the Environment, Social and Governance (ESG) Committee. The executives, the auditors, and independent observers from a law firm also attended the meeting.

The Chairman of the shareholders' meeting allowed every shareholder to review the Company's performance and submit questions on each agenda item. The Chairman also encouraged shareholders to voice their opinions and make inquiries about the Company's operations. In addition, the Board of Directors had the minutes of the meeting prepared and released on the Company's website 14 days after the meeting so that shareholders could review the minutes and propose any necessary amendments within 30 days.

Shareholders' Meeting Date

The 2024 Annual General Meeting of Shareholders (AGM) was convened and live-streamed on 1 April 2024 at 13.30 hours at the meeting hall of the Company's Head Office, 1550 Thanapoom Tower, New Petchburi Road, Makkasan, Ratchathewi, Bangkok. The 2024 AGM was attended by all 13 directors, 71 shareholders, and 423 proxies, bringing the total to 494 persons representing 3,526,909,278 shares, which accounted for 35.2025% of all voting shares.

Compliance with Other Corporate Governance Principles

The Company acts in good faith to fully comply with the Corporate Governance Code for Listed Companies 2017 set forth by the SEC, with some exceptions, of which the details and reasons are provided as follows:

1. The Chairman of the Board should be an independent director.

The Company's practice:

At present, the Chairman of the Board is a non-executive director. However, the roles and duties of the Chairman are clearly defined by the Board of Directors, emphasizing the best interests of the Company, shareholders, and other stakeholders. In 2022, the Board passed a resolution to appoint a Lead Independent Director to jointly set the agenda of the Board meeting if the Chairman of the Board is not an independent director to promote checks and balances of power and authority.



2. The Nomination Committee should consist entirely of independent directors.

The Company's practice:

The current Corporate Governance and Nomination Committee comprises four members: one independent director and three non-executive members. The Chairman of the Committee is a non-executive member. However, the Board of Directors has clearly set in the Charter of the Corporate Governance and Nomination Committee about the roles and duties of the members, covering all aspects of corporate governance and nomination.

3. The Chairman of the Sub-committees shall be an independent director.

The Company's practice:

Currently, the Chairman of the Corporate Governance and Nomination Committee and the Chairman of the Compensation Committee are non-executive directors. However, the Board of Directors has clearly defined the roles and duties of the Sub-committees in the respective charters, covering all aspects.

4. The Board should appoint an external consultant to provide advice on developing the approach and criteria for performance evaluation of the Board at least once every three years, and evaluation results should be disclosed in the annual report.

The Company's practice:

The Company conducts an annual performance evaluation of the full Board, sub-committees, and each individual director. The Corporate Governance and Nomination Committee has considered the issue and decided not to appoint an external consultant to facilitate the development of an evaluation approach or to advise on the Board's performance evaluation criteria.

5. The Board should set a clear office term for board members in the Corporate Governance Policy.

The Company's practice:

The Company prescribed that independent directors shall serve the term of office for up to nine years or no more than three consecutive terms. (The Practices for the Board of Directors of Banpu Public Company Limited, Article 6.2 Section 6. Term of Office and Retirement*). Furthermore, the Company set the directors' retirement age at 75 in the Corporate Governance Policy (Article 4.7 Directors' Retirement).

* Effective from 19 December 2014

6. The Board should carefully consider the qualifications of any candidate for appointment as an "Independent Director" to ensure that the appointed director is truly independent and well-suited to the Company's nature. At a minimum, an Independent Director must meet the qualifications required by the SEC and the SET. Apart from that, the tenure of an independent director should not exceed a cumulative term limit of nine years from the date of their initial appointment. In the event of reappointment beyond the maximum tenure, the Board must provide clear and justified reasons for the decision.

The Company's practice:

The Board has set more stringent requirements on the qualifications of an independent director than the minimum requirements of the SEC and the SET, specifically in terms of the Company's shares held by an independent director. Besides, the Company prescribed that an independent director shall serve the term of office for a maximum of nine consecutive years or no more than three consecutive terms. (The Practices for the Board of Directors of Banpu Public Company Limited Article 6.2 Section 6. Term of

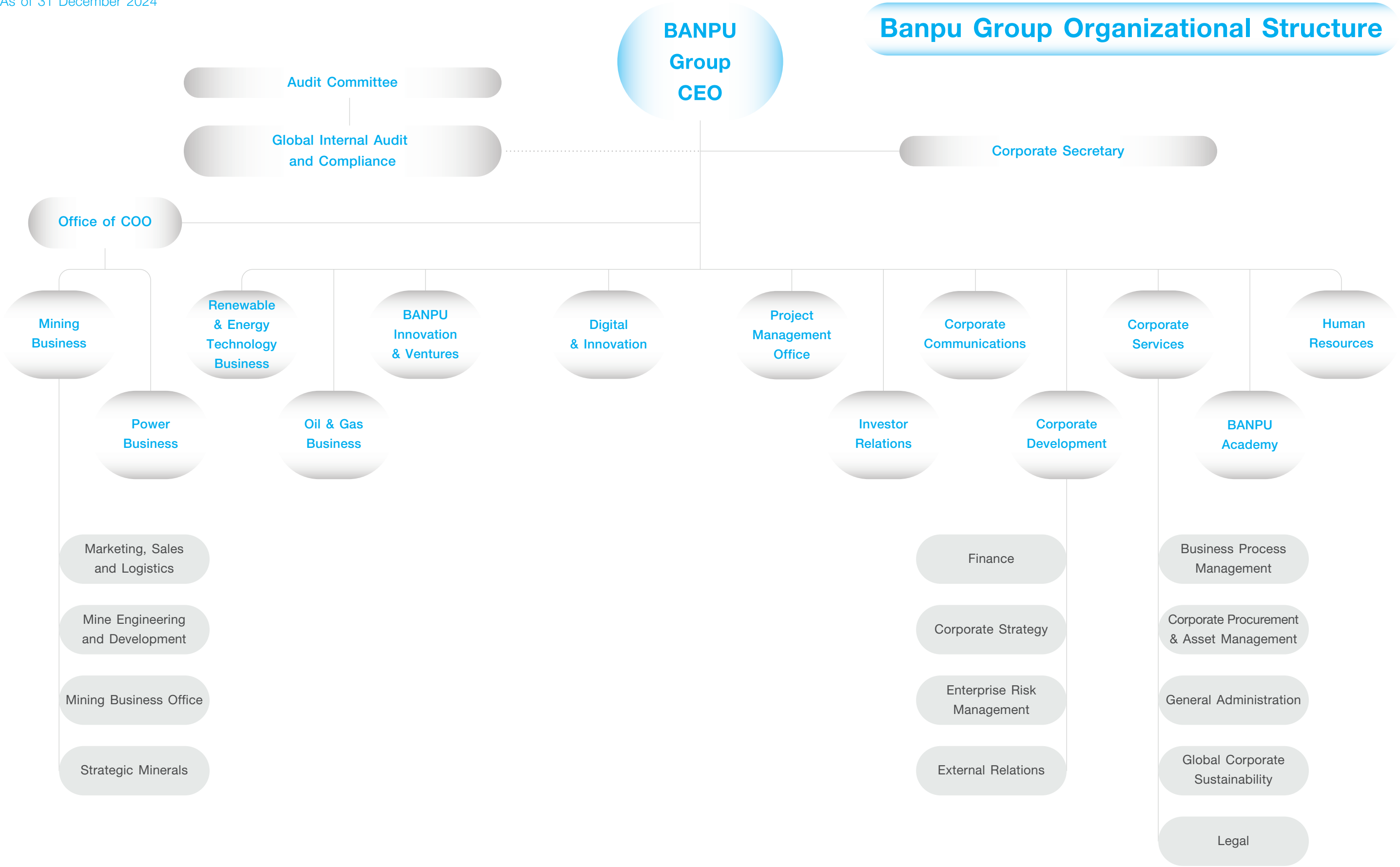
Office and Retirement*). Mr. Teerana Bhongmakapat has been an independent director for thirteen years, from 5 April 2012 to present. The Corporate Governance and Nomination Committee carefully deliberated and concluded that Mr. Teerana Bhongmakapat's qualifications match the required qualifications of independent directors. He has also been competent in performing his duties and expressing his independent views, making him well-suited to continue serving as an independent director.

* Effective from 19 December 2014

7. The Board of Directors considered and adopted the SEC's Corporate Governance Code for Listed Companies 2017 as a guideline for amending Banpu's Corporate Governance Policy and Code of Conduct, Practices of the Board of Directors, and Charters of Sub-committees in 2024.

CORPORATE GOVERNANCE STRUCTURE

As of 31 December 2024



Structure of the Board of Directors

The Board of Directors comprises directors who are widely recognized for their knowledge and competence. The Board plays a pivotal role in determining the Company's objectives and goals and works with executives to devise strategies and policies for short- and long-term operations. The Board also establishes financial policies, oversees risk management, governs overall management, and reviews significant policies and plans annually. The duties of the Board also include overseeing, monitoring, and evaluating the performance of the Company and senior executives to ensure alignment with the plans.

The Board of Directors

consists of

1. Mr. Chanin Vongkusolkrit	Chairman of the Board of Directors
2. Mr. Teerana Bhongmakapat	Independent Director
3. Mr. Piriya Khempon	Independent Director
4. Mr. Pichai Dusdeekulchai	Independent Director
5. Mr. Teerapat Sanguankotchakorn	Independent Director
6. Mrs. Watanan Petersik	Independent Director
7. Mr. Anon Sirisaengtaksin	Director
8. Mr. Buntoeng Vongkusolkrit	Director
9. Mr. Metee Auapinyakul	Director
10. Mr. Ongart Auapinyakul	Director
11. Mr. Verajet Vongkusolkrit	Director
12. Mr. Sarayuth Saengchan	Director
13. Mr. Sinon Vongkusolkrit *	Executive Director
14. Ms. Somruedee Chaimongkol **	Executive Director

STATUS

7

Non-executive Directors

1

Executive Directors

5

Independent Directors

12

Males


1

Female

Notes:

* Mr. Sinon Vongkusolkrit was appointed as an executive director, effective 2 April 2024.

** Ms. Somruedee Chaimongkol resigned as a director, effective 2 April 2024.



For full details of the

"Board of Directors",

Please scan the QR Code or click on

Click Here

Board Skill Matrix

The Board of Directors has assessed the diversity of expertise within the Board to ensure that the qualifications of the current directors are appropriate and align with the Company's strategies and business directions, as shown in the Board Skill Matrix:

Director	Expertise										
	Finance/Accounting	Marketing/Logistics	Management	Technical/Engineering	Business Relations	Economics	Strategy/International Relations	Mining	Energy	Oil and Gas	Technology
1. Mr. Chanin Vongkusolkrit	/	/	/		/	/	/	/	/		
2. Mr. Teerana Bhongmakapat	/		/	/	/	/	/				
3. Mr. Piriya Khempon			/		/	/	/				
4. Mr. Anon Sirisaengtaksin			/	/	/		/			/	
5. Mr. Buntoeng Vongkusolkrit		/	/		/		/				
6. Mr. Pichai Dusdeekulchai	/		/		/		/				
7. Mr. Teerapat Sanguankotchakorn			/	/	/						/
8. Mrs. Watanan Petersik	/		/		/	/	/				
9. Mr. Metee Auapinyakul			/		/		/		/		
10. Mr. Ongart Auapinyakul			/	/	/		/	/			
11. Mr. Verajet Vongkusolkrit	/		/		/	/			/		
12. Mr. Sarayuth Saengchan	/		/		/	/	/				
13. Mr. Sinon Vongkusolkrit *	/		/		/	/	/				/
14. Ms. Somruedee Chaimongkol **	/		/		/		/	/	/		

Notes:

* Mr. Sinon Vongkusolkrit was appointed as an executive director, effective 2 April 2024.

** Ms. Somruedee Chaimongkol resigned as a director, effective 2 April 2024.

Board Composition

As of 31 December 2024, the Board of Directors is composed of 13 directors: 5 independent directors, 7 non-executive directors, and an executive director.

Independent Directors

Five independent directors, who make up 38% of the Board, are as follows:

1. Mr. Teerana Bhongmakapat	Independent Director
2. Mr. Piriya Khempon	Independent Director
3. Mr. Pichai Dusdeekulchai	Independent Director
4. Mr. Teerapat Sanguankotchakorn	Independent Director
5. Mrs. Watanan Petersik	Independent Director

The qualifications of the five independent directors meet the requirements of “Independent Directors” of the Company, which are more stringent than the Capital Market Supervisory Board’s criteria.

To comply with good corporate governance, the Company places importance on building Board diversity using the Board Skill Matrix to identify valuable skills, experiences, knowledge, and specialization needed for the Company. Additionally, the Company’s director nomination process prioritizes inclusion, actively seeking diverse candidates regardless of gender, race, nationality, or religion. This broader pool expands the opportunity to identify the most suitable candidates for the Company’s strategy and business operations.

Authorized Signatory Directors on behalf of the Company

Any two individuals from the group comprising Mr. Chanin Vongkusolkit, Mr. Metee Auapinyakul, Mr. Ongart Auapinyakul, or Mr. Sinon Vongkusolkit are jointly authorized to sign documents bearing the Company’s seal.

Authority and Duties of Chairman of the Board

To ensure a clear division of policy-making and management roles and effective management oversight by the board, the Company mandates that the Chairman of the Board of Directors and the Chief Executive Officer not be the same person. The Chairman of the Board of Directors is entrusted with the following duties:

1. Monitor, support, and encourage all directors to perform their duties to their full potential according to good corporate governance principles to ensure the achievement of the Company’s key objectives and goals.
2. Call Board meetings, chair Board meetings and shareholders’ meetings, collaborate with the CEO to set board meeting agendas, and cast the deciding vote in case of a tie.
3. Promote strong interaction and cooperation between the Board, the management, and the Company Secretary to facilitate seamless and efficient operations.

If the Chairman of the Board is not an independent director, the Board of Directors shall promote the checks and balances of power and authority by ensuring that a majority of the Board consists of independent directors and/or appointing a designated independent director as the Lead Independent Director to participate in setting the board meeting agendas.

Duties and Responsibilities of the Board of Directors

The Board of Directors is accountable to shareholders for the Company’s operations and its oversight of management so that the Company’s goals are met and shareholders’ interests are maximized. The Board also has a duty to ensure ethical conduct and the best interests of all stakeholders.

The Board of Directors is required to oversee various operations to ensure compliance with the laws, the Company’s objectives and regulations, and the shareholders’ meeting resolutions. It must perform duties with integrity and safeguard the short-term and long-term interests of shareholders. Additionally, the Board has to ensure compliance with the rules and regulations of the Stock Exchange of Thailand (SET), the Securities and Exchange Commission (SEC), and the Capital Market Supervisory Board, which was established according to B.E. 2535, as amended by the Securities and Exchange Act (No.5), B.E. 2559.

Accordingly, the Board formulated “The Practices for the Board of Directors of Banpu Public Company Limited, B.E. 2552” as guidelines for the Board of Directors. The handbook outlines definitions, Board composition, directors’ qualifications, terms of office and retirement, duties and responsibilities of the Board, as well as meetings and voting procedures. It was amended in 2011, 2012, 2014, 2017 (Amendment No. 1 and No. 2), 2022, and 2024 to elevate the Board’s corporate governance standards and align with evolving responsibilities and changes in business conditions.



For complete information on “The Practices for the Board of Directors of Banpu Public Company Limited,” Please scan the QR Code or click on [Click Here](#)

Regulations Governing Directors Holding Positions in Other Companies

To ensure that directors can dedicate adequate time to perform their duties, the Company requires that directors shall not serve on the boards of more than five listed companies, which is considered one of the qualifications of the directors (see the Practices for the Board of Directors of Banpu Public Company Limited’s Section 5.1 Clause (5) General Qualifications of Directors, effective 19 December 2014). The Board also stipulated in the Corporate Governance Policy on the regulations governing directors holding positions in other companies, as follows: “Holding directorship position in other company, other than group companies, CEO must get an approval from the Board of Directors.”

Sub-committees

The Board of Directors set up four sub-committees, namely, the Audit Committee, the Corporate Governance and Nomination Committee, the Compensation Committee, and the Environment, Social and Governance (ESG) Committee. A charter was formulated for each sub-committee to be applied as their guiding principles.

The Board concluded that the chairperson of each sub-committee should be an independent director. Currently, the chairpersons of the Audit Committee and the Environment, Social, and Governance (ESG) Committee are independent directors. The term of office for these committees is three years, from May 2022 to the date of the Annual Shareholder’s Meeting in 2025.

The Audit Committee

The Audit Committee consists of three independent directors:

1. Mr. Teerana Bhongmakapat	Chairman
2. Mrs. Watanan Petersik	Member
3. Mr. Pichai Dusdeekulchai	Member

The Audit Committee has a duty to review the Company’s financial statements, the adequacy of internal control and internal audit systems, and compliance with applicable laws and regulations. It also oversees the selection and appointment of the Company’s auditors, determines their compensation, and, if necessary, terminates their appointment. The committee reviews related party transactions or potential conflicts of interest to ensure transparency, fairness, and benefit to the company. They collaborate with the Board of Directors on significant matters to protect stakeholders and shareholders. The committee reviews key risk management measures, covering strategic and investment risks, commodity price risks, financial risks, climate change risks, technology risks, and cybersecurity risks. Moreover, the Committee reviews and oversees compliance with the Anti-corruption Policy and the independence of the Global Internal Audit Department, including their work plan, performance, budgets, and workforce. It also approves the appointment, performance evaluation, transfer, and dismissal of the Head of the Global Internal Audit. This is to ensure that the role of the Audit Committee remains independent and aligned with the Audit Committee Charter, which complies with the regulations of the Stock Exchange of Thailand and the Securities and Exchange Commission of Thailand.

The Audit Committee is chaired by Mr. Teerana Bhongmakapat. All committee members are knowledgeable and competent and have sufficient

experience in accounting and finance to oversee the accuracy and creditability of the Company’s financial statements.

In the Audit Committee meeting No. 1/2018, held on 16 January 2018, Ms. Wiyada Wiboonsirichai was appointed as Secretary of the Audit Committee, effective 16 January 2018. Ms. Wiyada Wiboonsirichai has more than 30 years of experience in managing and conducting professional internal audits in accordance with international standards. She is a Certified Public Accountant (CPA) and a Certified Internal Auditor (CIA) with expertise in sustainable corporate governance, valuable strategic alignment, accounting and finance, and internal control systems based on significant risks according to international standards.



For complete information on
“The Audit Committee Charter”,
Please scan the QR Code or click on
[Click Here](#)

The Corporate Governance and Nomination Committee

The Corporate Governance and Nomination Committee consists of four directors, namely one independent director and three non-executive directors.

1. Mr. Anon Sirisaengtaksin	Chairman
2. Mr. Piriya Khempon	Member
3. Mr. Verajet Vongkusolkit	Member
4. Mr. Sarayuth Saengchan	Member

The Corporate Governance and Nomination Committee has two major duties:

- 1)
- Reviewing the Corporate Governance Policy and the Code of Conduct: The Committee ensures compliance with the policy and monitors practices within the Banpu’s Code of Conduct.

- 2)
- Identifying and nominating directors and the Chief Executive Officer: The Committee oversees succession planning, identifying suitable candidates for management positions at the department head level and above. It then presents recommendations to the Board of Directors for approval or for proposing to the shareholders’ meeting, as appropriate.

Apart from that, the Corporate Governance and Nomination Committee provides suggestions for the Board of Directors regarding the performance evaluation method for directors and sub-committees. It also completes the evaluation and monitors improvements following the evaluation. In 2012 and 2014, the Committee introduced performance evaluation forms for sub-committees and individual directors.



For complete information on
“The Corporate Governance
and Nomination Committee Charter”,
Please scan the QR Code or click on
[Click Here](#)

The Compensation Committee

The Compensation Committee consists of three members, namely two independent directors and one non-executive director

1. Mr. Buntoeng Vongkusolkit	Chairman
2. Mr. Teerana Bhongmakapat	Member
3. Mr. Teerapat Sanguankotchakorn	Member

The Compensation Committee is responsible for recommending compensation-related matters to the Board of Directors for approval or, where applicable, for proposing to the shareholders’ meeting, including:

- 1)
- To recommend guidelines on compensation criteria, methods of compensation payments, and other benefits for the Board of Directors, other sub-committees appointed by the Board, and any other persons attending the Board of Directors’ meetings and/or sub-committee meetings.
- 2)
- To consider and recommend a compensation scheme, including other benefits, and criteria for evaluating the Chief Executive Officer’s annual performance.
- 3)
- To review the structure and criteria for compensation stated in Clauses 1 and 2 to ensure alignment with the individual’s roles and responsibilities, the Company’s performance, and market conditions.
- 4)
- To review overall budgets for salary increases, annual bonus payments, and any other benefits for the staff.



For complete information on
“The Compensation Committee Charter”,
Please scan the QR Code or click on
[Click Here](#)

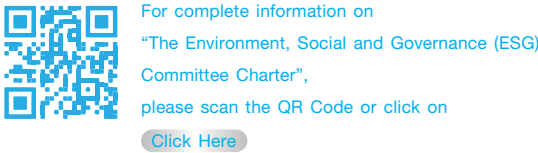
The Environment, Social and Governance Committee

The Environment, Social and Governance Committee consists of three independent directors:

1. Mr. Piriya Khempon	Chairman
2. Mr. Pichai Dusdeekulchai	Member
3. Mr. Teerapat Sanguankotchakorn	Member

The Environmental, Social and Governance (ESG) Committee is accountable to the Board of Directors for the oversight of ESG operations through:

- 1) Oversight of policies, management as well as targets and performance relating to ESG aspects
- 2) Review and monitoring of stakeholder engagement process and materiality assessment to ensure that all stakeholder expectations are identified, included in materiality assessment and managed properly
- 3) Review and monitoring of the ESG risk management performance
- 4) Oversight of the Company's ESG disclosure



The Board of Directors' Meeting

The Board of Directors convenes at least once a month on the final week of every month except for February and December when the Board convenes on the second week. Any additional meetings may be held if necessary. At every meeting, there are clear agenda items. A complete set of supporting documents is sent to the Board of Directors at least seven days in advance of the meeting to allow the Board an opportunity to properly review the information before the meeting. The inclusion of an agenda item after the distribution of documents is permissible only under exceptional circumstances and when justified. Furthermore, such an addition requires approval from the Chairman of the Board. Each meeting lasts approximately three and a half hours. During the meeting, all directors may openly voice their opinions. The Chairman of the Board must summarize views and board resolutions. If any director has a conflict of interest in a matter being considered by the Board, the director must leave the meeting room.

Minutes of all the meetings are documented and subsequently signed by the Chairman of the Board and the Company Secretary upon approval. These minutes and associated agenda documents are kept in both physical and electronic formats to be used as reference for directors or related persons. All the documents are securely stored for a minimum of five years, with a safeguard system in place to prevent any alteration or unforeseen disaster.

The Board of Directors' Meeting and Voting Procedure

The Company prescribed the Board of Directors' Meeting and the voting procedure in the Practices for the Board of Directors of Banpu Public Company Limited, section 8.5, effective 19 December 2014, as follows: "At least half of the directors shall be required to form a quorum. To pass resolutions, the quorum of the meeting shall be at least two-thirds of all the directors."

Non-Executive Directors' Meetings

A non-executive directors' meeting without the presence of the management was held on 26 October 2024, 10.00-12.00 hours, at JW Marriott Hotel, Bangkok. Eleven non-executive directors convened a meeting on the following agenda items.

1. Corporate Center Transformation & Future Capabilities
2. Strategic Changes & Governance Transformation
3. Senior Management Succession Plan
4. CEO Performance in the Past Year

After the meeting, the comments received during the session were conveyed to the CEO as input for strategic planning that aligns with the organization's transformation direction. This includes staff development to ensure their skills meet Banpu's business needs and to support sustainable growth in the future.

Remuneration of the Board of Directors

The Board of Directors delegated the Compensation Committee to review the remuneration structure and system and the appropriate remuneration for the Company's directors and senior management. It is prescribed as a policy that remuneration must be appropriate to roles, duties, and responsibilities and competitive in the job market and business. Executive remuneration is determined based on individual performance to be an incentive for effective performance.

The remuneration of the Board of Directors consists of a monthly salary and allowance for each meeting attended. Annual bonuses will be linked to the dividend paid out to shareholders, and the payment of the Board of Directors' remuneration must be approved by the shareholders' meeting.

In 2024, the shareholders' meeting determined committee remuneration by benchmarking it against remuneration in other business sectors. The Board and all committee remuneration for 2024 remained unchanged from 2023, as detailed in the table below.

Details	Chairman	Vice Chairman	Director/Member
1. Remuneration of the Board of Directors			
1.1 Monthly Compensation (THB/month)	90,350	79,925	69,500
1.2 Meeting allowance for the Board of Directors paid for each meeting attendance (THB/meeting)	45,175	39,970	34,750
2. The Audit Committee			
paid for each meeting attendance (THB/meeting)	54,210	-	41,700
3. The Corporate Governance and Nomination Committee			
The Compensation Committee	45,175	-	34,750
The Environment, Social and Governance Committee			
paid for each meeting attendance (THB/meeting)			

Summary of Directors' Meetings in 2024

The Company discloses the information and details of the Board of Directors Meetings in 2024 in the table "The Board of Directors' Meeting" on page 301.

Remuneration in Cash for the Year Ended 31 December 2024

Total cash remuneration of the Board of Directors in the forms of monthly compensation, meeting allowance, and annual remuneration amounted to THB 60,045,163.35, the details of which are as follows.

Name/Position	Monthly Compensation and Meeting Allowance (THB)	Meeting Allowance (THB)				Annual Remuneration (THB)	Total Remuneration (THB)
	Director	The Audit Committee	The Corporate Governance and Nomination Committee	The Compensation Committee	The Environment, Social and Governance Committee		
1. Mr. Chanin Vongkusolkrit Chairman of the Board of Directors	1,626,300.00	-	-	-	-	4,007,518.80	5,633,818.80
2. Mr. Teerana Bhongmakapat Independent Director/ Chairman of the Audit Committee/ Member of the Compensation Committee	1,251,000.00	487,890.00	-	278,000.00	-	3,082,706.77	5,099,596.77
3. Mr. Piriya Khempon Independent Director/ Chairman of the Environment, Social and Governance Committee/ Member of the Corporate Governance and Nomination Committee	1,251,000.00	-	278,000.00	-	180,700.00	3,082,706.77	4,792,406.77
4. Mr. Anon Sirisaengtaksin Director/ Chairman of the Corporate Governance and Nomination Committee	1,251,000.00	-	361,400.00	-	-	3,082,706.77	4,695,106.77
5. Mr. Buntoeng Vongkusolkrit Director/ Chairman of the Compensation Committee	1,216,250.00	-	-	361,400.00	-	3,082,706.77	4,660,356.77
6. Mr. Pichai Dusdeekulchai Independent Director/ Member of the Audit Committee/ Member of the Environment, Social and Governance Committee	1,251,000.00	375,300.00	-	-	139,000.00	3,082,706.77	4,848,006.77
7. Mr. Teerapat Sanguankotchakorn Independent Director/ Member of the Compensation Committee/ Member of the Environment, Social and Governance Committee	1,251,000.00	-	-	278,000.00	139,000.00	3,082,706.77	4,750,706.77

Name/Position	Monthly Compensation and Meeting Allowance (THB)	Meeting Allowance (THB)				Annual Remuneration (THB)	Total Remuneration (THB)
	Director	The Audit Committee	The Corporate Governance and Nomination Committee	The Compensation Committee	The Environment, Social and Governance Committee		
8. Mrs. Watanan Petersik Independent Director/ Member of the Audit Committee	1,216,250.00	333,600.00	-	-	-	2,312,030.08	3,861,880.08
9. Mr. Metee Auapinyakul Director	1,251,000.00	-	-	-	-	3,082,706.77	4,333,706.77
10. Mr. Ongart Auapinyakul Director	1,251,000.00	-	-	-	-	3,082,706.77	4,333,706.77
11. Mr. Verajet Vongkusolkrit Director/ Member of the Corporate Governance and Nomination Committee	1,251,000.00	-	208,500.00	-	-	3,082,706.77	4,542,206.77
12. Mr. Sarayuth Saengchan Director/ Member of the Corporate Governance and Nomination Committee	1,216,250.00	-	278,000.00	-	-	3,082,706.77	4,576,956.77
13. Mr. Sinon Vongkusolkrit Director	625,500.00	-	-	-	-	-	625,500.00
14. Ms. Somruedee Chaimongkol	208,500.00	-	-	-	-	3,082,706.77	3,291,206.77
Total							60,045,163.35

Notes:

- Mr. Sinon Vongkusolkrit (Person No. 13) was appointed as an Executive Director, effective 2 April 2024.
- Ms. Somruedee Chaimongkol (Person No. 14) resigned as a Director, effective 2 April 2024.
- In addition to the above remuneration, each director received other benefits, including an annual medical check-up fee of THB 50,000, Directors' and officers' liability insurance (D&O Insurance) coverage of THB 400 million, and fees for seminars held by the Thai Institute of Directors Association (IOD) and other related institutions according to the Company's regulations.

Shareholding of the Board of Directors and Executives as of 31 December 2024

Members of the Board of Directors are required to report the number of shares in Banpu Public Company Limited owned by themselves, their spouses, minor children being non sui juris, and related juristic persons. The report should be made during the next Board meeting following their appointment as Board members. Additionally, if any Board members, their spouses, minor children being non sui juris, and related juristic persons buy or sell the Company’s shares, they are required to report such transactions during the subsequent Board meeting. Shareholding of the Board of Directors and Executives as of 31 December 2024 is shown in the following table.



Name	Ordinary Share (Share)		
	31 Dec. 2024	31 Dec. 2023	+/(−)
1. Mr. Chanin Vongkusolkit	31,678,626	30,678,626	1,000,000
Spouse/Minor Child	11,814,300	11,814,300	-
Related Juristic Persons	-	-	-
2. Mr. Teerana Bhongmakapat	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
3. Mr. Piriya Khempon	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
4. Mr. Anon Sirisaengtaksin	39,998	39,998	-
Spouse/Minor Child	22,530	22,530	-
Related Juristic Persons	-	-	-
5. Mr. Buntoeng Vongkusolkit	11,263,527	10,863,527	400,000
Spouse/Minor Child	-	-	-
Related Juristic Persons	55,801,100	55,801,100	-
6. Mr. Pichai Dusdeekulchai	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
7. Mr. Teerapat Sanguankotchakorn	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
8. Mrs. Watanan Petersik	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
9. Mr. Metee Auapinyakul	8,000,000	8,000,000	-
Spouse/Minor Child	1,500,000	1,500,000	-
Related Juristic Persons	-	-	-
10. Mr. Ongart Auapinyakul	740,092	740,092	-
Spouse/Minor Child	3,500,000	3,500,000	-
Related Juristic Persons	-	-	-
11. Mr. Verajet Vongkusolkit	19,738,973	19,738,973	-
Spouse/Minor Child	484,400	484,400	-
Related Juristic Persons	55,801,100	55,801,100	-

Name	Ordinary Share (Share)		
	31 Dec. 2024	31 Dec. 2023	+/(−)
12. Mr. Sarayuth Saengchari	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
13. Mr. Smittipon Srethapramote*	212,000	N/A	N/A
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
14. Mr. Jamon Jamuang*	115,000	N/A	N/A
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
15. Mr. Jirameth Achcha	-	-	-
Spouse/Minor Child	38,837	38,837	-
Related Juristic Persons	-	-	-
16. Mr. Sutee Sukruan	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
17. Mr. Kirana Limpaphayom	-	-	-
Spouse/Minor Child	166,800	166,800	-
Related Juristic Persons	-	-	-
18. Ms. Arisara Sakulkarawek	-	-	-
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-
19. Mr. Issara Niropas*	-	-	-
Spouse/Minor Child	15,650	N/A	N/A
Related Juristic Persons	-	-	-
20. Mr. Wittapon Jawjit	-	-	-
Spouse/Minor Child	-	11,000	(11,000)
Related Juristic Persons	-	-	-
21. Mr. Sinon Vongkusolkit	1,879,699	494,666	1,385,033
Spouse/Minor Child	-	-	-
Related Juristic Persons	-	-	-

* Executives appointed during the year

Senior Executives

Banpu’s Senior Executives (As of 31 December 2024) are as follows:

1. Mr. Sinon Vongkusolkrit	Chief Executive Officer
2. Mr. Kirana Limpaphayom	Chief Operating Officer
3. Mr. Issara Niropas	Head of Power Business
4. Mr. Jamon Jamuang	Head of Mining Business
5. Mr. Sutee Sukruan	Head of Corporate Development
6. Ms. Arisara Sakulkarawek	Chief Financial Officer
7. Mr. Jirameth Achcha	Head of Corporate Services
8. Mr. Wittapon Jawjit	Head of Human Resources
9. Mr. Smittipon Srethapramote	Head of Renewable and Energy Technology Business

The above list of senior executives has qualifications as per the definition of “Executives” in the Notification of Capital Market Supervisory Board TorChor 23/2551. These executives are entrusted with authority and duties to manage the Company’s operations according to the policy, strategy, and goals set by the Board of Directors. The Board has approved the scope of authority and defined clear segregation of duties to ensure transparent and flexible operations.

Authority and Duties of Chief Executive Officer

The Board of Directors has set performance goals for the CEO and ensures that annual performance evaluations are conducted to determine the CEO’s remuneration. In turn, the CEO evaluates executives and senior management in a hierarchical manner using goals and criteria aligned with the Company’s strategic plan and annual work plan, as well as the CEO’s own performance targets, in order to determine appropriate compensation packages and incentives.

Executive Remuneration Policy and Payment

The Company’s remuneration consists of monthly salaries, bonuses, and other forms of compensation, such as contributions to the provident fund (excluding remuneration for some executives who are directors). Executive remuneration comprises salaries and bonuses tied to the Company’s overall performance and individual achievements, as measured against their key performance indicators. In 2024, remuneration rewarded to executives amounted to THB 125,586,703.34

Unit: THB	Number of Executives	Amount
Salary and Bonus	9	121,027,429.34
Contribution to Provident Fund	9	4,559,274.00
Total		125,586,703.34

Notes: In 2024, there were nine executives, namely 1) Mr. Sinon Vongkusolkrit, 2) Mr. Kirana Limpaphayom, 3) Mr. Issara Niropas, 4) Mr. Jamon Jamuang, 5) Mr. Sutee Sukruan, 6) Ms. Arisara Sakulkarawek, 7) Mr. Jirameth Achcha, 8) Mr. Wittapon Jawjit, and 9) Mr. Smittipon Srethapramote.

Employees

Committed to delivering sustainable energy for society, Banpu focuses on strengthening its ecosystem from within. The Company empowers employees and facilitates a work environment that nurtures growth and potential by prioritizing their well-being in all aspects, enabling them to create positive change based on Banpu’s belief that “employees” are the key to a robust business ecosystem that opens doors to new and diverse business opportunities.

Banpu puts its employees at the heart of every human resources management process while managing employees from diverse backgrounds, e.g., race, religion, language, culture, age, knowledge, perspective, and work experience in all countries where it operates. The Company leverages these strengths to enhance value, strengthen competitive advantage, and create a happy, agile, and flexible workplace for all employees in response to changing lifestyles. Employees are encouraged to create innovations in all dimensions to drive new businesses, with the ultimate goal of achieving business sustainability and long-term growth based on a solid foundation.

Total Number of Banpu's and Its Subsidiaries' Employees by Country

As of 31 December 2024



Employee Remuneration

In 2024, the remuneration in cash paid to employees of Banpu and its subsidiaries in Thailand, China, Indonesia, Australia, Mongolia, Japan, Vietnam, and the U.S. consisted of monthly salary, bonuses, and other forms of compensation, such as contribution to provident fund amounted to THB 13,809,616,544.36. Regarding Banpu Public Company Limited, the proportion of employees participating in the provident fund accounts for 81.67 percent.

Significant Labor Disputes over the Past Three Years

-none-

“Energy Symphonics” unites thousands of Banpu employees into “One” Banpu Heart.

Banpu Heart

ใจรัก	สร้างสรรค์	มุ่งมั่นยืนหยัด
Passionate Striving for the Future	Innovative New Ideas, New Solutions	Committed Success Is the Only Option
ก้าวไปให้สำเร็จ Pursue for Success	ก้าวล้ำนำหน้า Transcend the Trend	ยึดมั่นความถูกต้อง Adhere to Integrity and Ethics
เราทำได้ Can Do More	คิดจริงทำจริง Ideate and Get Real	สานพลังสร้างเครือข่าย Synergize and Network
ปรารถนาปรียะและเปลี่ยนแปลง Be Agile and Change	เรียนเร็วทำเร็ว Learn Fast, Do First	พัฒนาอย่างยั่งยืน Engage to Sustainability Development
ห่วงใยและแบ่งปัน Express Care and Share		

Recognizing the solid foundation of the “Banpu Heart,” forged by trust and the shared strength of Banpu people over four decades, in 2024, the Company developed activities to further strengthen its diverse business ecosystem. These activities focus on harmonizing different roles and responsibilities to foster collaboration while creating a sense of belonging and

allowing the freedom to design diverse initiatives that reflect the unique characteristics of each country and the generation of employees. This approach supports the design and expression of corporate culture that is most suitable for local contexts. For example, the “Stories of Banpu People: Voices of Dedication” is a documentary capturing the real-life work, experiences, and dedication of Banpu employees across all countries. This documentary not only deepened mutual understanding among employees but also engaged them in aligning the “10 Key Behaviors of Banpu Heart” with both their personal goals and the business objectives of Banpu Group. It conveys diverse

- Reinforcing the role of Banpu Change Leaders (BCLs), a group of employees who volunteer to drive corporate culture by establishing a global network of BCLs and making them part of the Company's Global Ecosystem through various activities. For example, cultural leadership skills for Business Cultural Leaders (BCLs) are developed through Culture Camp, where they learn to design culture-building activities, understand diversity, equity, and inclusion (DEI), and transform differences into strengths. This is achieved through initiatives such as Listening with the Heart, Understanding the Art of Happiness, and the Brain Secrets of Change to create high-potential teams. BCLs also took part in designing and organizing employee engagement workshops both in Thailand and abroad, including in Japan. Moreover, they led a role-model initiative, producing and creating short films that highlight the dedication of employees across different roles, all embodying the "Banpu Heart" spirit.
- Empowering employees to take ownership of corporate culture through a bottom-up approach that integrates employee feedback and utilizes employee engagement data to design activities that align with the diverse interests of employees in each country. Activities inspired by employee interests included chocolate-making for loved ones, creating inhalers for the elderly in nursing homes, weaving rugs with tufting guns to bring creative ideas to life, crafting personalized perfumes, and organizing events based on employee suggestions.





- The Boost Me Up Series, now in its fourth consecutive year, is a series of initiatives designed to sustainably enhance employee well-being. This series features 17 activities focused on three key areas: mental health, physical health, and financial health. The Company believes that a happy and balanced life enables employees to channel positive and creative energy to their colleagues and the broader community.
- Emphasizing close communication between management and employees to align business strategies with diverse roles and responsibilities to achieve a common goal and ensure that all business units across different countries share a unified vision under the Energy Symphonics strategy.



Banpu has been committed to developing its corporate culture throughout the past four decades and is willing to exchange ideas with other organizations and expand its employees' learning horizons about corporate values. To date, many public and private organizations, both in Thailand and abroad, have joined in the learning process. Banpu has welcomed companies to visit and learn about its corporate culture, organized lectures, and provided guidance on building a sustainable corporate culture.

Recruitment

The Company is committed to building a strong network with local and international professionals and students to attract top talent and drive collective success. In 2024, Banpu expanded its strategic network by supporting Samaggi Samagom under Royal Patronage and participating in its annual academic seminar in the UK. This provided an opportunity for Banpu representatives to share business insights and connect with Thai students studying abroad. More importantly, the Company cohosted activities with the Thai Student Association at Oxford University and Imperial College London to expand its network among the next generation of leaders.

Additionally, the Company continues its educational collaboration with the University of Texas at Austin, USA, where Banpu operates, to explore future business opportunities and innovations.

With this commitment, the Company is confident it can attract top talent to join the team and create a sustainable future together.

The Company has prioritized creating a positive employee experience from day one, recognizing that a strong start lays the foundation for success. Banpu has a mentoring process to help new employees adapt smoothly to the work environment, build their confidence, and prepare them to perform at their full potential.

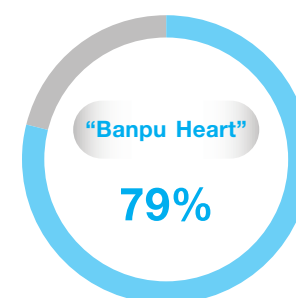
During the first six months, Banpu emphasizes friendly and informal communication with the HR team, providing new employees with opportunities to share ideas and concerns. The Buddy Program further supports their transition, pairing them with mentors—experienced teammates with over a year at Banpu—who offer guidance and build confidence at every step of the onboarding process.

Banpu also provides guidelines for supervisors to structure on-the-job training, ensuring that new employees receive targeted development and effectively adapt to the Company, their colleagues, and their roles within the team.

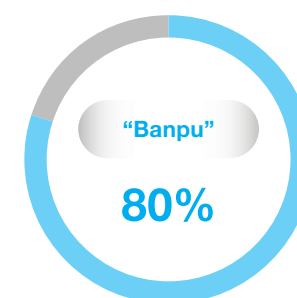
This reflects Banpu's commitment to building strong teams, fostering engagement, and creating a happy workplace culture, enabling employees to grow together and achieve success in harmony.

Additionally, the Company has established a network for future academic and research collaboration with the University of Texas at Austin, USA, one of its operating countries.

Furthermore, the Company annually conducts an employee survey to gather their opinions on corporate culture and assess the levels of employee engagement. In 2024, the Company conducted a survey on "Banpu Heart" to measure employee engagement and the extent to which employees' actions align with the corporate culture to ensure that employees, as a key group of Banpu's stakeholders, truly represent Banpu Heart. The 2024 survey results are as follows:



Average Alignment
Levels of Employee
Behaviors to Corporate
Culture in All
Countries in 2024



Average Levels of
Employee Engagement
in All Countries
in 2024

Creating a Strong Culture of Innovation: Fostering Ideas and Building an Innovation Community for Sustainability

Banpu has consistently prioritized strengthening an innovation culture, focusing on designing and developing activities to promote cross-sectional collaboration and cross-functional knowledge and experience sharing while encouraging openness to different perspectives and fostering a willingness to try new things. These activities aim to prepare employees to always embrace changes in the business world.

A key approach to driving innovation is building an innovation community within Banpu through creativity-driven and collaborative activities, such as UnBox iDeas, the Thailand Innovation Awards, and the Banpu Global Innovation Awards.



UnBox iDeas 2024 is an activity aimed at promoting agile working and cultivating an entrepreneurial mindset by providing a platform for thinkers and practitioners to experiment with their ideas. This activity encourages employees to try new things, dare to think, and learn from failures while being open to feedback so that they can improve their ideas and transform them into valuable innovations. The Company has granted a budget for employees to try their ideas, motivating them and increasing their chances of success. This also helps experienced employees become subject matter experts and internal facilitators, share their knowledge and skills with their colleagues, foster a learning atmosphere, and drive sustainable growth for the Company.



2024 Thailand Innovation Awards and 2024 Banpu Global Innovation Awards.

The Banpu Global Innovation Awards reflect Banpu's decade-long commitment to innovative thinking. This event provides employees across all operating countries with the opportunity to present creative ideas and innovative projects that align with the Company's Greener & Smarter strategy. Participants share their innovations with executives and colleagues at both national and international levels. It also serves as a platform for exchanging work approaches, technological advancements, and digital applications that enhance operational efficiency. The platform promotes cross-country and cross-sectional cooperation and information exchange while facilitating the development of an innovation community, allowing the Company to leverage practical outcomes to advance innovation in the short, medium, and long terms for sustainable success.



Creating an innovation culture and driving Banpu's innovation community help promote a development-led atmosphere. It is a key driver of organizational adaptability and stable growth in today's rapidly changing business landscape. This marks another milestone in Banpu's commitment to sustainable innovation, enabling the Company to achieve its long-term goals while creating value for society as a whole.

"It doesn't matter what role you are in; what matters is how you see yourself in the future."

To reinforce the "One Banpu, One Goal" concept, Banpu strives to align human resources management with its vision and timely response to changing business environments, propelling the Company toward becoming a leading versatile international energy provider. The Company strongly supports capacity building and agility in the workplace. Starting at Banpu Academy, the Company has integrated Scrum, an agile methodology framework, into its operations, which can be regarded as "Banpu's way of working." The goal is to create an agile way of working to ensure smooth cross-functional and cross-country collaboration while also allowing employees to develop new skills and enhance career growth across functions and countries.

Human Capital Development Policy

Banpu Academy aims to transform Banpu into a lifelong learning organization and create an environment that systematically and sustainably integrates knowledge, skills, and creativity. This directly contributes to the Company's success across multiple dimensions, including enhancing competitiveness, improving performance, driving innovation, and expanding networks with global experts.

Banpu Academy focuses on human resource development through an integrated approach that includes curriculum design, knowledge management, and the creation of a learning community. It also leverages digital savviness and data analytics to personalize learning experiences, ensuring they align with each employee's individual needs and potential.

Establishing Banpu Academy Campus in several countries, connecting internal expertise, and creating a collaborative learning ecosystem with educational institutions and world-class experts are part of the strategy to ensure that the Company has the right human resources to overcome challenges. In addition, Banpu promotes a coaching culture and a growth mindset, encouraging employees to think boldly, experiment confidently, and develop innovative approaches that support the Company's long-term goals.

With this policy, the Company not only develops high-potential employees but also establishes a strong foundation for sustainable growth, enhancing flexibility and agility to ensure long-term value creation in an ever-evolving business landscape.

1. Increase the readiness of capable people:

The High Potential Development Program is designed to cultivate top talent both within and beyond Banpu Group, ensuring the right individuals are placed in key positions across the value chain. This program also focuses on developing successors, establishing clear career paths, and empowering future leaders through training and development in partnership with world-class institutions, preparing them to support long-term business strategies. The potential assessment framework follows international standards and is benchmarked against leading organizations, fostering a culture of continuous learning throughout employees' careers. This helps employees recognize their value, plan their career growth, and acquire new skills that align with the Company's business direction. One example is the Banpu Business Leader Program, which brings together executives and experts from various countries to share insights and experiences.



2. Accelerate career development: Banpu Academy has clearly structured its curriculum and learning content with a data-driven approach, designing personalized learning experiences while fostering a corporate coaching culture. Coaching programs are collaboratively developed across Banpu's operating countries, enabling middle and senior executives to mentor high-potential employees to unlock their full potential and strengthen internal learning networks. It offers blended learning courses, including workshops for learning and exchange, academic learning via online videos, and e-learning combined with practical on-the-job experience. Data analytics is used to assess learning behavior and personalize courses according to each employee's interests and strengths. Moreover, the Learning & Development Dashboard is utilized to track and evaluate learning outcomes.

3. Banpu Academy Platform: This platform emphasizes knowledge management, expert pool development, and the effective use of the Learning Management System (LMS). Developing an expert pool starts with identifying subject matter experts within Banpu Group, such as renewable energy experts, advanced mining engineers, or data scientists, who are ready to mentor their teammates. Furthermore, expanding the Banpu Academy platform to other countries provides access to diversified knowledge that is consistent with local contexts and specific business conditions.

4. Establish Banpu Academy Campuses in collaboration with other business units in Banpu's operating countries: Banpu has established a development network that offers specialized knowledge, such as the Australia Campus, which focuses on expertise in underground mining and digital data analysis to enhance production efficiency. Indonesia

Campus specializes in surface mining and process improvements to support decarbonization targets. Vietnam Campus emphasizes knowledge of wind farms and renewable power plant project management. Banpu has built a knowledge community with appointed learning consultants who guide employees in designing personalized learning paths aligned with their career goals and interests. Moreover, the Company has signed MoUs with universities and external experts to create a dynamic learning ecosystem that drives continuous development.

5. Drive global & local innovative culture: Banpu prioritizes the cultivation of a lifelong learning culture, encouraging employees to think outside the box and experiment with new ideas. An open and empowering atmosphere enables employees to think boldly, take initiative, and innovate. The Company integrates continuous learning with innovation through various activities. For example, UnBox iDeas promotes agile working and an entrepreneurial mindset, inspiring employees to create, explore new opportunities, and develop effective problem-solving skills. Experienced employees are encouraged to become subject matter experts and internal facilitators, sharing knowledge and mentoring colleagues, which fosters a collaborative learning environment. This approach strengthens both international and local networking within the innovation community. Achievements are recognized and celebrated through awards such as the Thailand Innovation Award and the Banpu Global Innovation Awards, which also encourage collaboration with external partners and leverage benchmarking to enhance performance. Through these approaches, the company and Banpu Academy are positioning the organization as a local innovation hub while driving its transformation into a global innovation community.

Business Impact

- **Strengthening the competitiveness of human resources** – By developing new skills and knowledge, employees can quickly adapt to changes in the energy sector and related industries. This enables them to effectively respond to opportunities and challenges arising from technological advancements, regulatory shifts, and evolving customer needs.
- **Improving efficiency and operating results** – Continuous learning enables employees to gain deeper business insights and develop data analysis skills for strategic decision-making and resource management. This leads to more efficient work processes, cost reduction, increased productivity, and greater financial stability for the Company.
- **Promoting innovation culture and creativity:** Events such as UnBox Ideas, Talk Fest, and expert-led sharing sessions inspire employees to think outside the box, enhance services, and develop solutions that align with market trends and the Company's future growth. This creates added value and differentiation from competitors.
- **Strengthening and expanding the global expert network** – Collaboration with academic institutions and external experts enhances human resource development and ensures alignment with international standards.
- **Retaining and attracting quality talent** – A culture of continuous learning and skill development enhances the employee experience, making Banpu an attractive workplace for both internal and external talent. This helps reduce turnover, foster strong employee engagement, and motivate employees to grow with the Company.

In 2024, employees and executives received an average of 34 hours of training. They participated in the following training programs.

Self-Learning Capacity Development Programs

Banpu provides a strong foundation for employees to engage in continuous learning, equipping them with the skills and creativity needed to tackle new challenges and support the Company's long-term sustainable growth. This commitment serves as a vital mechanism for driving the Company towards business excellence and sustainable development. The Company prioritizes investment in human capital by allocating at least 5% of its total annual salary budget for potential development across all operating countries. It focuses on enhancing employees' knowledge, skills, and abilities, ensuring they stay ahead of global technological, economic, social, and environmental changes.

In 2024, the Company organized proactive skill development across various dimensions to prepare employees to effectively adapt to business changes. It focuses on four main areas:

1. Leadership Skills:

This program focuses on strengthening business vision and driving organizational success in a highly competitive environment. Employees will develop strategic thinking, negotiation skills, and an entrepreneurial mindset while also honing their ability to coach and mentor colleagues and teams. The program aims to create an environment that stimulates cross-functional, cross-regional, and cross-cultural learning to drive the Company toward becoming a lifelong learning organization.



2. Digital Skills:

Amid rapid technological advancements, the Company is committed to developing employees' digital skills through the Data-Driven Citizen Program, equipping them with the ability to leverage data for precise strategic decision-making. The program promotes learning about Generative AI (Gen AI) and ChatGPT technology, enabling employees to harness AI for innovation. In addition, it enhances understanding of cybersecurity to help safeguard the Company against cyber threats in a high-risk digital environment.

3. Technical/Functional Competencies:

The Company prioritizes the development of functional competencies, including strategic planning and thinking, project management, business operating models, and an understanding of Banpu Group's sustainable development principles. Employees also receive foundational training and specialized knowledge to support new business ventures, such as a strategic minerals course tailored for employees in the mining business. Furthermore, the Company hosts an internal ESG seminar to ensure employees can practically integrate sustainability concepts into their work.

4. Learning Communities:

To promote continuous collaborative learning, the Company has established a "Learning Community," providing employees from various countries and business functions with opportunities to exchange knowledge, share experiences, best practices, and lessons learned from real cases. Key learning communities include Mining Business, Energy Trading Learning Community and Renewable Energy Asset Management Learning Community. They strengthen internal collaboration networks, improve agility in adapting to business changes, and elevate work standards through systematic collaboration.

Banpu Global Leadership Program

This program offers training for Banpu's executives in all countries, aiming to foster cross-cultural collaboration and cross-functional networking to drive international cooperation and collaboration. It includes courses on self-development for enhanced leadership, team leadership skill development, and business leadership skill development. Banpu Global Leadership Programs consist of the following:

- **Banpu Global Leadership Program for Business Leaders:** The objectives of this leadership development program for executives across all countries are to enhance managerial potential in leading diverse teams, equipping them to navigate challenges in a globalized business environment. The program focuses on developing skills in four key areas: intercultural intelligence, investment intelligence, governance, and digital leadership.

Throughout the program, participants will explore emerging business trends and innovations, applying their insights to develop practical strategies that drive positive organizational impact. Major training topics include understanding cross-cultural intelligence and inclusive teams, navigating global trends, and understanding the impact of geopolitics, as well as strategies for successful business operations. The training also includes simulations of governance scenarios and alliance-building.

- **Banpu Global Leadership Program for First Line Leader** This program is designed to develop new-generation leaders and equip them with effective team leadership skills while enhancing self-management and team management in alignment with business goals. It emphasizes real experience sharing and peer learning among international executives to strengthen

leadership potential and ensure readiness to drive Banpu's sustainable growth. Key contents include leader's mindsets, self-management, performance improvement, and effective prioritization. The program focuses on strengthening team engagement, morale and collaboration, communication skills, and team spirit. It fosters a culture of giving and receiving constructive feedback while also enhancing leaders' capabilities in change management. It deepens leaders' business understanding and strategic implementation, enabling them to plan and execute strategies with clarity, purpose, and alignment with Banpu's direction.

- **Banpu Global Leadership Program for Future Leaders** The program aims to develop next-generation leaders by enhancing their leadership potential in diverse dimensions, including Emotional Intelligence, Stakeholder and Partner Management, Business Exploration and Strategy, and Innovation and Creativity Development. Additionally, the program emphasizes on-the-job learning and cross-functional exchange of experiences using the Learning Application Project (LAP) to apply knowledge to real-world tasks. In 2024, the program was organized under the theme "Build New S-Curve for Banpu," encouraging participants to apply their knowledge and skills to develop innovative ideas and initiate projects that will drive sustainable and significant growth for Banpu's future.

In 2024, Banpu achieved outstanding performance in human resource development, earning both local and international recognition. At the Employee Experience Awards 2024 (Thailand), Banpu received Best Holistic Leadership Development Strategy (Silver), Best Management Training Programme (Silver), and Best Executive Coaching Programme (Bronze). At the Employee Experience Awards 2024

(Singapore), the Company was honored with Silver in the Best In-House Certification Programme category. Banpu also received the NEWS® Compass Global Award in Coaching & Mentoring, as well as the HR Excellence Awards Thailand 2024 (Gold) in Excellence in Leadership Development. These prestigious awards highlight Banpu's commitment to human resource development, reinforcing its dedication to empowering its people—its most valuable asset—to achieve true excellence.

Succession Planning and High Potential Management

Banpu recognizes the importance of maintaining continuity in human resources planning and management to support its growing business. In 2024, the Company and the Succession Planning Committee identified potential successors for senior executive positions and regularly reviewed and monitored the succession plan to facilitate growth. The Company prepared future successors through various programs, such as the Banpu Global Leader Program (BGLP), Individual Coaching Program, and Individual Development Programs (IDP). In addition, the Company places importance on determining key and critical positions and identification of key successors, as well as regularly reviewing selection criteria to strengthen long-term management. For successors of senior executives and key positions, the Succession Planning Committee ensures they have planned career paths and job rotation opportunities. In 2024, there were promotions of successors to maintain business continuity.

In 2024, the Company launched the Banpu Global Talent and Mobility Project to develop leaders in every country, focusing on three main objectives:

- Develop global careers with cultural awareness to enhance confidence and performance when working in an international environment, as well as to foster cultural understanding and adaptation.

- Enhancing business support and knowledge transfer to support cross-regional business operations and promote the exchange of knowledge and experiences on a global scale.
- Developing holistic career growth to create flexible career paths that align with the organization’s goals while also promoting cultural adaptation and understanding.

Banpu is committed to pioneering the future of work by integrating all data under the “Energy Symphonics” concept. The Company supports agile working through the development of an HR Digital Ecosystem, enhancing the overall employee experience. By unifying employee data across all countries, Banpu fosters a supportive, engaging, and efficient work environment, empowering its people for long-term success.

The Company is moving forward to build an ecosystem of human resources management technology and ensure seamless linkage of HR information across all countries to allow for accurate information management, easy access, and maximum agility for all parties. Various technologies and systems have thus been introduced to streamline HR management processes in each country while prioritizing both process automation and pleasant user experience. The improved user experience was developed to enhance overall efficiency, provide visibility to support growth opportunities, and establish a robust business ecosystem in the long run. Key recent developments include:

- Developing a digital platform to foster collaboration between employees and communities.
- Creating a virtual university to provide employees in all countries with unlimited access to skills, knowledge, and training—anytime, anywhere.
- Developing AI-powered dashboards and analytics to deliver strategic data, enhance competitive advantage, and enable timely responses to potential challenges.

- Design a well-being program to promote employee health—covering physical, financial, and mental aspects—to support personal and professional success.
- Strengthen the HR digital ecosystem – In 2024, the Company improved data connectivity and enhanced employee experience as follows:
 - BTalk System – A system that allows employees to share opinions, answer questions, and exchange knowledge.
 - Buddy Up System – A system designed to boost employee engagement and streamline daily tasks by integrating multiple systems into a single platform. Employees can stay updated on the Company’s news, accumulate reward points, and redeem them for various benefits. The system also fosters a culture of appreciation by enabling point transfers as reward gifts among colleagues.
 - Developing a centralized database—a unified system that consolidates data from various platforms to create dashboards and people analytics. This integration enhances data connectivity, diversity trend analysis, and strategic decision-making.

- Continuously developing and deploying artificial intelligence (AI) technologies. In 2024, AI was introduced to enhance human resources management through the following initiatives:

- The development and testing of AI tools designed to screen biases in employee potential assessments at Banpu NEXT Co., Ltd. This project won the Excellence in AI-Powered HR Solution at the HR Excellence Awards Thailand 2024. Efforts are underway to expand its application across Banpu Group’s companies.
- Introducing deployment of artificial intelligence (AI) to compile essential skill sets for each job position. This involves analyzing labor market data, benchmarking with other organizations, and developing principles for designing employee skills development plans. In 2024, this initiative started with digital and mining engineering units in Thailand, with plans to expand to other domestic and international business units.
- Developing robots using Generative AI technology to provide services to employees anytime, anywhere. In 2024, initial data was uploaded to test-run these services and gather employee feedback. The focus is on fine-tuning responses to frequently asked questions, such as welfare benefits and group health insurance.

Development of an Effective Organization Structure

The Company is well aware that an organizational structure appropriate for business strategies promotes agility, strengthens management, creates synergies among business groups in every country, and

facilitates speedy operations in each country to ensure maximum efficiency. The Company has set up an Executive Committee to steer and support diverse business expansions and to reinforce the Banpu Ecosystem in the long term through the strategic plans of each country.

In human resources management, HR executives in Thailand have been appointed to serve on the Human Resources Committee (HRC) of each country where Banpu operates. The aim is to create better understanding and collaboration among executives in each country, focusing on increasing efficiency by streamlining communication and expediting the approval of key issues. The approach not only improves operational effectiveness but also strengthens the skills and capabilities of HR teams through close cross-country collaboration.

Other Important Information

The Person Assigned to Supervise Accounting

Ms. Arisara Sakulkarawek, Chief Financial Officer, was assigned to directly supervise the accounting of the Company. Details of the person directly supervising accounting are included under the section “Details of the Board of Directors and Management” in this report.

Company Secretary

The Board of Directors has appointed Mr. Virach Vudhidhanaseth as Company Secretary, whose duties and responsibilities are as stipulated in the Securities and Exchange Act (No.5), B.E. 2559, an amendment of the Securities and Exchange Act B.E. 2535. The Company Secretary is responsible for organizing the Board of Directors’ meetings and shareholders’ meetings, ensuring compliance with the meetings’ resolutions, and advising the Board on rules and

regulations that it must comply with. Additionally, the Company Secretary prepares and keeps the register of directors, Board meeting invitation letters, Board meeting minutes and the Company's annual reports, invitation letters to attend the shareholders' meeting and records of its minutes, the report on interest of directors or executives, and performs other duties as prescribed by the Office of the Securities and Exchange Commission, the Capital Market Supervisory Board, and the Stock Exchange of Thailand.

Head of the Internal Audit Department

Ms. Wiyada Wiboonsirichai, Head of Global Internal Audit and Compliance, was appointed to supervise the Company's internal audit.

Investor Relations

Investor Relations Department discloses information to ensure inclusive and equitable information for all stakeholders.

Interested persons may contact or make inquiries to the Company's Investor Relations via the following channels:

Telephone: +66 2 694 6684

Email: investor_relations@banpu.co.th

Line: @banpu-ir

Audit Fee

The Audit Committee considered the selection of auditors based on Banpu's evaluation criteria, namely auditor independence, audit quality and standards, and qualifications of auditors as required by the Stock Exchange of Thailand. The Audit Committee then proposed the appointment of the following auditors to the Board of Directors for approval.

1. Ms. Amornrat Permpoonwattanasuk

CPA, License No. 4599; and/or

2. Ms. Rodjanart Banyatananusard

CPA, License No. 8435; and/or

3. Mr. Pongthavee Ratanakoses

CPA, License No. 7795; and/or

4. Mr. Boonrueng Lerdwiseswit

CPA License No. 6552.

The above individuals from PricewaterhouseCoopers ABAS Ltd. (PwC), which has a network of firms in many countries, were nominated as auditors of Banpu Public Company Limited in 2024 with total audit fees of THB 3,160,000, increasing 4.89% from 2023. The audit fees were exclusive of out-of-pocket expenses, such as domestic travel expenses, telephone bills, postage and stamp charges, and photocopy service fees, which shall not exceed 10% of the total audit fees.

Non-Audit Fees

In 2024, the Company incurred other of THB 618,000 which were paid to PricewaterhouseCoopers ABAS Ltd. (PwC) for the following services:

- 1) Knowledge sharing sessions on promoting investment that supports sustainable development and reduces environmental impact, as well as guidelines for sustainability-related disclosures, and
- 2) Review of the consolidated financial statement working papers as per agreed procedures (AUP) of the subsidiary, Banpu Minerals (Singapore) Pte. Ltd., to support loan applications with bank.

The Company recognizes that PricewaterhouseCoopers ABAS Ltd. (PwC) possesses expertise and experience in providing the aforementioned services.

CORPORATE GOVERNANCE PERFORMANCE

Summary of the Performance of the Board of Directors in 2024

In 2024, the Board of Directors played a critical role in formulating policies and strategies to strengthen competitiveness, cultivate the corporate culture and values, and ensure the efficiency of governance and the adequacy of internal control and risk management. Furthermore, the Board provided suggestions for business development. The Board's performance in the past year is as follows:

- Reviewing the Practices for the Board of Directors and the Charter of each sub-committee to revise their scope of duties and meetings to ensure that they align with changing governance criteria, the Board's roles, and business operations. Reviewing the Board's performance evaluation form to gather broader feedback and insights on business operations from its directors.

• Conducting an annual review of the structure and composition of the Board of Directors as well as the Board Skill Matrix to ensure alignment with the Company's strategy and business direction.

• Reviewing the Corporate Governance Policy and the Practices for the Board of Directors of Banpu Public Company Limited regarding extending a director's retirement age to 75 years to ensure continuity in the personnel structure and support a seamless transition and transformation of the corporate strategy.

• Reviewing the succession plan prepared by the Corporate Governance and Nomination Committee, in collaboration with the CEO. This process involved evaluating potential candidates based on their skills, knowledge,
- competencies, leadership qualities, and experience, which are beneficial and essential to advancing the Company's strategic plan and business operations.

• Reviewing and updating the Anti-corruption Policy to align with the Thai CAC's guidance by adding definitions for terms such as bribe, charitable contribution, sponsorship, political contribution, revolving door, and facilitation payment, and ensuring that individuals who refuse to engage in corruption are not penalized.

• Considering and approving Banpu's targets to achieve Net Zero emissions by 2050 and reduce greenhouse gas emissions by at least 20% by 2030 to affirm the Company's dedication to sustainable development. Banpu conducts its business with adherence to ethics and governance principles while embracing social and environmental concerns and prioritizing stakeholder engagement.

• Considering and approving the digital framework and operating plan to align business units in all countries with the Company's digital transformation strategy and roadmap to achieve digital excellence by 2030.

- Reviewing three Environment, Social, and Governance policies and practices by the ESG Committee:

- Community Engagement Policy
- Environmental Policy
- Waste Management Policy

While acknowledging that there are some practices within the SEC’s Corporate Governance Code for Listed Companies 2017 that the Company has not yet implemented, Banpu has established appropriate alternative measures through various internal practices.

Nomination, Development, and Performance Evaluation of the Board and Directors

The nomination, development, and performance evaluation of the Board of Directors are of great importance as the Board of Directors plays a pivotal role in establishing the Company’s strategy and business direction to drive sustainable growth. The Company has disclosed information as well as the criteria and procedures for the nomination of Board members under the section “Nomination of Directors and Senior Executives” on page 248, “Performance Evaluation of the Board of Directors” on page 249, and “Development of the Board of Directors and the Executives” on page 250.

The Board of Directors’ Meeting

The Board of Directors convenes at least once a month, with regular meetings scheduled for the final week of every month, except in February and December, when meetings are held during the second week. Additional meetings may be called as necessary. At the meeting,

there are clear meeting agenda items. A complete set of supporting documents is submitted to the Board of Directors at least seven days prior to the meeting to allow sufficient time for review before the meeting. Adding agenda items after documents are distributed to the Board is allowed only when it is extremely necessary and justified, with the approval of the Chairman of the Board. Each meeting typically lasts three and a half hours, during which directors can openly express their opinions. The Chairman of the Board summarizes viewpoints and board resolutions. If any director has a conflict of interest in a matter being considered by the Board, the director must leave the meeting room for the duration of that agenda item.

Minutes of all the meetings are documented and subsequently signed by the Chairman of the Board and the Company Secretary upon approval. These minutes and associated agenda documents are kept in both physical and electronic formats to be used as reference materials for directors or related persons. All documents are securely stored for reference for a minimum of five years, with a safeguard system in place to prevent any alteration and other risks of potential catastrophes.

Board of Directors’ Meeting Attendance in 2024 (1 January 2024 – 31 December 2024)

Name	Title	Terms of Office	The Board of Directors’ Meetings in 2024							
			The Board of Directors		Non-Executive Directors		The Audit Committee		The Board of Directors’ Meetings in 2024	
			Total 12 meetings	Total 1 meeting	Total 9 meetings	Total 8 meetings	Total 8 meetings	Total 8 meetings	Total 4 meetings	Total 1 meeting
1. Mr. Chanin Vongkusolkrit	Chairman, Non-Executive Director (NED)	April 2022 - AGM 2025	12/12	1/1	-	-	-	-	-	1/1
2. Mr. Teerana Bhongmakapat	Independent Director (ID)	April 2022 - AGM 2025	12/12	1/1	9/9	-	8/8	-	-	1/1
3. Mr. Piriya Khempon	Independent Director (ID)	April 2022 - AGM 2025	12/12	1/1	-	8/8	-	-	4/4	1/1
4. Mr. Anon Sirisaengtaksin	Non-Executive Director (NED)	April 2023 - AGM 2026	12/12	1/1	-	8/8	-	-	-	1/1
5. Mr. Buntoeng Vongkusolkrit	Non-Executive Director (NED)	April 2024 - AGM 2027	11/12	1/1	-	-	8/8	-	-	1/1
6. Mr. Pichai Dusdeekulchai	Independent Director (ID)	April 2023 - AGM 2026	12/12	1/1	9/9	-	-	4/4	-	1/1
7. Mr. Teerapat Sanguankotchakorn	Independent Director (ID)	April 2022 - AGM 2025	12/12	1/1	-	-	8/8	4/4	-	1/1
8. Mrs. Watanan Petersik	Independent Director (ID)	April 2023 - AGM 2026	11/12	1/1	8/9	-	-	-	-	1/1
9. Mr. Metee Auapinyakul	Non-Executive Director (NED)	April 2023 - AGM 2026	12/12	1/1	-	-	-	-	-	1/1
10. Mr. Ongart Auapinyakul	Non-Executive Director (NED)	April 2024 - AGM 2027	12/12	1/1	-	-	-	-	-	1/1
11. Mr. Verajet Vongkusolkrit	Non-Executive Director (NED)	April 2024 - AGM 2027	12/12	0/1	-	6/8	-	-	-	1/1
12. Mr. Sarayuth Saengchan	Non-Executive Director (NED)	April 2022 - AGM 2025	11/12	1/1	-	8/8	-	-	-	1/1
13. Mr. Sinon Vongkusolkrit	Executive Director (ED)	April 2024 - AGM 2027	9/9	-	-	-	-	-	-	-
14. Ms. Somruedee Chaimongkol	-	April 2021 - AGM 2024	2/3	-	-	-	-	-	-	1/1

Notes: 1. The 2024 Annual General Meeting of Shareholders of Banpu Public Company Limited was convened on 1 April 2024.
2. Mr. Sinon Vongkusolkrit was appointed as a director, effective 2 April 2024.
3. Ms. Somruedee Chaimongkol resigned from the position of director, effective 2 April 2024.



Remuneration of the Board of Directors

The Board of Directors delegated the Compensation Committee to review the remuneration structure, system, and the appropriate remuneration for the Company's directors and senior management. It is prescribed as a policy that remuneration must be appropriate to roles, duties, and responsibilities and remain competitive in the job market and business landscape. Executive remuneration is performance-based, serving as an incentive to drive effective performance. The remuneration of the Board of Directors consists of monthly salary and allowance for each meeting attended. Annual remuneration in the form of bonuses will be linked to the dividend paid out to shareholders, and the payment of the Board of Directors' remuneration must be approved by the shareholders' meeting. Further details are disclosed in the section "Remuneration of the Board of Directors" on page 279.

Governance of Subsidiaries and Affiliates

The Company has managed its subsidiaries and affiliates and established business procedures to ensure operational effectiveness and efficiency, as follows:

Investment Policies of Banpu and Its Subsidiaries

1. The management shall review and assess a pre-feasibility report prepared by the Investment Committee before presenting the results and investment outlook to the Board of Directors. The Board then considers and approves the project for funding, development, and expansion, as well as the subsidiaries' significant policies. Additionally, if the establishment or dissolution of a subsidiary is necessary, the Board of Directors holds the authority to approve such decisions to ensure the overall efficiency of Banpu's operations.

2. The Board of Directors oversees and approves investment transactions that meet specific criteria established by the SEC, such as connected transactions and the acquisition or disposition of assets.
3. The Board of Directors has a governance mechanism to oversee subsidiaries and safeguard the Company's investments. The Board is responsible for deliberating on the suitability of top executives to serve as directors of the Company's subsidiaries to ensure that the management aligns with the Company's policies and that all transactions comply with applicable laws, the Securities and Exchange Act, and the SEC's announcements.
4. The subsidiaries shall submit reports on their performance and operations, particularly their key business activities. They shall also conduct sensitivity analysis, evaluate it against goals or benchmarks, and provide opinions or recommendations on the management of each subsidiary. These reviews provide a basis for policy formulation and business improvement to ensure sustainable growth for the Company's subsidiaries.

Internal Control Policy and Group-level Management Policy

The Board of Directors and the management assigned the Global Internal Audit Unit to report directly to the Audit Committee to ensure its independence. The Unit is also required to report on the progress of the internal audit to the Board of Directors on a quarterly basis. The level of control over a subsidiary is proportionate to the Company's shareholding. The Board of Directors is responsible for appointing an executive to serve as a director in each subsidiary to ensure alignment of business direction with the Company's policies and strategies. Director selection is decided based on knowledge, relevant competencies to the subsidiary, work location (in case of a foreign subsidiary), health, and readiness of the director. Director positions in the Company's subsidiaries are reviewed at least once a year.

In 2024, the Board of Directors established mechanisms to oversee and monitor the performance of subsidiaries through directors appointed to manage each subsidiary to ensure alignment with Banpu's policies and safeguard the Company's investment capital. The subsidiaries' operations are managed under the control and deliberation of relevant executives, following the policies and scope of responsibilities defined by the Delegation of Authority (DOA). For matters requiring the consent or approval of the Board of Directors, or in cases where significant changes may impact the Company's financial position or operating results, such items must be proposed and included on the agenda of the Board meeting.

Budget Policy

Investment budget preparation and implementation must comply with each subsidiary's budget regulations and be consistent with the Company's budget regulations. Budget preparation and review must be completed within the specified deadline, and the corresponding information must be submitted according to the Company's standard operating procedures. Projects with an investment value exceeding THB 1,500 million or surpassing the approved budget by more than 15% must receive approval from the Board of Directors.

Corporate Governance and Compliance Monitoring

Prevention of Conflicts of Interest

The Board of Directors prioritizes the prevention of conflicts of interest, ensuring that directors, executives, and employees do not exploit their positions for personal gain or engage in transactions that may conflict with the Company's interests. Details of this policy are disclosed under the section "Conflict of Interest" on page 262.

In 2024, Banpu implemented and monitored compliance with its policy on conflict of interest. The Corporate Governance Department consistently communicated with directors, executives, and employees to ensure they understood the Corporate Governance Policy and Code of Conduct, including specific practices related to the prevention of conflicts of interest. These resources were accessible via Banpu's intranet system and website. Moreover, the Human Resources Department and the Corporate Governance Department incorporated the prevention of conflicts of interest into orientation materials for new executives and employees. All new executives and employees during the year successfully completed orientation sessions covering this topic.

In 2024, there were no reports of violations or non-compliance with the regulations regarding the prevention of conflicts of interest.

Reporting of Interests of Directors and Executives

In compliance with Section 89/14 of the Securities and Exchange Act (No. 4) B.E. 2551 and the Notification of the Capital Market Supervisory Board No. TorJor. 2/2552 Re: Reporting of Interests of Directors, Executives, and Related Persons, members of the Board of Directors are required to report their holdings of the Company's securities, including those held by their spouses and minor children who are not sui juris, at the next Board meeting following their appointment. If any Board members, their spouses, or minor children who are not sui juris engage in transactions involving the purchase or sale of the Company's securities, they must report these transactions at the subsequent Board meeting.

In 2024, the Company Secretary ensured that newly appointed directors and executives were informed of and acknowledged the Capital Market Supervisory Board's regulations regarding the Reporting of Interests of Directors, Executives, and Related Persons. These directors and executives were also monitored to ensure

their reported interests were consistently updated to remain accurate, complete, and current.

Additionally, the Company Secretary informed the Board of Directors during a board meeting about the amendment to the regulations regarding the reporting of changes in securities and derivatives holdings by directors and executives to the Office of the Securities and Exchange Commission (SEC), as outlined in the SEC’s Notification No. SorJor.6/2567. The amendment stipulates that changes to securities holdings must be reported within three business days from the transaction date. However, for transactions under THB 3 million, reporting is required within three business days from either the date the total value of combined transactions reaches THB 3 million or more, or six months after the date of the first transaction, whichever occurs first. The Board of Directors has been duly informed of these changes.

Use of Inside Information

The Board of Directors and executives disclosed their holdings of the Company’s securities upon appointment and reported any changes in these holdings, including those of their spouses, minor children who are not sui juris, and connected persons, to the Securities and Exchange Commission. Additionally, their securities holdings were disclosed to the Board of Directors for acknowledgment, as outlined under the section “Policy on the Use of Inside Information” on page 264.

In 2024, there were no reports of insider trading violations or non-compliance with the Stock Exchange of Thailand’s and the Securities and Exchange Commission’s rules and regulations regarding securities transactions.

Anti-Corruption

Banpu has been a certified member of the Thai Private Sector Collective Action Against Corruption (CAC). In 2024, the Company revised its Anti-Corruption Policy

to comply with the updated requirements of the Thai CAC. The Company conducted its annual assessment of corruption risk, covering businesses in all counties where Banpu has invested, both its subsidiaries and joint ventures and developed preventive measures based on the assessment, with results reported to the Risk Management Committee. In addition, the Company has continuously communicated and informed employees of the policies and practices to combat corruption, for example, the Corporate Governance Policy and Code of Conduct and the standard practice manual for accepting and offering of gifts, hospitality, or other Similar forms of reward. Employees at all levels can access the policies through internal communication channels. The Company also sent out a letter requesting cooperation from external parties in refraining from giving gifts to Banpu’s directors, executives and staff (No Gift Policy).

Whistleblowing and Receiving Complaints regarding Corporate Governance

The Company has provided channels and procedures for receiving complaints that cover all related stakeholders. The system to receive complaints has been established through the Company’s website on the Whistleblowing page under the Corporate Governance section. Complaints can be submitted directly to the Chairman of the Corporate Governance and Nomination Committee via GNCchairman@banpu.co.th and/or the Secretary of the Corporate Governance and Nomination Committee, who is the responsible person via GNCsecretariat@banpu.co.th. The Company requires all complaints to be reported to the Corporate Governance and Nomination Committee (composed of independent director) on a quarterly basis. A summarized report is presented annually to the Board of Directors. Details are disclosed under the section “Roles of Stakeholders” on page 255. In 2024, the Company received no complaints from the stakeholders.

REPORT OF THE CORPORATE GOVERNANCE AND NOMINATION COMMITTEE

The Corporate Governance and Nomination Committee of Banpu Public Company Limited consists of Mr. Anon Sirisaengtaksin, the Chairman of the Committee, with Mr. Piriya Khempon, Mr. Verajet Vongkusolkrit, and Mr. Sarayuth Saengchan as committee members. The Committee independently performs duties to the full extent as entrusted by the Board of Directors, in compliance with the principles and the Charter of the Corporate Governance and Nomination Committee, as well as the good governance principles outlined in the SEC’s Corporate Governance Code for Listed Companies 2017.

In 2024, the Corporate Governance and Nomination Committee convened eight meetings, with attendance details as follows:,

Name	Position	Meeting Attendance
1. Mr. Anon Sirisaengtaksin	Chairman of the Corporate Governance and Nomination Committee	8/8
2. Mr. Piriya Khempon	Member of the Corporate Governance and Nomination Committee	8/8
3. Mr. Verajet Vongkusolkrit	Member of the Corporate Governance and Nomination Committee	6/8
4. Mr. Sarayuth Saengchan	Member of the Corporate Governance and Nomination Committee	8/8

The Corporate Governance and Nomination Committee’s performance in 2024 can be summarized as follows:

Corporate Governance Mission

1. Oversight and Monitoring of Compliance with the Corporate Governance Policy and Code of Conduct

In 2024, the Corporate Governance and Nomination Committee monitored and evaluated the effectiveness of Banpu’s Corporate Governance Policy and Code of Conduct implementation. This evaluation was based on the 2024 survey on employee perception of the “Banpu Heart” corporate culture, using the core value “Committed” as an indicator. The survey results, which are classified by work level and work location, were satisfactory.

2. Promotion of Corporate Culture and Positive Attitude toward Corporate Governance

The Corporate Governance and Nomination Committee monitored the implementation of the communication plan to promote the corporate culture and positive attitude toward corporate governance through various activities in 2024. The performance according to the plan and the assessment results of CG E-Learning and CG E-Testing platforms usage were satisfactory.



3. Receipt and Handling of Complaints Regarding Corporate Governance

The Company has established communication channels and procedures for receiving complaint, covering all groups of stakeholders, via the Company's website under the Corporate Governance section. Complaints can be submitted to the Chairman of the Corporate Governance and Nomination Committee at GNCchairman@banpu.co.th and/or the Secretary of the Corporate Governance and Nomination Committee at GNCSecretariat@banpu.co.th. The Secretary, as a responsible person, reports complaints and grievances to the Corporate Governance and Nomination Committee, which includes an independent director, on a quarterly basis and submits a summarized report to the Board of Directors on an annual basis. All relevant parties assess the complaints to identify risks and determine or improve control measures and practices to improve operational and governance efficiency. In 2024, no complaints were received from stakeholders.

4. Performance Evaluation of Directors and the Board and Directors

The Corporate Governance and Nomination Committee presented the annual evaluation results at the Board of Directors meeting. The Board's overall performance was satisfactory, with an average score of 4.68 out of 5. Each evaluation category received scores within the "excellent" range (4.5-5.0.) The Board acknowledged the evaluation results and suggestions and exchanged their views during the Board of Directors meeting on ways to further enhance their performance in the best interest of the Company.

The annual evaluation results of the four sub-committees, namely the Audit Committee, the Compensation Committee, the Corporate Governance and Nomination Committee, and the Environment, Social and Governance Committee, fell within the "excellent" range, with an average score of 4.65 out of 5. Each Sub-Committee submitted its annual self-evaluation report to the Board of Directors as part of its annual performance report.

In addition, each director has performed an individual self-assessment, and the annual evaluation of each director's individual performance earned an average score of 4.56 out of 5. The Board of Directors acknowledged the results and suggestions and found the individual performance evaluation satisfactory. They also exchanged their views on how to enhance their performance in the best interests of the Company.

Mission on the Nomination of Directors and Succession Planning for Senior Executive Officers

Nomination of Directors to Replace Those Retiring by Rotation in 2024

The Corporate Governance and Nomination Committee reviewed the qualifications and suitability of directors who completed their three-year term and proposed their re-nomination to the Board of Directors, which subsequently submitted the candidates for consideration and re-election at the Annual General Meeting of Shareholders (AGM). At the 2024 AGM, the following three directors were re-elected:

1. Mr. Buntoeng Vongkusolkrit
2. Mr. Verajet Vongkusolkrit
3. Mr. Ongart Auapinyakul

After reviewing the qualifications and performance of the three directors retiring by rotation, the Corporate Governance and Nomination Committee concluded that they possess appropriate qualifications and have demonstrated strong performance. The Committee subsequently nominated them for re-election at the 2024 Annual General Meeting (AGM) and reported its recommendation to the Board of Directors. Following the AGM's approval, their reappointment has been successfully completed.

Succession Plan for Senior Executive Officers

In 2024, the Corporate Governance and Nomination Committee received five progress reports on senior executive succession planning and reported to the Board of Directors twice.

Mr. Anon Sirisaengtaksin

Chairman of the Corporate Governance and
Nomination Committee
Banpu Public Company Limited



REPORT OF THE COMPENSATION COMMITTEE OF BANPU PUBLIC COMPANY LIMITED

The Compensation Committee of Banpu Public Company Limited consists of three members: two Independent Directors and one Non-Executive Director. All members were appointed by the Board of Directors based on their expertise, competence, skills, and experience at both domestic and international levels.

The Compensation Committee is composed of Mr. Buntoeng Vongkusolkrit, who serves as Chairman of the Compensation Committee, Mr. Teerana Bhongmakapat and Mr. Teerapat Sanguankotchakorn as members.

The Compensation Committee Charter B.E. 2552 defines the duties and responsibilities of the Compensation Committee as follows:

- To provide recommendations on remuneration management to the Board of Directors regarding the Board of Directors, Sub-Committees appointed by the Board, and any other persons attending the Board of Directors meetings or Sub-Committees meetings.
- To consider and recommend remuneration and other benefits as well as the annual remuneration of the Chief Executive Officer and to deliberate the overall budget for an annual salary increase, bonuses, as well as other benefits for employees.
- To review and recommend the amendment of the scope of work, duties, and responsibilities of the Compensation Committee in response to changing circumstances and determine appropriate criteria for consideration and deliberation on remuneration.

- To submit a report on the Compensation Committee's performance to the Board of Directors at least once a year.

In 2024, the Compensation Committee convened eight meetings, comprising five regular meetings and three special meetings, in which the Committee considered the agenda proposed by the Secretary of the Committee. The Committee also provided recommendations to the Board of Directors for consideration and approval.

To enhance meeting flexibility, the Committee adopted a hybrid meeting format, allowing both in-person and online attendance. Most of the meetings were conducted in person. The essences of meeting resolutions are summarized below:

1. Remuneration and Other Benefits

In 2024, the Compensation Committee considered and provided recommendations on the remuneration of the Board of Directors, Sub-Committees, Chief Executive Officer, and Banpu Group's employees in all countries. The Committee's consideration was based on individual roles and responsibilities and performance over the past year. They also took into consideration the business performance, key economic factors, remuneration surveys among leading companies in Thailand and abroad, and other factors contributing to the successful implementation of the Company's strategy as well as benefit to the overall business.

Additionally, the Compensation Committee reviewed the compensation structure for the new CEO, implementing a new scheme that is aligned with corporate strategies and focused on achieving the strategic plan. This new approach to remuneration management was also applied to other senior Executives, including Banpu's COO and Banpu NEXT's CEO, ensuring that compensation remains appropriate, aligned with their responsibilities, and competitive within the markets.

As the Company's 2024 operating results fell short of the target, the Compensation Committee established guidelines for determining variable bonus payments to appropriately incentivize employees and boost morale for the following year. The bonus determination was considered by the Company's operating results, achievement of operational goals, exogenous factors that may impact performance, and intense labor market competition in certain countries.

2. Business Directions of the Company

In 2024, following the appointment of the new CEO, the Compensation Committee took part in defining business directions to truly achieve the targets while ensuring business continuity. The Committee provided recommendations on the Chief Executive Officer's Key Performance Indicators (KPIs), ensuring alignment with both short and long-term business strategies and the key annual goals set by the Board of Directors.

The Committee also considered the Chief Executive Officer's performance during the first and second half of the year with recommendations provided for the Board of Directors.

3. Collaboration with Employees and Management

The Compensation Committee regularly invited Executives involved in the agenda of the meeting to provide additional information and explanations on certain matters that support the Board's decision-making. This practice does not only facilitate accurate and timely decisions but also allows the Committee to gain a deeper understanding of employees' working conditions across various locations in each country.

Furthermore, the Compensation Committee also performed a self-evaluation of its performance over the year in terms of qualifications, duties, and responsibilities, meetings and reporting. The evaluation results were reported to the Board of Directors together with the evaluation results of other Sub-Committees.

In summary, in 2024, the Compensation Committee has completely performed its duties, roles, and responsibilities defined in Banpu's Charter of the Compensation Committee, B.E. 2552, as well as the tasks entrusted by the Board of Directors. The Committee also provided constructive feedback and recommendations that are beneficial both in the short and long-term for the Board of Directors, Executives, and all stakeholders on a regular basis.

Mr. Buntoeng Vongkusolkrit
Chairman of the Compensation Committee
Banpu Public Company Limited

AUDIT COMMITTEE REPORT TO SHAREHOLDERS

Dear Shareholders of Banpu Public Company Limited,

The Audit Committee of Banpu Public Company Limited is comprised of three independent directors, each with a wealth of expertise in management, economics, accounting, and finance. This diverse range of knowledge ensures that the Committee is fully equipped to assess the accuracy and reliability of the company's financial statements. Furthermore, the members meet all qualifications and requirements set forth by the Securities and Exchange Commission (SEC) and the Stock Exchange regulations. The Audit Committee is composed of the following three members:

1. Mr. Teerana Bhongmakapat	Chairman
2. Mr. Pichai Dusdeekulchai	Member
3. Mrs. Watanan Petersik	Member

The Audit Committee is supported by Ms. Wiyada Wiboonsirichai, Head of Global Internal Audit and Compliance, who serves as the Secretary of the Committee.

The Audit Committee has independently fulfilled its responsibilities in accordance with the scope and duties delegated by the Board of Directors, as outlined in the Audit Committee Charter. These actions are in line with the best practices recommended by the Securities and Exchange Commission (SEC). The Committee has diligently reviewed and supported the company's adherence to principles of good corporate governance, with a strong focus on risk management and ensuring the sufficiency of internal controls. The Committee's efforts are aimed at fostering a transparent, fair organization that combats corruption, maintains an effective internal audit process, and aligns with the company's objectives, while considering the interests and needs of all stakeholders. The key activities and outcomes are outlined below:

- The Committee has actively driven improvements in corporate governance and risk management practices, emphasizing the need for management to raise awareness among employees to act with caution. This includes thorough risk assessments, reviews of strategic plans, and the continuous update of relevant policies and regulations. Furthermore, the Committee has overseen the implementation of internal controls across key processes, including stringent security measures for technology, all designed to enhance stakeholder confidence in the company's operations.
- The Audit Committee has sought advice from and provided valuable guidance to management in overseeing and monitoring the operations of various departments, including risk management, resource allocation, auditing, and the oversight of transparency in related-party transactions. These efforts are intended to ensure that the company's operational processes remain reliable and robust enough to support sustainable business practices over the long term.
- The Committee has given particular attention to overseeing the company's investments and the growth of its subsidiaries, in line with the company's overall strategy. The Committee has met with the Risk Management Department and management in regular meetings to exchange information, ensuring that the company's investment processes are analyzed and reviewed comprehensively. These processes are continually adapted to align with the changing business environment. Additionally, the Committee remains committed to monitoring investment performance within the framework of sustainable business practices. In 2024, the Audit Committee convened a total of 9 meetings. Details of each committee member's attendance are as follows:

Name-Surname	Position	Number of Attendance
1. Mr. Teerana Bhongmakapat	Chairperson of the Audit Committee	9/9
2. Mr. Pichai Dusdeekulchai	Member of the Audit Committee	9/9
3. Mrs. Watanan Petersik	Member of the Audit Committee	8/9

The Audit Committee conducted joint meetings with management, the Internal Audit Department, and the external auditors on relevant matters, as well as separate meetings with the external auditors without the presence of management. The Committee regularly reported its findings and activities to the Board of Directors on a quarterly basis. Below is a summary of the key activities undertaken:

1. Review of Financial Reports

The Audit Committee reviewed the quarterly and annual financial statements for 2024, including the consolidated financial statements, in collaboration with management, the Internal Audit Department, and the external auditors. The Committee carefully examined the accuracy and completeness of the financial statements, significant accounting adjustments, and estimates affecting the financial reports. Additionally, the Committee reviewed the adequacy of accounting methods, the scope of the audit, and the sufficiency of disclosures. The independence of the external auditors was also maintained. The Committee ensured that the preparation of the financial reports complied with legal requirements and generally accepted accounting standards, and that the reports were reliable, timely, and provided relevant information for users of the financial statements.

2. Review of Internal Controls and Internal Auditing

The Audit Committee consistently reviewed and monitored the effectiveness of the company's internal control systems, in close collaboration with the Internal Audit Department, on a quarterly basis. This review covered investments, operations, resource management, asset protection, prevention or reduction

of risks associated with potential damage, fraud, financial report reliability, and compliance with laws and regulations. Additionally, the Committee oversaw IT governance, with a particular focus on continuous improvements in cybersecurity to support the company's strategy and ensure sustainable business operations. Based on the internal control adequacy evaluation following the framework of the Securities and Exchange Commission, no significant deficiencies were found, confirming that the company's internal control system is robust and appropriate.

Furthermore, the Audit Committee supervised the Internal Audit Department, which reviewed and approved the team's strategic plan, "3P" (Protect, Proactive, Proper Governance), and the annual audit plan, which addresses the company's risks and new business areas. The Committee also followed up on the results of audits and the implementation of the audit plan, offering recommendations and monitoring the resolution of key issues raised by management every quarter. This ongoing oversight ensures strong governance and sufficient internal controls. Additionally, the Committee evaluated the adequacy of the internal audit budget, personnel, and independence, while supporting the development of internal auditors to enhance their knowledge and expertise. The Committee further promoted the quality of audits (Quality Assurance Review: QAR) in accordance with international standards, ensuring the protection of stakeholders' interests with efficiency and reliability. The focus was on evaluating the achievement of organizational goals, enhancing operational efficiency, and increasing the advisory role of internal auditors, utilizing technology to analyze audit data, and improving business operations to add value to the organization.

3. Review of Compliance with Relevant Business Laws

The Audit Committee has reviewed the company’s adherence to applicable laws and regulations. The Corporate Compliance Department plays a vital role in promoting, monitoring, and ensuring that business operations align with legal and regulatory requirements. This department regularly reports its activities to the Audit Committee and continuously develops practices and tools to ensure proactive legal compliance. Key initiatives include:

- Corporate Compliance Practices:** The company has established standardized compliance practices applicable across all countries of operation. The focus is on effective communication to foster a corporate culture where both management and employees consistently recognize the importance of legal compliance.
- Compliance In-Hand System:** The company has implemented the Compliance In-Hand system, an extension of the Laws In-Hand system, which enables management and employees to efficiently monitor and track legal reports. The system also addresses risks associated with compliance across different countries, incorporating a Compliance Obligations List (COL).
- Permit and License Monitoring System:** This interconnected system ensures that the company’s business operations are fully aligned with legal requirements. It also supports business expansion opportunities in accordance with the company’s strategic goals.
- Global Compliance Communication System:** In collaboration with relevant departments, the company organizes ESG (Environmental, Social, and Governance) submissions to raise awareness of the importance of complying with local laws in each country of operation. This includes new regulations on environmental management, decarbonization, climate change, AI technology, and related tax matters. The company aims to implement these regulations efficiently, in line with its sustainability-focused business model.

- Personal Data Protection Compliance System:** The company has established systems and processes in full compliance with the Personal Data Protection Act (PDPA) in Thailand, as well as similar laws in other countries where the company operates. These systems are continuously updated to comply with the evolving legal frameworks of the jurisdictions in which the company invests.

4. Corporate Governance

The Audit Committee has reviewed the effectiveness and efficiency of the company’s corporate governance practices. It has found that the Board of Directors, management, and employees consistently adhere to policies with diligence. The company is committed to conducting its business with integrity, transparency, and responsibility towards both society and the environment, creating value for shareholders and benefiting all stakeholders. This is achieved through the application of ESG (Environmental, Social, and Governance) principles and strong corporate governance, while upholding ethical business practices. In its review of potential conflicts of interest, the Committee has confirmed that the company operates within reasonable commercial terms and complies with the laws and regulations of the Stock Exchange of Thailand. The company has a clearly defined Anti-Corruption Policy and Whistleblower Policy and Channel, with an Investigation Committee tasked with impartially investigating complaints and implementing measures to prevent and mitigate risks associated with corruption and unethical behavior.

5. Risk Management Oversight

The Audit Committee has assessed the effectiveness and efficiency of the company’s risk management processes, including policies, plans, and strategies for managing risks that could affect the company’s performance. Working closely with the Risk Management Department, the Committee has provided recommendations for ongoing improvements to ensure the company is well-prepared for unforeseen events on a quarterly basis.

In terms of risk mitigation, the company has developed strategic plans to address risks that could arise from changes in the business environment. These include global events, supply and demand imbalances, regulatory shifts, and rapid technological advancements. These efforts are aimed at ensuring the company remains flexible and adaptable. Furthermore, the company has established operational frameworks aligned with ESG principles, evaluating both short-term and long-term risks related to the environment, society, and governance to ensure sustainable corporate governance based on ethical business practices.

6. Appointment of Auditor and Determination of Audit Fees for 2025

The company has established a rigorous process for selecting and appointing external auditors, ensuring that auditors are qualified and suited to perform audits according to international standards and in line with the company’s governance principles.

For 2025, the Audit Committee reviewed the selection of the external auditor based on the company’s established criteria, which include the auditor’s past performance, experience, knowledge, expertise, independence, timeliness, and the reasonableness of the proposed audit fees. The Committee also confirmed that the selected auditor meets the regulatory requirements set by the Stock Exchange of Thailand. Following this review, the Audit Committee recommended the following auditors for approval by the Board of Directors and subsequent shareholder approval:

1. Ms. Amornrat Phermphoonwattanasook

License No. 4599, and/or
2. Ms. Rojanart Panyathananusart

License No. 8435, and/or
3. Mr. Pongthavee Rattanakoses

License No. 7795, and/or
4. Mr. Boonrueng Lertvisetwit


License No. 6552

The external audit services will be provided by PricewaterhouseCoopers ABAS Ltd. (PwC), with any one of the listed auditors appointed to conduct the audit and express an opinion on the company’s financial statements. In the event that the designated auditor is unavailable, PwC may assign another qualified auditor from its firm to perform the audit in their place. The total audit fee is set at 3,160,000 baht.

The Audit Committee has fully carried out its responsibilities, as outlined in the Audit Committee Charter, with due care, independence, and thoroughness, always for the benefit of all stakeholders. The Committee confirms that the company adheres to sound governance practices, maintains an appropriate risk management framework, complies with all relevant laws and regulations, and upholds effective internal controls and internal auditing processes. These measures effectively mitigate risks and contribute to the creation of sustainable business value. Moreover, the company’s financial statements are accurate, reliable, and transparently disclosed in accordance with generally accepted accounting principles.

24 February 2025

On behalf of the Audit Committee



Mr. Teerana Bhongmakapat

Chairman of the Audit Committee

Banpu Public Company Limited

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) COMMITTEE REPORT

The Environmental, Social, and Governance (ESG) Committee of Banpu Public Company Limited consists of highly qualified members with a wide range of expertise and experience both locally and internationally. The committee is chaired by Mr. Piriya Khemphon, and includes two other members: Mr. Pichai Dusdeekulchai and Mr. Teerapat Sanguankotchakorn. All members have performed their duties independently, in accordance with the scope and responsibilities assigned by the Board of Directors, and in line with the principles and charter governing the ESG Committee.

In 2024, the ESG Committee convened four meetings, with full attendance by all members at each session. The key outcomes and discussions from the committee’s activities are summarized as follows:

1. Review of Policies, Goals, Operations, and Performance Related to Environmental, Social, and Governance (ESG) Matters

The Committee has conducted a comprehensive review of policies related to Environmental, Social, and Governance (ESG), including the Community Engagement Policy, Environmental Policy, Waste Management Policy, among others. Additionally, the Committee has assessed goals, operations, and performance in key areas such as water usage, air quality, occupational health and safety. A notable focus has been placed on the goal of reducing greenhouse gas emissions, with Banpu setting an ambitious target to achieve net-zero emissions by 2050, which was announced for the first time in 2024.

In each meeting, the Committee also receives reports on significant ESG incidents, such as fatalities, cyberattacks, and other critical events. The Committee provides actionable recommendations to management to improve the handling of these matters, ensuring that the company’s operations are more effective and efficient in managing ESG-related issues.

2. Review and Monitoring of Environmental, Social, and Governance (ESG) Risk Management

Each quarterly meeting includes an agenda focused on assessing risks related to ESG matters. The Committee receives reports on significant environmental, social, and governance risks from the Enterprise Risk Management team and actively monitors the company’s risk management strategies and corrective actions. This ensures the company can respond quickly and effectively to potential risks, minimizing their impact on business operations. Key ESG-related risks identified in the past year include challenges in talent acquisition and development aligned with company growth (Talent Pipeline), cybersecurity threats, and risks arising from changes in regulations and policies in countries where the company operates, particularly those related to environmental issues such as climate change.

3. Review and Monitoring of Stakeholder Engagement Processes and Materiality Assessment

Each year, the Sustainability Development Committee conducts a thorough review of the stakeholder engagement process and assesses material issues (Materiality Analysis). The ESG Committee carefully evaluates these processes and their outcomes to ensure that the company’s sustainability efforts are both effective and aligned with the interests of key stakeholders. In the past year, critical ESG topics highlighted by stakeholders included occupational health and safety, human resource development, employee and community engagement, and the reduction of greenhouse gas emissions.

4. Collaboration Between the Committee, Management, and Stakeholders

In 2024, Mr. Piriya Khemphon facilitated Banpu’s introduction to CMKL University, a joint initiative between Carnegie Mellon University, specialized in Artificial Intelligence (AI), and King Mongkut’s Institute of Technology Ladkrabang. This collaboration is set to expand the company’s network in related fields. Furthermore, Mr. Piriya was invited to deliver a keynote lecture on the topic “Does Sustainability Matter” at the Faculty of Political Science and Public Administration at Chiang Mai University, with attendees from five universities across the Asia-Pacific region. His talk on Banpu’s ESG management practices helped raise awareness of the company’s efforts and significantly enhanced its external reputation in terms of sustainability. Additionally, Mr. Piriya traveled alongside Banpu’s management team to Shanxi Province, China, to meet with business partners in both the coal and electricity sectors. This trip served the dual purpose of gaining insights into new regulations from the Chinese government and strengthening business ties, thereby positioning Banpu to explore future opportunities and reinforce collaboration with its strategic partners.

14 February 2025
On behalf of the Environmental, Social,
and Governance Committee



Mr. Piriya Khemphon
Chairman of the Environmental, Social,
and Governance Committee
Banpu Public Company Limited



INTERNAL CONTROL AND CONNECTED TRANSACTIONS

Banpu operates its business with a strong commitment to corporate governance, which is in line with the Environmental, Social, and Governance (ESG) principles under its Energy Symphonics strategy. The Company prioritizes a robust internal control system with checks and balances to ensure compliance with its Code of Conduct, fostering transparency while preventing conflicts of interest and corruption. Banpu ensures the accuracy and reliability of its financial statements and important reports. The Company also implements effective risk management and an internal audit system with checks and balances aligned with international standards to safeguard the interests of all stakeholders. Furthermore, Banpu leverages advanced digital and information technology as a preventive mechanism to enhance operational efficiency and drive steady, sustainable growth.

At the Board of Directors' meeting held on 29 January 2025, the Board reviewed the evaluation form for the internal control adequacy assessment following the guidelines of the Securities and Exchange Commission (SEC). The evaluation form had been prepared by management and reviewed by the Audit Committee. The overall evaluation results indicated that the internal control system of Banpu and its subsidiaries is sufficient and appropriate for business operations. The monitoring and control processes ensure effective control of business operations, including appropriate measures to prevent transactions that could lead to conflicts of interest and safeguard against the misuse of assets or abuse of power. The Company's risk management practices align with international standards, addressing both corporate and operational levels. The results reaffirm that Banpu is well-positioned to achieve its predefined goals. Banpu's internal control system is based on the five key components of the

Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework, which can be summarized as follows:

1. Control Environment

Banpu has a sufficient and efficient internal control system to accommodate expanding operations and investments while upholding integrity, transparency, and ethical conduct. The Company has clearly defined policies and practices on corporate governance, risk management, anti-corruption and bribery, and guidelines for receiving and offering gifts and other benefits. These policies and practices have been communicated to all employees to ensure awareness and compliance. Key functions such as asset registration, maintenance, and approval processes are segregated to prevent misconduct and mitigate corruption risks arising from individual control. An appropriate delegation of authority (DOA) has been established, cascading from the Board of Directors to the operational staff. In 2024, the Company restructured its organization to align with its growth and direction, implementing recruitment and nomination policies for key positions and succession planning for high-potential management. Leaders are equipped with business, critical thinking, and management skills to support future growth, with progress monitored quarterly using clear key performance indicators (KPIs). Furthermore, a strict checks and balances mechanism, including whistleblowing channels for reporting corruption, has been established to ensure a comprehensive internal control system. These measures ensure effective management of key risks and compliance with laws and regulations, reinforcing transparency and credibility to support efficient and sustainable business operations.

2. Risk Management

The Company places a strong emphasis on both internal and external risk management through a comprehensive risk analysis and assessment process. This includes strategic, operational, and geopolitical risks, as well as economic slowdown, regulatory changes, rapidly evolving technologies, cyber threats, investor expectations, financial and investment risks, corruption, reputation risks, and compliance risks, including the risk of non-compliance with the Personal Data Protection Act (PDPA). The results gained from risk assessment and analysis are integrated into business planning and adjustments of both strategic and short-term plans to ensure adaptability to changing situations. The Company prioritizes flexibility and agility in its business plans under the Energy Symphonics strategy, which aims to provide energy for a sustainable future, ensuring alignment with developments in the energy sector, the global economy, and Environmental, Social, and Governance (ESG) risks. Technology and innovation are deployed to mitigate risks and enhance competitiveness. The Company adopts a prudent financial management approach, investing in projects that generate immediate cash flow, reduce costs, and maintain financial liquidity. Business operations and management at all levels are continuously monitored for potential risk factors, with key risk-related topics discussed in major meetings. Risk management is integrated into employee training programs to promote understanding at all levels. Risk management results are reported to the Risk Management Committee (RMC), the Environmental, Social, and Governance (ESG) Committee, the Audit Committee and the Board of Directors on a quarterly basis.

3. Control Activities

The Company prioritizes a sound and effective internal control system across its business operations. To achieve this, it has implemented internal control procedures to oversee business investments within the corporate structure to ensure alignment with policies, practices, and strategic directions as follows:

1. Formalizing policies, regulations, operating manuals, and operating procedures in written documents that are regularly reviewed and updated; implementing control activities based on the policies, in which clear expectations and procedures are clearly stated to achieve policy objectives. Last year, the Company reviewed its sustainability investment policy and processes, integrated AI technology into its operations, and reinforced governance guidelines for the Company and its subsidiaries, including the appropriate delegation of authority.
2. Identifying and adjusting corporate structure by defining clear segregation of duties and delegation of authority with effective checks and balances.
3. Establishing a clear policy on related party transactions by taking into account the Company's best interests on a similar basis to arm's length transactions. Material transactions are subject to review by the Board of Directors.
4. Safeguarding the Company's assets to prevent misuse of the assets for personal purposes.
5. Establishing appropriate and effective IT control systems and concurrently developing control activities using technological systems to support the achievement of objectives.
6. Managing, monitoring, and overseeing operations to ensure compliance with the Company's action plans, policies, regulations, and procedures, as well as compliance with laws and external requirements; evaluating performance based on Key Performance Indicators (KPIs) linked to the Company's goals.
7. Establishing control measures to mitigate risks that may prevent the Company from achieving its objectives to an acceptable level.



Banpu has improved several key operational processes and management in line with the Energy Symphonics strategy to advance growth and strengthen its business. The Company focuses on eco-friendly business while embracing new technologies, such as artificial intelligence (AI), the Internet of Things (IoT), and data analytics in alignment with the Company's business direction to create automated, modern, and safe operational processes.

4. Information and Communication

The Company has established an operational framework for controlling processes involved in developing an efficient and transparent information system. This includes measures to ensure compliance with laws and regulations alongside risk management related to cybersecurity, recognizing it as a critical component of sustainable value creation for stakeholders. A policy has been implemented to govern the deployment of AI technology, enabling the organization to leverage digital solutions to enhance efficiency and create value in business operations, fostering continuous growth. This approach aims to create agility, speed, transparency, and security in line with principles of good governance grounded in the responsible use of AI. Integrated governance unifies Information Technology (IT), Operational Technology (OT), and AI, adhering to international standards, including ISO 42001:2023 AI Management System (AIMS) and ISO 27001:2022 Information Security Management System (ISMS). The Company has implemented an information system that integrates various data sources and facilitates effective communication channels, providing the Board, executives, and operational teams with accurate and timely information to support informed decision-making. Digital transformation remains a key enabler of the Energy Symphonics strategy, driving the integration of digital technology and AI to elevate digitalization across all business units. The Digital Strategy SGPR (Smarter, Greener,

Partnership, Resilience) serves as a foundation for improving operational efficiency, generating added value, and fostering ecosystem sustainability. Furthermore, the Company oversees digital projects through the Digital Approval Committee Gate (DAC) process, aiming to mitigate relevant risks from the outset of projects, ensure strategic alignment, and optimize resource allocation. The Global Information Security Officer (GISO) is responsible for overseeing information security, digital technology risks, and regulatory compliance across the Group.

5. Monitoring

As Banpu continues diversifying its business portfolio into various countries, corporate governance is of utmost importance and a challenge. The Company has implemented a monitoring system at both the management and operational levels. Regular performance reviews are conducted by superiors and department heads, while executive meetings are convened regularly to monitor performance and ensure that goals are achieved as planned. The Global Internal Audit and Compliance Unit supports the oversight and monitoring of internal control performance across Banpu Group as follows:

- **Global Internal Audit Department**

The Global Internal Audit Department independently performs its duties and reports directly to the Audit Committee. It is responsible for providing assurance and advisory services to ensure good corporate governance, effective and efficient risk assessment, internal control, and compliance with corporate standards and regulations, as well as the achievement of the Company's business objectives. The Department focuses on risk-based auditing, addressing risks associated with the Group's businesses and key

activities in all countries where the Company operates. It provides guidance on process improvements, monitors progress, and ensures that appropriate corrective actions, including risk mitigation measures, are implemented in a timely manner.

Banpu is committed to driving business growth while maintaining an adequate and effective internal control system in accordance with the Committee of the Sponsoring Organization (COSO) framework. The Company also upholds high-quality internal auditing practices aligned with International Internal Audit Standards, emphasizing strategic partnerships, data analytics, and the adoption of new digital technologies, including ChatGPT, Generative AI, and Power BI. These innovations enhance audit efficiency and reliability, ensuring protective, proactive, and proper governance while sustainably enhancing the Company's value. The Department operates independently, with no restrictions on expressing opinions and no unresolved conflicts with audited entities. Additionally, internal audit staff receive continuous training to enhance their expertise. The Department has Certified Internal Auditors (CIAs) accredited by the Institute of Internal Auditors (IIA), who perform their duties effectively and are internationally recognized for their competence.

- **Corporate Compliance Department**

The Corporate Compliance Department is responsible for promoting, safeguarding, and overseeing the Company's operations to ensure compliance with applicable laws and external regulations. The Department prioritizes raising awareness of full compliance with environmental and community laws and reports compliance performance based on ISO 37301: Compliance

Management Systems – Requirements with Guidance for Use. This standard emphasizes the compliance management system and documentation within Banpu Group across all operating countries. The Company's compliance management follows the Three Lines Model, an internationally recognized framework that establishes multi-tiered controls to ensure operational compliance. The Company continues to improve Compliance In-Hand, an application for executives and employees to stay updated with newly issued laws and regulations and manage and monitor compliance risk via a dashboard that allows timely and effective reporting and monitoring of compliance risks. The application contains comprehensive information about policies, applicable laws, and business news in the countries where the Company operates. The application helps ensure that the Company conducts its business in compliance with applicable laws while being socially and environmentally responsible. In addition, it facilitates faster and more advanced risk management. Apart from that, the Company continues to develop the Compliance Obligations List (COL) system and the Permit and License Monitoring system, as well as fostering culture and communication through Global Compliance Communication. Banpu also promotes cross-functional collaboration by organizing the ESG Summit, bringing together executives and employees from across the Banpu Group. The summit raises awareness of compliance with country-specific legal frameworks and emerging regulations on AI and environmental laws, including decarbonization, environmental management, climate change, and related taxation. These initiatives strengthen governance and oversight across all countries where Banpu operates, aligning with its three sustainability pillars: environment, society, and governance (ESG).

Connected Transactions

Connected Persons and Transactions

No.	Connected Persons	Relationship	Description of Transaction	Transaction Value (THB Million)	The Audit Committee's Opinion	Book Value (THB Million)
1	Beyond Green Co., Ltd.	Major shareholders are executives and connected persons.	Beyond Green Co., Ltd. increased its capital by issuing 3,000,000 ordinary shares at a par value of THB 100 per share. Prior to this capital increase, Banpu NEXT Co., Ltd., a subsidiary of Banpu, held a 39.2% stake in Beyond Green Co., Ltd., equivalent to 175,464 shares. Following the capital increase, which amounted to THB 117.546 million, Banpu NEXT's ownership percentage in Beyond Green Co., Ltd. increased from 39.2% to 47.7%.	117.546	On 24 June 2024, the Audit Committee approved the acquisition of additional shares in Beyond Green Co., Ltd. The decision was based on the rationale that the shares were offered proportionally and at the same price, making the transaction fair and reasonable. The capital raised is intended to support business operations, contributing to the Company's operating results.	117.540

Necessity and Justification of Related Transactions

In the event that the Company enters into any transactions with its subsidiaries, associate companies, related parties, and/or third parties, it carefully evaluates the necessity and justification of such transactions to ensure they serve the best interests of the Company.

Measure or Procedure of Connected Transactions

The Company has established a policy on connected transactions that complies with the Notification of the Board of Governors of the Stock Exchange of Thailand, Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Connected

Transactions. The prices and conditions must be similar to those in transactions with a third party. Any directors or employees with potential conflicts of interest are prohibited from participating in the approval process for such transactions.

Policy or Tendency of Future Related Transactions

In the event that the Company engages in transactions with related parties, such transactions must comply with the Securities and Exchange Act, the rules and regulations of the Stock Exchange of Thailand, and the notifications of the Capital Market Supervisory Board. To safeguard investor interests and maintain transparency, the Audit Committee will review and approve any such transactions, ensuring they are conducted on a fair and reasonable basis.





SECTION 3

CERTIFICATION OF INFORMATION AND DATA ACCURACY



ATTACHMENT 1: DETAILS OF THE BOARD OF DIRECTORS AND MANAGEMENT

Mr. Chanin Vongkusolkit

Age: 72

Chairman of the Board of Directors

Appointed Date : 28 April 2016

Director

Appointed Date : 16 May 1983

Senior Executive Officer

Appointed Date : 10 April 2015

* A father of person number 13 and
uncle of person number 5 and 11



1

Education/ Training

- Honorary Doctorate Degree (Economics), Thammasat University
- Honorary Doctorate Degree (Economics), Chiang Mai University
- M.B.A. (Finance), St. Louis University, Missouri, U.S.A.
- B.Econ., Thammasat University
- DCP Refresher Course #3/2006, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) #20/2002, Thai Institute of Directors Association (IOD)
- TLCA Leadership Development Program (LDP) – Enhancing Competitiveness #0/2012, Thai Listed Companies Association

% Share Held

- Own Share : 0.32
- Spouse : 0.12
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2016 - Present : Chairman, Banpu Plc.
- 2023 - Present : Chairman, Hongsa Power Co., Ltd.
- 2023 - Present : Chairman, Phu Fai Mining Co., Ltd.
- 1983 - Present : Director, Banpu Plc.
- 2015 - 2016 : Senior Executive Officer, Banpu Plc.
- 1983 - 2015 : Chief Executive Officer, Banpu Plc.
- 2015 - Present : Member of the Corporate Governance and Nomination Committee, Banpu Power Plc.
- 1996 - Present : Director, Banpu Power Plc.

Other Listed Companies

- 2018 - Present : Chairman, The Erawan Group Plc.
- 2004 - Present : Director, The Erawan Group Plc.

Other Companies

- 1983 - Present : Director, Mitr Phol Sugar Corp., Ltd.

Other Organizations

- 2021 - Present : Chairman, Thai Listed Companies Association
- 2019 - 2021 : Director, Thai Listed Companies Association
- 2021 - Present : Advisor, Thammasat Economics Association
- 2012 - 2021 : Chairman, Thammasat Economics Association
- 2015 - Present : Director, Private Sector Collective Action Against Corruption (CAC)
- 2008 - Present : President, The Foundation for Better Life
- 2012 - 2021 : Director, Faculty of Economics, Thammasat University
- 2016 - 2018 : Commissioner, The Securities and Exchange Commission, Thailand
- 2015 - 2018 : Task Force Chairperson, Task Force for Sustainability in Listed Companies, The Securities and Exchange Commission, Thailand

Mr. Teerana Bhongmakapat

Age: 68

Lead Independent Director

Appointed Date : 22 Feb 2023

Independent Director

Appointed Date : 5 April 2012

Chairman of the Audit Committee

Appointed Date : 30 April 2014

Member of the Compensation Committee

Appointed Date : 30 April 2014



2

Education/ Training

- Ph.D. (Econ), University of Wisconsin at Madison, U.S.A.
- M.Econ., Thammasat University
- B.Econ. (Quantitative Economics), Chulalongkorn University
- Capital Market Academy Leader Program #14/2012, Capital Market Academy (CMA)
- Director Certification Program (DCP) #161/2012, Thai Institute of Directors Association (IOD)
- Financial Institutions Governance Program (FIGP) #7/2013, Thai Institute of Directors Association (IOD)
- Director Certification Program Update (DCPU) #2/2014, Thai Institute of Directors Association (IOD)
- IT Governance Program (ITG) #2/2016, Thai Institute of Directors Association (IOD)
- Audit Committee Forum 2016, Federation of Accounting Professions Under the Royal Patronage of His Majesty the King, and Thai Institute of Directors Association (IOD)
- Audit Committee Effectiveness Seminar 2012, Federation of Accounting Professions Under the Royal Patronage of His Majesty the King
- Audit Committee Forum 2017, Thai Institute of Directors Association (IOD)
- Cyber Incident Management for Executive Committees of Listed Companies, The Securities and Exchange Commission
- Boards that Make a Difference (BMD) #8/2018, Thai Institute of Directors Association (IOD)
- Risk Management for Corporate Leaders (RCL) #15/2019, Thai Institute of Directors Association (IOD)
- IT Security Awareness for Top Management, ACIS Professional Center Co., Ltd.
- Ethical Leadership Program (ELP) #22/2021, Thai Institute of Directors Association (IOD)

% Share Held

- Own Share : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2014 - Present : Chairman of Audit Committee/ Member of Compensation Committee, Banpu Plc.
- 2023 - Present : Lead Independent Director, Banpu Plc.
- 2012 - Present : Independent Director, Banpu Plc.

Other Listed Companies

- 2022 - Present : Advisor to the Board, Tisco Financial Group Plc.
- 2013 - 2022 : Director/ Chairman of Corporate Governance Committee/ Chairman of Risk Oversight Committee, Tisco Financial Group Plc.

Other Companies

- 2023 - Present : Chairman of the Audit Committee, Mitr Phol Sugar Corp., Ltd.
- 2022 - 2023 : Vice Chairman of the Audit Committee, Mitr Phol Sugar Corp., Ltd.

Other Organizations

- 2022 - 2023 : Chairman, The Sustainable Arts and Crafts Institute of Thailand (Public Organization)
- 2021 - Present : Professor Emeritus, Chulalongkorn University
- 2011 - 2016 : Professor of Economics (C11), Chulalongkorn University
- 2006 - 2011 : Professor of Economics, Chulalongkorn University
- 2018 - Present : Chairman of the Evaluation Board, Thai Health Promotion Foundation
- 2016 - 2019 : Chairman of the Research Support Committee, National Anti-Corruption Commission (NACC)
- 2010 - 2015 : Eminent Member, Anti-Money Laundering Office (AMLO)

Mr. Piriya Khempon

Age: 66

Independent Director

Appointed Date : 8 April 2020

Chairman of the Environment, Social and Governance Committee

Appointed Date : 1 May 2021

Member of the Corporate Governance and Nomination Committee

Appointed Date : 1 May 2020



3

Education/ Training

- Master of Science (International Relations), London School of Economics, University of London, United Kingdom
- Bachelor of Arts (Political Science), Chiangmai University
- Director Certification Program (DCP) #298/2020, Thai Institute of Directors Association (IOD)
- Top Executive Program in Energy (TEA) #7, Thailand Energy Academy
- Financial Statement for Directors (FSD) #45/2022, Thai Institute of Directors Association (IOD)
- The Board's Roles in Climate Governance (BCG) #1/2024, Thai Institute of Directors Association (IOD)

% Share Held

- Own Share : –
- Spouse : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2021 - Present : Chairman of the Environment, Social and Governance Committee, Banpu Plc.
- 2020 - Present : Independent Director/ Member of the Corporate Governance and Nomination Committee, Banpu Plc.

Other Listed Companies

- 2019 - Present : Director, Saha Pathana Inter-Holding Plc.

Other Organization

- Present : Board of Trustees, Carnegie Mellon University and King Mongkut's Institute of Technology Ladkrabang
- 2023 - 2024 : Advisor to Thai Trade Representative Prof. Dr. Narumon Pinyosinwat, Office of the Prime Minister
- 2021 - 2023 : Special Advisor on Foreign Affairs, Office of Eastern Economic Corridor (EEC)
- 2020 - 2022 : Advisor, The Federation of Thai Industries
- 2020 - 2021 : Executive Director and Member of the Risk Oversight Committee, Export-Import Bank of Thailand (EXIM)
- 2017 - 2019 : Ambassador Extraordinary and Plenipotentiary of Thailand to the People's Republic of China, Royal Thai Embassy in Beijing, China
- 2015 - 2017 : Deputy Permanent Secretary for Foreign Affairs, Office of the Permanent Secretary, Ministry of Foreign Affairs

Remark:

% Share Held which is indicated as "0" means % share held less than 1% while "–" means not holding any shares.



Mr. Anon Sirisaengtaksin

Age: 72

Director

Appointed Date : 19 April 2016

Chairman of the Corporate Governance and Nomination Committee

Appointed Date : 1 May 2022

Executive Advisor

Appointed Date : 1 April 2014



4

Education/ Training

- Honorary Doctor of Public Administration, Bangkok Thonburi University
- M.B.A., Thammasat University
- B.Sc. (Geology), Chulalongkorn University
- Certificates in Project Investment Appraisal and Management and Global Leadership, Harvard University, U.S.A.
- Capital Market Academy Program #1, Capital Market Academy
- Director Accreditation Program (DAP) #52/2006, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) #73/2006, Thai Institute of Directors Association (IOD)
- Sustainability Board Training 2021, CIMB Group

% Share Held

- Own Share : 0
- Spouse : 0
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2022 - Present : Chairman of the Corporate Governance and Nomination Committee, Banpu Plc.
- 2016 - Present : Director, Banpu Plc.
- 2016 - 2022 : Member of the Corporate Governance and Nomination Committee, Banpu Plc.
- 2014 - Present : Executive Advisor, Banpu Plc.
- 2021 - Present : Director, Banpu Innovation and Ventures Co., Ltd.
- 2021 - Present : Director, BKV-BPP Power, LLC
- 2020 - Present : Director, BKV Corporation

Other Listed Companies

- 2022 - Present : Chairman, Thai Eastern Group Holdings Plc.
- 2020 - Present : Independent Director/ Chairman of Nomination, Remuneration and Corporate Governance Committee/ Member of Board Risk and Compliance Committee, CIMB Thai Bank Plc.
- 2020 - 2023 : Independent Director/ Member of Audit Committee/ Member of Nomination and Remuneration Committee, Saha-Union Plc.
- 2020 - 2021 : Overseas Business Consultant, PTT Global Chemical Plc.

Other Companies

- 2019 - 2022 : Chairman, Thai Eastern Group Holdings Co., Ltd.
- 2014 - 2020 : Chairman, PTTGC Innovation America Corp.
- 2014 - 2020 : Chairman, PTTGC International (USA) Inc.
- 2014 - 2020 : Chairman, Natureworks LLC
- 2012 - 2020 : Chairman, PTTGC International Private Ltd.
- 2012 - 2020 : Chairman, PTTGC International (Netherlands) B.V.
- 2012 - 2020 : Chairman, Emery Oleochemical (M) Sdn. Bhd.
- 2012 - 2020 : Chairman, Emery Specialty Chemical Sdn. Bhd.
- 2012 - 2020 : Chairman, Vencorex Holding

Other Organizations

- 2024 - Present : Honorable Committee Member of the Silpakorn University Council/ Chairman of the Risk Management Committee/ Committee Member of the Steering Committee for Enterprises and Businesses in Innovation and Creative Works, Silpakorn University
- 2020 - Present : Subcommittee of the Institute Council for finance and planning, King Mongkut's Institute of Technology Ladkrabang
- 2019 - Present : President's Administration Evaluation Committee, King Mongkut's Institute of Technology Ladkrabang
- 2019 - Present : Reform Council, Silpakorn University

Mr. Buntoeng Vongkusolkit

Age: 68

Director

Appointed Date : 3 April 2014

Chairman of the Compensation Committee

Appointed Date : 25 April 2019

* A nephew of person number 1 and a cousin of person number 11 and 13



5

Education/ Training

- Honorary Doctoral Degree of Philosophy Program in Agricultural Research and Development, Kasetsart University
- Honorary Doctorate Degree in Engineering (Modern Technology of Sugarcane and Sugar Industry), Rajamangala University of Technology Isan
- Doctor of Philosophy (Biotechnology), Maejo University
- Doctor of Agriculture (Innovative Agriculture), Khon Kaen University
- M.S. in Political Science, Ramkhamhaeng University
- B.S. in Political Science, Ramkhamhaeng University
- Agriculture & Cooperatives Executive Program (ACE) #1, Ministry of Agriculture and Cooperatives & The Agricultural Research Development Agency (Public Organization) & Kasattratikarn Foundation
- Ultra Wealth – Invest Like a Master (UW) #2
- Top Executive Program in Energy (TEA) #5, Thailand Energy Academy
- TLCA Leadership Development Program (LDP) #1, Thai Listed Companies Association
- Top Executive Program in Commerce and Trade (TEPCOT) #5, University of the Thai Chamber of Commerce (UTCC)
- Director Certification Program (DCP) #161/2012, Thai Institute of Directors Association (IOD)
- Senior Executive Program #9, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Management Problem Solving and Decision Making Program, Kepner – Tregoe, International, Princeton, New Jersey, U.S.A.

% Share Held

- Own Share : 0.11
- Spouse : –
- Related Juristic Person : 0.56

Work Experience in the Last Five Years

Banpu Group

- 2019 - Present : Chairman of the Compensation Committee, Banpu Plc.
- 2014 - Present : Director, Banpu Plc.
- 2014 - 2019 : Member of the Compensation Committee, Banpu Plc.

Other Companies

- 2020 - Present : Chairman/ Chairman of Executive Director, Mitr Phol Group
- 1982 - Present : Director, Mitr Phol Group
- 2018 - 2020 : Vice Chairman/ Chairman of Executive Director, Mitr Phol Group
- 2015 - 2020 : Chief Operating Officer – Cane Management Business, Mitr Phol Group
- 2011 - 2018 : Senior Executive Vice President, Sugarcane Development & Management Group, Mitr Phol Group

Other Organizations

- 2019 - 2022 : Honorary Member, King Mongkut's Institute of Technology Ladkrabang Council

Mr. Pichai Dusdeekulchai

Age: 63

Independent Director

Appointed Date : 4 April 2019

Member of the Audit Committee

Appointed Date : 25 April 2019

Member of the Environment, Social and Governance Committee

Appointed Date : 1 May 2021



6

Education/ Training

- Master of Business Administration (MBA), Ashland University, Ohio, U.S.A.
- Bachelor of Arts Program in Mathematics and Statistic, Thammasat University
- TLCA Leadership Development Program (LDP) #1, Thai Listed Companies Association
- Director Certification Program (DCP) #278/2019, Thai Institute of Directors Association (IOD)
- Advance Audit Committee Program (ACCP) #38/2020, Thai Institute of Directors Association (IOD)
- The Board's Roles in Climate Governance (BCG) #1/2024, Thai Institute of Directors Association (IOD)
- Audit Committee Forum #55, KPMG
- Enhancing Governance – Standard and Financing Insight, The Securities and Exchange Commission
- AML/CFT, Anti-Money Laundering Office (AMLO)
- Sustainable Finance 2024, The Thai Banker's Association
- Information Technology Security Awareness 2024, ACIS professional Center Co., Ltd.

% Share Held

- Own Share : –
- Spouse : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2021 - Present : Member of the Environment, Social and Governance Committee, Banpu Plc.
- 2019 - Present : Independent Director/ Member of the Audit Committee, Banpu Plc.

Other Listed Companies

- 2022 - Present : Chairman of the Audit Committee/ Chairman of the Nomination and Remuneration Committee/ The Risk Management Committee Member/ Independent, Kijcharoen Engineering Electric Plc.
- 2020 - Present : Independent Director/ Member of the Audit Committee/ Member of the Corporate Governance/ Member of the Risk Oversight Committee, Land and Houses Bank Plc.
- 2020 - Present : Independent Director/ Chairman of the Nomination and Remuneration Committee/ Member of the Audit Committee/ Member of the Risk Oversight Committee, LH Financial Group Plc.

Other Companies

- 2018 - 2018 : General Manager & Deputy Country Head of Thailand, Sumitomo Mitsui Banking Corporation
- 2002 - 2018 : Head of Business Promotion, Sumitomo Mitsui Banking Corporation

Mr. Teerapat Sanguankotchakorn

Age: 59

Independent Director

Appointed Date : 3 April 2019

Member of the Compensation Committee

Appointed Date : 25 April 2019

Member of the Environment, Social and Governance Committee

Appointed Date : 1 May 2021



7

Education/ Training

- Doctor of Philosophy Program in Information Processing, Tokyo Institute of Technology
- Master of Engineering Program in Information Processing, Tokyo Institute of Technology
- Bachelor of Engineering Program in Electrical Engineering, Chulalongkorn University
- Director Certification Program (DCP) #148/2011, Thai Institute of Directors Association (IOD)
- Advance Audit Committee Program (AACP) #14/2014, Thai Institute of Directors Association (IOD)
- Board Matters and Trends (BMT) #8/2019, Thai Institute of Directors Association (IOD)
- National Director Conference 2021 (NDC 2021) "Leadership Behind Closed Door", Thai Institute of Directors Association (IOD)
- Urban Leader Training Course #7, Navamindradhiraj University
- The Board's Roles in Climate Governance (BCG) #1/2024, Thai Institute of Directors Association (IOD)
- NCSA Cyber Clinic 2024, Thailand National Cyber Academy (THNCA)
- AI for All, Mahidol University

% Share Held

- Own Share : –
- Spouse : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2021 - Present : Member of the Environment, Social and Governance Committee, Banpu Plc.
- 2019 - Present : Independent Director/ Member of the Compensation Committee, Banpu Plc.

Other Organizations

- 2018 - Present : Chairman of the Audit Committee, Thai Public Broadcasting Service (Thai PBS)
- 2018 - Present : Board of Governors, Thai Public Broadcasting Service (Thai PBS)
- 2020 - 2021 : Executive Director, Technology Promotion Association (Thailand-Japan)
- 2018 : Member of the Committee for Sustainable Development and Planning of National Education, Ministry of Education
- 2014 - 2018 : Audit Committee, Thai Public Broadcasting Service (Thai PBS)
- 2012 - 2016 : Board of Governors, Thai Public Broadcasting Service (Thai PBS)
- 2004 - Present : Associate Professor, Telecommunications Field of Study, School of Engineering and Technologies Asian Institute of Technology (AIT)

Remark:

% Share Held which is indicated as "0" means % share held less than 1% while "–" means not holding any shares.



Mrs. Watanan Petersik

Age: 63

Independent Director

Appointed Date : 4 April 2023

Member of the Audit Committee

Appointed Date : 1 May 2023



8

Education/ Training

- A.B. degree, Bryn Mawr College, Pennsylvania, U.S.A.
- Director Accreditation Program (DAP) English Program Class 83/2010, Thai Institute of Directors Association (IOD)
- Mandatory Accreditation Programme (MAP) for Directors of Public Listed Companies (March 2010), Bursatra Sdn. Bhd.
- Role of Director Singapore Institute of Directors Course

% Share Held

- Own Share : –
- Spouse : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2023 - Present : Independent Director/ Member of the Audit Committee, Banpu Plc.

Other Listed Companies

- 2014 - 2023 : Independent Director/ Director to the Corporate Governance and Sustainability Committee/ Director to the Audit Committee, PTT Global Chemical Plc.
- 2007 - 2020 : Independent Director/ Chairperson of Nomination, Remuneration and Corporate Governance Committee, CIMB Thai Bank Plc.

Other Companies

- Present : Non-Executive Director, Jetanin Institute for Assisted Reproduction, Jetanin Co., Ltd.
- 2010 - 2019 : Independent Director/ Non-Executive Director, CIMB Group Sdn. Bhd.
- 2010 - 2019 : Independent Director/ Non-Executive Director, CIMB Group Holdings Berhad, Malaysia

Other Organizations

- 2024 - Present : Director, Thailand Development Research Institute
- 2024 - Present : Director, Teach for Thailand
- 2024 - Present : Director, Asia Philanthropy Circle (APC)
- Present : Management Committee, Lien Centre for Social Innovation, Singapore Management University
- Present : Advisor, TPG Capital Asia
- Present : Advisor, TaejaiDotCom (taejai.com)

Mr. Metee Auapinyakul

Age: 71

Director

Appointed Date : 16 May 1983

Advisor

Appointed Date : 1 January 2014



9

Education/ Training

- Doctor of Business, Engineering and Technology (Honoris Couse), St. Louis University, Missouri, U.S.A.
- B.Sc. (Management), St. Louis University, Missouri, U.S.A.
- Infrastructure for the Market Economy, Harvard University, John F. Kennedy School of Government, Boston, U.S.A.
- National Defence College of Thailand (Class 377)
- National Defence College of Thailand, College of Management (Class 1)
- Director Certification Program (DCP) #61/2005, Thai Institute of Directors Association (IOD)

% Share Held

- Own Share : 0.08
- Spouse : 0.02
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2014 - Present : Advisor, Banpu Plc.
- 1983 - Present : Director, Banpu Plc.
- 2015 - Present : Director, Banpu Power Plc.

Other Listed Companies

- 2004 - Present : Chairman of Advisors, GENCO Plc.

Other Companies

Other Organizations

Other Organizations

Other Organizations

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Other Organizations

Mr. Ongart Auapinyakul

Age: 68

Director

Appointed Date : 29 July 1983

Advisor

Appointed Date : 1 January 2017

Executive Officer

Appointed Date : 8 January 2001



10

Education/ Training

- B.S. (Mechanical Engineering), University of Missouri, Columbia, U.S.A.
- Senior Executive Program #3, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- National Defence College of Thailand (Class 4414)
- Director Certification Program (DCP) #23/2002, Thai Institute of Directors Association (IOD)
- Capital Market Academy Leader Program #8, Capital Market Academy (CMA)
- Bangkok Metropolitan Administration Executive Program (Mahanakorn Class 1), Urban Green Development Institute Bangkok
- Top Executive Program in Energy (TEA) #1, Thailand Energy Academy
- Top Executive Program #17, Judicial Training Institute
- Executive Management with Business Development and Investment #1, Institute of Business and Industrial Development
- Top Executive Program in Commerce and Trade (TEPCOT) #4, University of the Thai Chamber of Commerce (UTCC)
- Business Revolution and Innovation Network (BRAIN) #1, The Federation of Thai Industries
- Tourism Management Program for Executives (TME) #1, TAT Academy
- Academy of Business Creativity (ABC) #8/2018, Sripatum University
- Top Executive Program for Creative and Amazing Thai Services (ToPCATS) #2, University of the Thai Chamber of Commerce (UTCC)

% Share Held

- Own Share : 0.01
- Spouse : 0.04
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2017 - Present : Advisor, Banpu Plc.
- 1983 - Present : Director, Banpu Plc.
- 1983 - 2016 : Executive Officer, Banpu Plc.

Mr. Verajet Vongkusolkrit

Age: 60

Director

Appointed Date : 1 June 2010

Member of the Corporate Governance and Nomination Committee

Appointed Date : 1 June 2010



11

Education/ Training

- Bachelor of Science (Finance), Babson College, Massachusetts, U.S.A.
- Director Certification Program (DCP) #24/2002, Thai Institute of Directors Association (IOD)
- TLCA Executive Development Program #13, Thai Listed Companies Association
- TLCA Leadership Development Program (LDP) #2, Thai Listed Companies Association and International Institute for Management Development (IMD)
- Strategy and Innovation for Businesses in ASIA (SIBA) 2016, Mahidol University and MIT Sloan School of Management
- Leadership Communication Certification Program 2018, Thailand Management Association (TMA)
- Senior Executive Program 2019 (SEP) #33, Sasin Graduate Institute of Business Administration of Chulalongkorn University and The Kellogg School of Management and the Wharton School
- Boards that Make a Difference (BMD) #10/2020, Thai Institute of Directors Association (IOD)
- Thailand Energy Academy (TEA) #16, Thailand Energy Academy
- Coaching Program: CEO Coaching Skill, Mitr Phol Group
- Communication Mitr Phol Purpose Workshop, Mitr Phol Group
- Mitr Phol OKRs Workshop, Mitr Phol Group
- Corporate Innovation Summit 2023, RISE – Corporate Innovation Powerhouse
- Top Executive Program in commerce and Trade (TEPCOT 16), University of the Thai Chamber of Commerce
- CIS - Corporate Innovation Summit 2024 – Experimental, Rise Accel

% Share Held

- Own Share : 0.20
- Spouse : 0
- Related Juristic Person : 0.56

Work Experience in the Last Five Years

Banpu Group

- 2010 - Present : Director/ Member of the Corporate Governance and Nomination Committee, Banpu Plc.
- 2020 - Present : Director, Banpu NEXT Co., Ltd.

Other Companies

- Present : Chief Executive Officer – Thai Sugar, Energy and New Business, Mitr Phol Sugar Corp., Ltd.
- 2008 - Present : Director, Mitr Phol Sugar Corp., Ltd.
- 2008 - Present : Director, Mitr Siam Sugar Corp., Ltd.
- 2008 - Present : Director, United Farmer and Industry Co., Ltd.

Remark:

% Share Held which is indicated as “0” means % share held less than 1% while “–” means not holding any shares.



Mr. Sarayuth Saengchan

Age: 62

Director

Appointed Date : 2 April 2022

Member of the Corporate Governance and Nomination Committee

Appointed Date : 1 May 2022



12

Education/ Training

- Ph.D. Economics, Faculty of Economics, Chulalongkorn University, Bangkok, Thailand
- Master of Management (M.M.) in Management Policy, Managerial Economics and Operations, Kellogg School of Management – Northwestern University, U.S.A.
- Bachelor of Art in Economics, (First-Class Honors) in Monetary Policy and Public Finance, Faculty of Economics, Chulalongkorn University
- Director Certification Program (DCP) #322/2022, Thai Institute of Directors Association (IOD)
- Subsidiary Governance Program (SGP) #2/2022, Thai Institute of Directors Association (IOD)
- RISE Alpha Silicon Valley, RISE – Corporate Innovation Powerhouse
- Investors Certification Course (QBAC+), World Business Angel Investment Forum (WBAF)
- Sustainability Transformation Xponential, RISE – Corporate Innovation Powerhouse

% Share Held

- Own Share : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2022 - Present : Director/ Member of the Corporate Governance and Nomination Committee, Banpu Plc.

Other Listed Companies

- 2018 - 2022 : Independent Director/ Member of the Audit Committee, Bangkok Dec-Con Plc.

Other Companies

- 2020 - 2024 : Senior Executive Vice President – Finance and Administration, Mittr Phol Sugar Corp., Ltd.

Other Organizations

- 2024 - Present : Deputy of Director – Finance Division, Mahidol University
- 2020 - Present : Director, The Suntraporn Foundation under the patronage of Her Royal Highness Princess Maha Chakri Sirindhorn
- 2021 - Present : Director and Treasurer, Chulalongkorn University Alumni Association
- 2021 - Present : Association Director, Thai Sugar and Bio-Energy Producers Association
- 2020 - Present : Member of the Audit Committee, Vajiravudh College
- 2020 - Present : Director – Fund Management Committee, Thai Sugar and Bio-Energy Producers Association

Mr. Sinon Vongkusolkrit

Age: 34

Chief Executive Officer

Appointed Date : 2 April 2024

Director

Appointed Date : 2 April 2024

* A son of person number 1 and a cousin of person number 5 and 11



13

Education/ Training

- MA Global Management Pathway in Finance and Business Development, Regent's University
- BA Business and Marketing Management, Oxford Brookes University

% Share Held

- Own Share : 0.02
- Spouse : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2024 - Present : Chief Executive Officer/ Director, Banpu Plc.
- 2024 - Present : Director, Banpu Power Plc.
- Present : Director, Banpu NEXT Co., Ltd.
- Present : Director, Banpu Minerals Co., Ltd.
- Present : Director, Banpu International Ltd.
- Present : Director, Banpu Coal Power Co., Ltd.
- Present : Director, Banpu Innovation & Ventures Co., Ltd.
- Present : Director, SVOLT Energy Technology (Thailand) Co., Ltd.
- Present : Director, BOG Co., Ltd.
- Present : Director, Banpu Singapore Pte. Ltd.
- Present : Director, Banpu Minerals (Singapore) Pte. Ltd.
- Present : Director, Centennial Coal Co. Pty Ltd.
- Present : Director, Hunnu Coal Pty Ltd.
- Present : Director, AFE Investments Pty Ltd.
- Present : Director, Banpu Australia Co. Pty Ltd.
- Present : Director, Banpu Energy Holding Pty Ltd.
- Present : Director, Banpu Energy Australia Pty Ltd.
- Present : Director, Banpu Renewable Australia Pty Ltd.
- Present : Director, Banpu Coal Investment Co., Ltd.
- Present : Director, Banpu Power Investment Co., Ltd.
- Present : Director, BP Overseas Development Co., Ltd.
- Present : Director, Asian American Coal, Inc.
- Present : Director, Banpu Japan K.K.
- Present : Director, Banpu Power (Japan) Co., Ltd.
- Present : Director, BKV Corporation
- Present : Director, Banpu North America Corporation
- Present : Director, Banpu Power US Corporation
- Present : Manager, BPPUS Power Trading LLC
- Present : Director, Banpu Innovation & Ventures LLC
- Present : Director, Banpu Innovation & Ventures (Singapore) Pte. Ltd.
- Present : Director, Banpu Ventures Pte. Ltd.
- Present : Director, ACN 152 429 206 Pty Ltd.
- Present : Director, PT. Indo Tambangraya Megah Tbk
- 2023 - 2024 : Director, Banpu NEXT Green Leasing Co., Ltd.
- 2023 - 2024 : Director, Banpu NEXT EcoServe Co., Ltd.
- 2023 - 2024 : Director, Banpu NEXT Green Services Co., Ltd.
- 2023 - 2024 : Director, Durapower Technology (Thailand) Co., Ltd.
- 2023 - 2024 : Director, DP NEXT Co., Ltd.
- 2023 - 2024 : Director, Aizu Energy Pte. Ltd.
- 2023 - 2024 : Director, BRE Singapore Pte. Ltd.
- 2023 - 2024 : Director, Banpu Renewable Singapore Pte. Ltd.
- 2023 - 2024 : Director, Durapower Holdings Pte. Ltd.
- 2022 - 2024 : Director, Banpu NEXT Green Energy Co., Ltd.
- 2022 - 2024 : Director, BPIN Investment Co., Ltd.
- 2022 - 2024 : Director, Banpu Power Trading G.K.
- 2022 - 2023 : Head of Renewable and Energy Technology Business, Banpu Plc.
- 2022 - 2023 : Chief Executive Officer, Banpu NEXT Co., Ltd.

Other Companies

- 2022 - 2022 : Director, PT. Berkah Manis Makmur
- 2022 - 2022 : Director, PT. Rejoso Manis Indo

Dr. Kirana Limpaphayom

Age: 50

Chief Operating Officer

Appointed Date : 2 April 2024



14

Education/ Training

- Ph.D. Sociology, Centre for Comparative Labour Studies, University of Warwick, United Kingdom
- M.Sc. Industrial Relations, Labour Market Economic, London School of Economics and Political Science (LSE), University of London, United Kingdom
- Bachelor of Economics, Chulalongkorn University
- Master of Business Administration in Executive Finance, Sasun Graduate Institute of Business Administration of Chulalongkorn University and The Kellogg School of Management and the Wharton School
- Graduate of the Australian Institute of Company Directors (GAICD)
- Director Certificate Program, Indonesian Institute of Corporate Directors (IICD)
- Director Certification Program (DCP) #294/2020, Thai Institute of Directors Association (IOD)
- Executive Program in Energy Literacy for a Sustainable Future, Thailand Energy Academy (TEA)

% Share Held

- Own Share : –
- Spouse : 0.002
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2024 - Present : Chief Operating Officer, Banpu Plc.
- 2020 - Present : Director, Banpu Power Plc.
- 2020 - 2024 : Head of Power Business, Banpu Plc.
- 2020 - 2024 : Chief Executive Officer, Banpu Power Plc.
- 2021 - Present : Director, Banpu Energy Holding Pty Ltd.
- 2023 - Present : Director, BKV Corporation
- 2021 - Present : Director, BKV-BPP POWER LLC
- 2021 - Present : Director, Banpu Power US Corporation
- 2024 - Present : Vice President, Banpu Power US Corporation
- 2021 - Present : Director, Banpu Power (Japan) Co., Ltd.
- 2021 - Present : Director, Banpu Innovation & Ventures Co., Ltd.
- 2023 - Present : Manager, BPPUS Power Trading LLC
- 2022 - Present : Commissioner, PT. Indo Tambangraya Megah Tbk
- 2020 - Present : Director, BLOP Power Ltd.
- 2020 - Present : Director, Banpu NEXT Co., Ltd.
- 2020 - Present : Director, Hongsa Power Co., Ltd.
- 2020 - Present : Director, Phu Fai Mining Co., Ltd.
- 2020 - Present : Director, Banpu Coal Power Ltd.
- 2020 - Present : Director, Banpu Energy Australia Pty Ltd.
- 2014 - Present : Alternate Director, Centennial Coal Company Pty Ltd.
- 2013 - Present : Director, Banpu Australia Co., Pty Ltd.
- 2013 - Present : Director, AFE Investments Pty Ltd.
- 2013 - Present : Director, ACN 152 429 206 Pty Ltd.
- 2022 - Present : Director, Banpu Japan K.K.
- 2022 - Present : Managing Director, BKV-BPP Retail LLC
- 2024 - Present : Director, Banpu Engineering Services Co., Ltd.
- 2024 - Present : Director, Banpu Energy Services (Thailand) Co., Ltd.
- 2024 - Present : Director, Banpu International Ltd.
- 2024 - Present : Director, Banpu Minerals Co., Ltd.
- 2024 - Present : Director, Banpu Minerals (Singapore) Pte. Ltd.
- 2024 - Present : Director, Banpu Singapore Pte. Ltd.
- 2024 - Present : Director, BP Overseas Development Co., Ltd.
- 2024 - Present : Corporate Representative, Banpu Minerals (Singapore) Pte. Ltd.
- 2024 - Present : Corporate Representative, Banpu Singapore Pte. Ltd.
- 2021 - 2024 : Director, Banpu Power International Ltd.
- 2021 - 2024 : Director, Pan-Western Energy Corporation LLC
- 2021 - 2024 : Executive Manager, Banpu Power Trading G.K.
- 2020 - 2024 : Director, Banpu NEXT Green Leasing Co., Ltd.
- 2016 - 2020 : President Director, PT. Indo Tambangraya Megah Tbk

Mr. Issara Niropas

Age: 53

Head of Power Business

Appointed Date : 2 April 2024

Chief Executive Officer/ Director – Banpu Power Plc.

Appointed Date : 2 April 2024



15

Education/ Training

- M.B.A., Ramkhamhaeng University
- B. Ind. Tech. (Mechanical Technology), Phranakhon Rajabhat University
- Executive Development Program (EDP) 2022, TLCA
- Energy and Mobility Transitions, Bloomberg NEF (BNEF) 2021
- McKinsey Management Program (MMP), McKinsey and TLCA
- The Young Executive Program in Energy Literacy for a Sustainable Future #4/2017, Thailand Energy Academy
- Clean Coal Technology (Coal Combustion Sector), New Energy Development Organization (NEDO), Japan
- Director Certification Program (DCP) #356/2024, Thai Institute of Directors Association (IOD)
- The Board's Role in Mergers & Acquisitions (BMA) #7/2024, Thai Institute of Directors Association (IOD)
- TLCA Executive Development Program (EDP) #21/2022, TLCA
- Banpu Global Leadership Program for Business Leader 2022, Banpu Plc. and INSEAD

% Share Held

- Own Share : –
- Spouse : 0
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2024 - Present : Head of Power Business, Banpu Plc.
- 2024 - Present : Chief Executive Officer/ Director, Banpu Power Plc.
- 2023 - 2024 : Senior Vice President – Power Operations, Banpu Power Plc.
- Present : Director, BLOP Power Ltd.
- Present : Director, Banpu Power US Corporation
- Present : Director, BKV-BPP Power, LLC
- Present : Director, Banpu Power Investment Co., Ltd.
- Present : Director, Zouping Peak Pte. Ltd.
- Present : Director, Banpu Power International Ltd.
- Present : Director, Pan-Western Energy Corporation LLC
- 2019 - 2022 : Vice President – Asset Management, Banpu Power Plc.

Remark:

% Share Held which is indicated as "0" means % share held less than 1% while "–" means not holding any shares.



Mr. Jamon Jamuang

Age: 46

Head of Mining Business

Appointed Date : 1 January 2024



16

Education/ Training

- Master of Science in Engineering Business Management, University of Warwick, United Kingdom
- Master of Engineering in Engineering Management, Chulalongkorn University
- Bachelor of Mining Engineering, Chulalongkorn University
- TLCA Executive Development Program (EDP), Thai Listed Companies Association
- Director Certification Program (DCP) #359/2024, Thai Institute of Directors Association (IOD)
- LTD, Leadership Program on Trade and Development Strategy #1, International Institute for Trade and Development

% Share Held

- Own Share : 0.001
- Spouse : —
- Related Juristic Person : —

Work Experience in the Last Five Years

Banpu Group

- 2024 - Present : Head of Mining Business, Banpu Plc.
- 2024 - Present : Commissioner, PT. Indo Tambangraya Megah Tbk
- 2022 - 2023 : Senior Vice President – Mine Engineering and Development, Mine Engineering, Banpu Plc.
- 2019 - 2022 : Vice President – Mine Engineering and Development, Banpu Plc.
- 2016 - 20218 : Technical Development & Services Head, PT. Indo Tambangraya Megah Tbk.

Mr. Sutee Sukruan

Age: 60

Head of Corporate Development

Appointed Date : 1 January 2021



17

Education/ Training

- M.B.A. (Finance), Chulalongkorn University
- Bachelor of Accounting, Chulalongkorn University
- TLCA Executive Development Program #11, Thai Listed Companies Association
- Economic Leader Forum, Thammasat Economics Association
- Director Certification Program (DCP) #254/2018, Thai Institute of Directors Association (IOD)
- Global Leadership Program for Strategic Leader 2019, IMD Business School
- TLCA Leadership Development Program (LDP) #5, Thai Listed Companies Association and International Institute for Management Development (IMD)
- Leadership Program – Accelerating Transformation Series, Banpu Plc. and Pacrim Group
- Data Leadership Essential Program for SVP, Banpu Plc. and Skooldio

% Share Held

- Own Share : —
- Spouse : —
- Related Juristic Person : —

Work Experience in the Last Five Years

Banpu Group

- 2021 - 2024 : Head of Corporate Development, Banpu Plc.
- 2020 - 2020 : Senior Vice President – Corporate Development, Banpu Plc.
- 2018 - 2020 : Chief Operating Officer – Power Business, Banpu Plc.
- 2009 - 2017 : Senior Vice President – Corporate Finance, Banpu Plc.
- 2022 - 2023 : Director, Licogi 16 Ninh Thuan Investment Renewable Energy Joint Stock Company
- 2018 - 2020 : Chief Executive Officer, Banpu Power Plc.
- 2020 - Present : Director, Banpu Renewable Australia Pty Ltd.
- 2020 - Present : Director, Banpu NEXT Co., Ltd.
- 2019 - Present : Director, Banpu Japan K.K.
- 2018 - Present : Director, Banpu Coal Power Ltd.
- 2018 - 2023 : Director, BRE Singapore Pte. Ltd.
- 2018 - 2023 : Director, BPP Vinh Chau Wind Power LLC
- 2018 - 2021 : Director, Banpu Power (Japan) Co., Ltd.
- 2018 - 2021 : Director, Zouping Peak Pte. Ltd.
- 2018 - 2021 : Director, Banpu Power International Ltd.
- 2019 - 2021 : Director, Pan-Western Energy Corporation LLC

Remark: Mr. Sutee Sukruan retired since 1 January 2025.

Ms. Arisara Sakulkarawek

Age: 54

Chief Financial Officer

Appointed Date : 1 March 2019



18

Education/ Training

- Master of Science in Accounting, Thammasat University
- Bachelor of Accounting (BA), Thammasat University
- Orchestrating Winning Performance 2016, IMD Business School
- Global Leadership Program for Strategic Leader 2017, IMD Business School
- Certification from School of Tax
- Certified Public Accountant (Thailand) (CPA)
- TLCA Leadership Development Program (LDP) – Crafting Agile Strategies to Enhance Competitiveness of Your Organization, Thai Listed Companies Association
- Refreshment of the Role and Expectation of a CFO, Federation of Accounting Professions Under the Royal Patronage of His Majesty the King
- Beyond Treasury Management, Federation of Accounting Professions Under the Royal Patronage of His Majesty the King
- Enterprise Governance of IT, Federation of Accounting Professions Under the Royal Patronage of His Majesty the King
- Transfer Pricing, Federation of Accounting Professions Under the Royal Patronage of His Majesty the King
- Basic Forensic Analytics, Federation of Accounting Professions Under the Royal Patronage of His Majesty the King
- CFO Refresher Course 2023, Thailand Securities Institute, The Stock Exchange of Thailand
- Director Certification Program (DCP) #342/2023, Thai Institute of Directors Association (IOD)

% Share Held

- Own Share : —
- Related Juristic Person : —

Work Experience in the Last Five Years

Banpu Group

- 2019 - Present : Chief Financial Officer, Banpu Plc.
- 2018 - 2019 : Senior Vice President – Corporate Finance, Banpu Plc.
- 2016 - 2017 : Senior Vice President – Controller, Banpu Plc.
- 2011 - 2015 : Vice President – Accounting, Banpu Plc.
- 2023 - Present : Director, Banpu Power International Ltd.
- 2020 - Present : Member of Member's Council, Banpu Vietnam Limited Liability Company
- 2020 - Present : Director, Banpu International Ltd.
- 2020 - Present : Director, Banpu Minerals Co., Ltd.
- 2019 - Present : Director, Banpu Innovation & Ventures Co., Ltd.
- 2019 - Present : Director, Banpu Innovation & Ventures (Singapore) Pte. Ltd.
- 2019 - Present : Director, Banpu Innovation & Ventures LLC
- 2018 - Present : Director, Banpu Singapore Pte. Ltd.
- 2018 - Present : Director, Banpu Minerals (Singapore) Pte. Ltd.
- 2018 - Present : Director, BP Overseas Development Co., Ltd.
- 2018 - Present : Director, Banpu Coal Investment Co., Ltd.
- 2018 - Present : Director, Aura Land Development Pte. Ltd.
- 2018 - Present : Director, Hunnu Investment Pte. Ltd.
- 2018 - Present : Director, Banpu Engineering Services Co., Ltd.
- 2018 - Present : Director, Banpu Energy Services (Thailand) Co., Ltd.
- 2018 - Present : Director, BOG Co., Ltd.
- 2020 - 2022 : Director, Banpu NEXT Green Energy Co., Ltd.
- 2019 - 2024 : Executive Manager, Aizu Land Solar G.K.
- 2018 - 2024 : Executive Manager, Hokkaido Solar Estate G.K.
- 2018 - Present : Director, Banpu North America Corporation
- 2022 - Present : Director, Banpu Ventures Pte. Ltd.
- 2022 - 2024 : Director, LIV Energy Venture Pte. Ltd.

Mr. Wittapon Jawjit

Age: 54

Head of Human Resources

Appointed Date : 1 July 2021



19

Education/ Training

- Master of Science, Telecommunication Engineering (Satellite and Data Communication), Chulalongkorn University
- Bachelor of Science, Electrical Engineering (Telecommunication Engineering), Chulalongkorn University
- Diploma in Strategic Management and Business Reengineering, Special Program by Sloan School of Management, MIT, Boston, MA, U.S.A.

% Share Held

- Own Share : —
- Spouse : 0
- Related Juristic Person : —

Work Experience in the Last Five Years

Banpu Group

- 2021 - Present : Head of Human Resources, Banpu Plc.

Other Listed Companies

- 2017 - 2019 : First Executive Vice President, Head of Human Resources, Bank of Ayudhaya Plc. (BAY)
- 2014 - 2017 : First Executive Vice President, Head of Human Resources, Kiatnakin Phatra Financial Group

Other Companies

- 2005 - 2014 : Chief Executive Officer and Country Head, Mercer (Thailand) Ltd.

Other Organizations

- 2021 - Present : Committee Member, Thailand National Innovation Committee, Ministry of Higher Education, Science, Research and Innovation
- 2021 - Present : Committee Member, Human Resources Management Subcommittee, National Science and Technology Development Agency (NSTDA)
- 2019 - Present : Advisor to Chief Executive Officer, Mae Fah Luang Foundation

Remark:

% Share Held which is indicated as "0" means % share held less than 1% while "—" means not holding any shares.



Mr. Jirameth Achcha

Age: 55

Head of Corporate Services

Appointed Date : 1 January 2021



20

Education/ Training

- Master of Economics (Business Economics), Kasetsart University
- Bachelor of Economics (Fiscal Economics), Ramkhamhaeng University

% Share Held

- Own Share : –
- Spouse : 0
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2021 - Present : Head of Corporate Services, Banpu Plc.
- 2018 - 2020 : Senior Vice President – Corporate Services, Banpu Plc.
- 2016 - 2017 : Vice President – Corporate Compliance, Banpu Plc.
- 2015 - 2016 : Vice President – Business Process Management, Banpu Plc.

Mr. Smittipon Srethapramote

Age: 48

Head of Renewable and Energy Technology Business

Appointed Date : 1 January 2024

Chief Executive Officer – Banpu NEXT Co., Ltd.

Appointed Date : 1 January 2024



21

Education/ Training

- Master of Business Administration, Cornell University, U.S.A.
- Master of Arts in Economics, Tufts University, U.S.A.
- Bachelor of Arts in Economics, University of Oregon, U.S.A.
- WISDOM-INNOVATION-NETWORK-SERVING SOCIETY (WINS) program, Class 3, Ministry of Higher Education, Science, Research and Innovation
- Director Certificate Program (DCP) 361/2024, Thai Institute of Directors Association (IOD)

% Share Held

- Own Share : 0.002
- Spouse : –
- Related Juristic Person : –

Work Experience in the Last Five Years

Banpu Group

- 2024 - Present : Head of Renewable and Energy Technology Business, Banpu Plc.
- 2024 - Present : Chief Executive Officer, Banpu NEXT Co., Ltd.
- 2023 - 2024 : Head of Corporate Venture Capital, Banpu Plc.
- 2020 - 2021 : Investment Analyst – Brookfield Asset Management, New York, U.S.A.
- 2009 - 2015 : Head of Clean Technology Research/ Head of Fintech Research, Morgan Stanley & Co., New York, U.S.A.

Mr. Virach Vudhihanaseth

Age: 50

Company Secretary

Appointed Date : 1 January 2018

Senior Vice President – Corporate Strategy

Appointed Date : 10 April 2020



22

Education/ Training

- Master of Arts in Economics, State University of New York, Albany, U.S.A.
- Master of Science in Finance, Bentley College, U.S.A.
- Master in Business Administration, Clark University, U.S.A.
- Bachelor of Economics (International Economics), Bangkok University
- TLCA Executive Development Program 2018, Thai Listed Companies Association
- Company Secretary Program #96, Thai Institute of Directors Association (IOD)
- CG Code Workshop, Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. (Deloitte)
- WIAL Certified Action Learning Coach Program, Banpu Plc. and World Institute for Action Learning (Thailand) Ltd.
- Leadership Program – Accelerating Transformation Series, Banpu Plc. and Pacrim Group
- Climate Risk Management and Climate Scenario Analysis, Ernst & Young Corporate Services Limited
- Economic Briefing Organized, Kiatnakin Phatra Bank
- Energy Transition Towards Net-Zero, KPMG
- APEC CEO Summit 2022, APEC Business Advisory Council (ABAC)

% Share Held

- Own Share : 0
- Spouse : –

Work Experience in the Last Five Years

Banpu Group

- 2020 - Present : Senior Vice President – Corporate Strategy, Banpu Plc.
- 2020 - Present : Head of Corporate Secretary, Banpu Plc.
- 2020 - 2022 : Head of Investor Relations, Banpu Plc.
- 2018 - 2019 : Vice President – Corporate Secretary and Investor Relations, Banpu Plc.
- 2015 - 2017 : Vice President – Investor Relations, Banpu Plc.

Ms. Wiyada Wiboonsirichai

Age: 55

Secretary of the Audit Committee

Appointed Date : 16 January 2018

Head of Global Internal Audit and Compliance

Appointed Date : 1 January 2018



23

Education/ Training

- Master of Business Administration, Financial Management, National Institute of Development Administration (NIDA)
- Bachelor of Accounting, Thammasat University
- Certified Public Accountant (Thailand) (CPA)
- Certified Internal Auditor (CIA), The Institute of Internal Auditors (IIA)
- Certified Control Self – Assessment (CCSA), The Institute of Internal Auditors (IIA)
- TLCA Executive Development Program #13, Thai Listed Companies Association
- IFRS S1 and IFRS S2, Thailand federation of accounting professions
- Tax and Accounting Due Diligence For M&A and IPO, Thailand federation of accounting professions
- TFRS9 workshop, Thailand federation of accounting professions
- Enhancing the Audit Committee's oversight capabilities with emerging standards and Technologies, PricewaterhouseCoopers (Thailand)
- Ethical Challenges Along the Path to Sustainability in Future, Institute of Internal Auditors Thailand

% Share Held

- Own Share : 0

Work Experience in the Last Five Years

Banpu Group

- 2018 - Present : Head of Global Internal Audit and Compliance, Banpu Plc.
- 2018 - Present : Secretary of the Audit Committee, Banpu Plc.
- 2014 - 2017 : Senior Vice President – Information Technology, Banpu Plc.

Remark:

% Share Held which is indicated as "0" means % share held less than 1% while "–" means not holding any shares.



ATTACHMENT 2: DETAILS OF THE MANAGEMENT AND CONTROLLING PARTIES OF BANPU AND ITS SUBSIDIARIES

Name	Banpu	Subsidiaries																	
		AACI	AFE	ALD	AZE	Banpu NEXT	BAR	BEH	BEN	BES	BEST	BIVSG	BIVTH	BIVUS	BJP	BKV	BKV-BPP	BMC	BMS
1. Mr. Chanin Vongkusolkit	X	/	/			/	/	/	/			/	/	/	/	/			
2. Mr. Teerana Bhongmakapat	//																		
3. Mr. Buntoeng Vongkusolkit	/																		
4. Mr. Metee Auapinyakul	/																		
5. Mr. Ongart Auapinyakul	/																		
6. Mr. Verajet Vongkusolkit	/					/													
7. Mr. Sinon Vongkusolkit	/,M	/	/			/	/	/	/			/	/	/	/	/	/	/	/
8. Mr. Anon Sirisaengtaksin	/											/			/	/			
9. Mr. Pichai Dusdeekulchai	//																		
10. Mr. Teerapat Sanguankotchakorn	///																		
11. Mr. Piriya Khempon	///																		
12. Mrs. Watanan Petersik	//																		
13. Mr. Sarayuth Saengchan	/																		
14. Dr. Kirana Limpaphayom	O	/				/	/	/	/	/	/	/	/	/	/	/	/	/	/
15. Mr. Jamon Jamuang	O																		
16. Mr. Issara Niropas	O															/			
17. Mr. Smittipon Srethapramote	O		/	/	/		/	/	/	/				/				/	/
18. Mr. Sutee Sukruan	O				/													/	/
19. Ms. Arisara Sakulkarawek	O		/	/				/	/	/	/	/	/				/	/	/
20. Mr. Jirameth Achcha	O																		
21. Mr. Wittapon Jawjit	O																		

Name	Banpu	Subsidiaries																	
		BOG	BPA	BPCI	BPCP	BPI	BPIC	BPINI	BPNE	BPOD	BPP	BPPI	BPPJP	BPPPT	BPPTGK	BPPUS	BPPVC	BPS	BPV
1. Mr. Chanin Vongkusolkit	X		/	/	/					/	/			/		/			
2. Mr. Teerana Bhongmakapat	//																		
3. Mr. Buntoeng Vongkusolkit	/																		
4. Mr. Metee Auapinyakul	/										/								
5. Mr. Ongart Auapinyakul	/																		
6. Mr. Verajet Vongkusolkit	/																		
7. Mr. Sinon Vongkusolkit	/,M	/	/	/	/	/	/			/	/		/	/		/	/	/	/
8. Mr. Anon Sirisaengtaksin	/																		
9. Mr. Pichai Dusdeekulchai	//																		
10. Mr. Teerapat Sanguankotchakorn	///																		
11. Mr. Piriya Khempon	///																		
12. Mrs. Watanan Petersik	//																		
13. Mr. Sarayuth Saengchan	/																		
14. Dr. Kirana Limpaphayom	O		/		/	/				/	/		/	/		/	/		/
15. Mr. Jamon Jamuang	O																		
16. Mr. Issara Niropas	O					/				/	/				/				
17. Mr. Smittipon Srethapramote	O						/	/						/		/	/	/	/
18. Mr. Sutee Sukruan	O																	/	/
19. Ms. Arisara Sakulkarawek	O	/	/	/						/	/						/	/	/
20. Mr. Jirameth Achcha	O																		
21. Mr. Wittapon Jawjit	O																		



Name		Subsidiaries												Associated Companies					Joint Ventures		
		Banpu	DPH	DPN	DPT	DPSZ	ELMD	HUNC	HUNI	ITM	LCE Ninh Thuan	PW	RETAIL	TEMPLE II	ZPP	BLCP	HPC	HSEGK	PFMC	SVOLT	GL
1. Mr. Chanin Vongkusolkit	X						/				/				/	/		/			
2. Mr. Teerana Bhongmakapat	//																				
3. Mr. Buntoeng Vongkusolkit	/																				
4. Mr. Metee Auapinyakul	/																				
5. Mr. Ongart Auapinyakul	/																				
6. Mr. Verajet Vongkusolkit	/																				
7. Mr. Sinon Vongkusolkit	/,M						/		/					/					/		
8. Mr. Anon Sirisaengtaksin	/																				
9. Mr. Pichai Dusdeekulchai	//																				
10. Mr. Teerapat Sanguankotchakorn	///																				
11. Mr. Piriya Khempon	///																				
12. Mrs. Watanan Petersik	//																				
13. Mr. Sarayuth Saengchan	/																				
14. Dr. Kirana Limpaphayom	O								/		/			/	/		/				
15. Mr. Jamon Jamuang	O								/												
16. Mr. Issara Niropas	O									/		/	/	/							
17. Mr. Smittipon Srethapramote	O	/	/	/	/	/			/	/							/			/	/
18. Mr. Sutee Sukruan	O																				
19. Ms. Arisara Sakulkarawek	O						/														
20. Mr. Jirameth Achcha	O																				
21. Mr. Wittapon Jawjit	O																				

Notes:

Symbols of the Board Members and Executives

- X Chairman of the Board of Directors
- V Vice-Chairman of the Board of Directors
- / Directors
- // Independent Director/ Member of the Audit Committee
- /// Independent Director
- M Chief Executive Officer
- N Executive Officer
- O Executive

Abbreviation of the Company, Its Subsidiaries and Associated Companies, Joint Ventures and Other Investments

BANPU Banpu Plc.

Subsidiaries and Associated Companies:

AACI	Asian American Coal, Inc.	BPNE	Banpu NEXT EcoServe Co., Ltd.
AFE	AFE Investments Pty Ltd.	BPOD	BP Overseas Development Co., Ltd.
ALD	Aura Land Development Pte. Ltd.	BPP	Banpu Power Plc.
AZE	Aizu Energy Pte. Ltd.	BPPI	Banpu Power International Ltd.
Banpu NEXT	Banpu NEXT Co., Ltd.	BPPJP	Banpu Power (Japan) Co., Ltd.
BAR	ACN 152 429 206 Pty Ltd.	BPPPT	BPPUS Power Trading, LLC
BEH	Banu Energy Holding Pty Ltd.	BPPTGK	Banpu Power Trading G.K.
BEN	Banpu Energy Australia Pty Ltd.	BPPUS	Banpu Power US Corporation
BES	Banpu Engineering Services Co., Ltd.	BPPVC	BPP Vinh Chau Wind Power LLC
BEST	Banpu Energy Services (Thailand) Co., Ltd.	BPS	Banpu Singapore Pte. Ltd.
BIVSG	Banpu Innovation & Ventures (Singapore) Pte. Ltd.	BPV	Banpu Ventures Pte. Ltd.
BIVTH	Banpu Innovation & Ventures Co., Ltd.	BPVT	Banpu Vietnam LLC
BIVUS	Banpu Innovation & Ventures LLC	BRA	Banpu Renewable Australia Pty Ltd.
BJP	Banpu Japan K.K.	BRES	BRE Singapore Pte. Ltd.
BKV	BKV Corporation	BRS	Banpu Renewable Singapore Pte. Ltd.
BKV-BPP	BKV-BPP Power, LLC	CEY	Centennial Coal Co., Ltd.
BMC	Banpu Minerals Co., Ltd.	DPH	Durapower Holdings Pte. Ltd.
BMS	Banpu Minerals (Singapore) Pte. Ltd.	DPN	DP NEXT Co., Ltd.
BNAC	Banpu North America Corporation	DPT	Durapower Technology (Thailand) Co., Ltd.
BNGE	Banpu NEXT Green Energy Co., Ltd.	DPSZ	Suzhou Durapower Technology Co., Ltd.
BNGL	Banpu NEXT Green Leasing Co., Ltd.	ELMD	EI Wind Muidinh Ltd.
BNGS	Banpu NEXT Green Services Co., Ltd.	HUNC	Hunnu Coal Pty Ltd.
BNS1	Banpu NEXT Solar 1 Co., Ltd.	HUNI	Hunnu Investment Pte. Ltd.
BOG	BOG Co., Ltd.	ITM	PT. Indo Tambangraya Megah Tbk
BPA	Banpu Australia Co., Pty Ltd.	LCE Ninh Thuan	Licogi 16 Ninh Thuan Investment Renewable Energy Joint Stock Company
BPCI	Banpu Coal Investment Co., Ltd.	PW	Pan-Western Energy Corporation LLC
BPCP	Banpu Coal Power Ltd.	RETAIL	BKV-BPP Retail, LLC
BPI	Banpu International Ltd.	TEMPLE II	Temple Generation II, LLC
BPIC	Banpu Power Investment Co., Ltd.		
BPINI	BPIN Investment Co., Ltd.		

Joint Ventures:

BLCP	BLCP Power Ltd.
HPC	Hongsa Power Co., Ltd.
HSEGK	Hokkaido Solar Estate G.K.
PFCM	Phu Fai Mining Co., Ltd.
SVOLT	SVOLT Energy Technology (Thailand) Co., Ltd.

Other Investments:

GL	Green Li-ion Pte. Ltd.
OYIKA	Oyika Pte. Ltd.



Banpu Public Company Limited



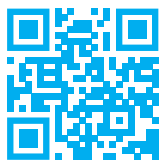
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www.banpu.com





ENERGY SYMPHONICS

พลาพลังงานที่หลากหลาย
เพื่อการเปลี่ยนผ่านพลังงานที่ยั่งยืน

CONTENTS

01

Report of the Board of
Directors' Responsibilities
for the Financial Statements

02

Report of
the Audit Committee
to Shareholders

07

Independent
Auditor's Report

12

Statement of
Financial Position

19

Statement of
Comprehensive Income

23

Statement of
Changes in Equity

27

Statement of
Cash Flows

32

Notes to the Consolidated
and Separate
Financial Statements

REPORT OF THE BOARD OF DIRECTORS' RESPONSIBILITIES FOR THE FINANCIAL STATEMENTS

The main priority of the Board of Directors is to supervise the Company's operations, making sure they are in line with good corporate governance policy and that the financial statements and financial information appearing in the Company's annual report (56-1 One Report) are accurate, complete, and adequate. Its duty is also to make sure that the financial statements are in line with Thai Financial Reporting Standards. In addition, the Board of Directors must also ensure that the Company has an effective internal control system to assure the credibility of its financial statements. The Board also ensures protection over potential conflicts of interest through systems which are place to prevent unusual transactions. Considering relevant connected transactions which might lead to possible conflicts of interest are closely monitored to ensure they are genuine transactions and are reasonably carried out, based on the normal course of business and for the Company's maximum benefits, and that the Company is in compliance with relevant laws and regulations. The Audit Committee has already reported the result of its action to the Board of Directors and has also reported its opinions in the Audit Committee's Report as seen in the annual report (56-1 One Report).

The Board of Directors is of the opinion that the Company's internal control system has been proved to be satisfactory. The Board was able to obtain reasonable assurance on the credibility of the Company's financial statements as at 31 December 2024 which the Company's auditor has audited based on the generally-accepted accounting standards. The auditor is of the opinion that the financial statements present fairly the Company's financial position and the results of its operations in accordance with generally accepted accounting principles.



Mr. Chanin Vongkusolkrit
Chairman of the Board of Directors



Mr. Sinon Vongkusolkrit
Chief Executive Officer





REPORT OF THE AUDIT COMMITTEE TO SHAREHOLDERS

Dear Shareholders of Banpu Public Company Limited,

The Audit Committee of Banpu Public Company Limited is comprised of three independent directors, each with a wealth of expertise in management, economics, accounting, and finance. This diverse range of knowledge ensures that the Committee is fully equipped to assess the accuracy and reliability of the company's financial statements. Furthermore, the members meet all qualifications and requirements set forth by the Securities and Exchange Commission (SEC) and the Stock Exchange regulations. The Audit Committee is composed of the following three members:

1. Mr. Teerana Bhongmakapat	Chairman
2. Mr. Pichai Dusdeekulchai	Member
3. Mrs. Watanan Petersik	Member

The Audit Committee is supported by Ms. Wiyada Wiboonsirichai, Head of Global Internal Audit and Compliance, who serves as the Secretary of the Committee.

The Audit Committee has independently fulfilled its responsibilities in accordance with the scope and duties delegated by the Board of Directors, as outlined in the Audit Committee Charter. These actions are in line with the best practices recommended by the Securities and Exchange Commission (SEC). The Committee has diligently reviewed and supported the company's adherence to principles of good corporate governance, with a strong focus on risk management and ensuring the sufficiency of internal controls. The Committee's efforts are aimed at

fostering a transparent, fair organization that combats corruption, maintains an effective internal audit process, and aligns with the company's objectives, while considering the interests and needs of all stakeholders. The key activities and outcomes are outlined below:

- The Committee has actively driven improvements in corporate governance and risk management practices, emphasizing the need for management to raise awareness among employees to act with caution. This includes thorough risk assessments, reviews of strategic plans, and the continuous update of relevant policies and regulations. Furthermore, the Committee has overseen the implementation of internal controls across key processes, including stringent security measures for technology, all designed to enhance stakeholder confidence in the company's operations.
- The Audit Committee has sought advice from and provided valuable guidance to management in overseeing and monitoring the operations of various departments, including risk management, resource allocation, auditing, and the oversight of transparency in related-party transactions. These efforts are intended to ensure that the company's operational processes remain reliable and robust enough to support sustainable business practices over the long term.
- The Committee has given particular attention to overseeing the company's investments and the growth of its subsidiaries, in line with the company's overall strategy. The Committee has met with the Risk Management Department and management in

regular meetings to exchange information, ensuring that the company's investment processes are analyzed and reviewed comprehensively. These processes are continually adapted to align with the changing business environment. Additionally, the Committee

remains committed to monitoring investment performance within the framework of sustainable business practices. In 2024, the Audit Committee convened a total of 9 meetings. Details of each committee member's attendance are as follows:

Name-Surname	Position	Number of Attendance
1. Mr. Teerana Bhongmakapat	Chairman	9/9
2. Mr. Pichai Dusdeekulchai	Member	9/9
3. Mrs. Watanan Petersik	Member	8/9

The Audit Committee conducted joint meetings with management, the Internal Audit Department, and the external auditors on relevant matters, as well as separate meetings with the external auditors without the presence of management. The Committee regularly reported its findings and activities to the Board of Directors on a quarterly basis. Below is a summary of the key activities undertaken:

1. Review of Financial Reports

The Audit Committee reviewed the quarterly and annual financial statements for 2024, including the consolidated financial statements, in collaboration with management, the Internal Audit Department, and the external auditors. The Committee carefully examined the accuracy and completeness of the financial statements, significant accounting adjustments, and estimates affecting the financial reports. Additionally, the Committee reviewed the adequacy of accounting methods, the scope of the audit, and the sufficiency of disclosures. The independence of the external auditors was also maintained. The Committee ensured that the preparation of the financial reports complied with legal requirements and generally accepted accounting standards, and that the reports were reliable, timely, and provided relevant information for users of the financial statements.

2. Review of Internal Controls and Internal Auditing

The Audit Committee consistently reviewed and monitored the effectiveness of the company's internal control systems, in close collaboration with the Internal Audit Department, on a quarterly basis. This review covered investments, operations, resource management, asset protection, prevention or reduction of risks associated with potential damage, fraud, financial report reliability, and compliance with laws and regulations. Additionally, the Committee oversaw IT governance, with a particular focus on continuous improvements in cybersecurity to support the company's strategy and ensure sustainable business operations. Based on the internal control adequacy evaluation following the framework of the Securities and Exchange Commission, no significant deficiencies were found, confirming that the company's internal control system is robust and appropriate.

Furthermore, the Audit Committee supervised the Internal Audit Department, which reviewed and approved the team's strategic plan, "3P" (Protect, Proactive, Proper Governance), and the annual audit plan, which addresses the company's risks and new business areas. The Committee also followed up on the results of audits and the implementation of the audit plan, offering recommendations and



monitoring the resolution of key issues raised by management every quarter. This ongoing oversight ensures strong governance and sufficient internal controls. Additionally, the Committee evaluated the adequacy of the internal audit budget, personnel, and independence, while supporting the development of internal auditors to enhance their knowledge and expertise. The Committee further promoted the quality of audits (Quality Assurance Review: QAR) in accordance with international standards, ensuring the protection of stakeholders' interests with efficiency and reliability. The focus was on evaluating the achievement of organizational goals, enhancing operational efficiency, and increasing the advisory role of internal auditors, utilizing technology to analyze audit data, and improving business operations to add value to the organization.

3. Review of Compliance with Relevant Business Laws

The Audit Committee has reviewed the company's adherence to applicable laws and regulations. The Corporate Compliance Department plays a vital role in promoting, monitoring, and ensuring that business operations align with legal and regulatory requirements. This department regularly reports its activities to the Audit Committee and continuously develops practices and tools to ensure proactive legal compliance. Key initiatives include:

- **Corporate Compliance Practices:** The company has established standardized compliance practices applicable across all countries of operation. The focus is on effective communication to foster a corporate culture where both management and employees consistently recognize the importance of legal compliance.

- **Compliance In-Hand System:** The company has implemented the Compliance In-Hand system, an extension of the Laws In-Hand system, which enables management and employees to efficiently monitor and track legal reports. The system also addresses risks associated with compliance across different countries, incorporating a Compliance Obligations List (COL).
- **Permit and License Monitoring System:** This interconnected system ensures that the company's business operations are fully aligned with legal requirements. It also supports business expansion opportunities in accordance with the company's strategic goals.
- **Global Compliance Communication System:** In collaboration with relevant departments, the company organizes ESG (Environmental, Social, and Governance) submissions to raise awareness of the importance of complying with local laws in each country of operation. This includes new regulations on environmental management, decarbonization, climate change, AI technology, and related tax matters. The company aims to implement these regulations efficiently, in line with its sustainability-focused business model.
- **Personal Data Protection Compliance System:** The company has established systems and processes in full compliance with the Personal Data Protection Act (PDPA) in Thailand, as well as similar laws in other countries where the company operates. These systems are continuously updated to comply with the evolving legal frameworks of the jurisdictions in which the company invests.

4. Corporate Governance

The Audit Committee has reviewed the effectiveness and efficiency of the company's corporate governance practices. It has found that the Board of Directors, management, and employees consistently adhere to policies with diligence. The company is committed to conducting its business with integrity, transparency, and responsibility towards both society and the environment, creating value for shareholders and benefiting all stakeholders. This is achieved through the application of ESG (Environmental, Social, and Governance) principles and strong corporate governance, while upholding ethical business practices. In its review of potential conflicts of interest, the Committee has confirmed that the company operates within reasonable commercial terms and complies with the laws and regulations of the Stock Exchange of Thailand. The company has a clearly defined Anti-Corruption Policy and Whistleblower Policy and Channel, with an Investigation Committee tasked with impartially investigating complaints and implementing measures to prevent and mitigate risks associated with corruption and unethical behavior.

5. Risk Management Oversight

The Audit Committee has assessed the effectiveness and efficiency of the company's risk management processes, including policies, plans, and strategies for managing risks that could affect the company's performance. Working closely with the Risk Management Department, the Committee has provided recommendations for ongoing improvements to ensure the company is well-prepared for unforeseen events on a quarterly basis.

In terms of risk mitigation, the company has developed strategic plans to address risks that could arise from changes in the business environment. These include global events, supply and demand

imbalances, regulatory shifts, and rapid technological advancements. These efforts are aimed at ensuring the company remains flexible and adaptable. Furthermore, the company has established operational frameworks aligned with ESG principles, evaluating both short-term and long-term risks related to the environment, society, and governance to ensure sustainable corporate governance based on ethical business practices.

6. Appointment of Auditor and Determination of Audit Fees for 2025

The company has established a rigorous process for selecting and appointing external auditors, ensuring that auditors are qualified and suited to perform audits according to international standards and in line with the company's governance principles.

For 2025, the Audit Committee reviewed the selection of the external auditor based on the company's established criteria, which include the auditor's past performance, experience, knowledge, expertise, independence, timeliness, and the reasonableness of the proposed audit fees. The Committee also confirmed that the selected auditor meets the regulatory requirements set by the Stock Exchange of Thailand. Following this review, the Audit Committee recommended the following auditors for approval by the Board of Directors and subsequent shareholder approval:

1. **Ms. Amornrat Phermphoonwattanasook,**

License No. 4599, and/or

2. **Ms. Rojanart Panyathananusart,**

License No. 8435, and/or

3. **Mr. Pongthavee Rattanakoses,**

License No. 7795, and/or

4. **Mr. Boonrueng Lertvisetwit,**

License No. 6552.



The external audit services will be provided by PricewaterhouseCoopers ABAS Ltd. (PwC), with any one of the listed auditors appointed to conduct the audit and express an opinion on the company's financial statements. In the event that the designated auditor is unavailable, PwC may assign another qualified auditor from its firm to perform the audit in their place. The total audit fee is set at 3,160,000 baht.

The Audit Committee has fully carried out its responsibilities, as outlined in the Audit Committee Charter, with due care, independence, and thoroughness, always for the benefit of all stakeholders. The Committee confirms that the company adheres to sound governance practices, maintains an appropriate risk management framework, complies with all relevant laws and regulations, and upholds effective internal controls and internal auditing processes. These measures effectively mitigate risks and contribute to the creation of sustainable business value. Moreover, the company's financial statements are accurate, reliable, and transparently disclosed in accordance with generally accepted accounting principles.

24 February 2025

On behalf of the Audit Committee

Mr. Teerana Bhongmakapat
Chairman of the Audit Committee
Banpu Public Company Limited

INDEPENDENT AUDITOR'S REPORT

To the shareholders of Banpu Public Company Limited

My opinion

In my opinion, the consolidated financial statements and the separate financial statements present fairly, in all material respects, the consolidated financial position of Banpu Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial position of the Company as at 31 December 2024, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRS).

What I have audited

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2024;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include material accounting policies and other explanatory information.

Basis for opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Code of Ethics for Professional Accountants including Independence Standards issued by the Federation of Accounting Professions (TFAC Code) that are relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with the TFAC Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.



Key audit matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the consolidated and separate financial statements of the current period. I determine one key audit matter: Impairment assessment of goodwill. The matter was addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on the matter.

Key audit matter	How my audit addressed the key audit matter
<p>Impairment assessment of goodwill</p> <p>As at 31 December 2024, the Group has net goodwill, after an accumulated impairment of US Dollar 452.63 million, represented 3.65% of its total consolidated assets. In 2024, the Group didn't recognise an impairment loss for the goodwill as disclosed in Note 19, Goodwill.</p> <p>Management tests the impairment of goodwill annually or whenever there is an indicator of impairment. The impairment test is performed at the level of the cash-generating unit (CGU) by establishing a recoverable amount, which is the higher of the value in use and the fair value less costs of disposal. Establishing the recoverable amount involves significant management judgments regarding the future operating results of the business, projected cash flows, and the discount rate applied to these projected cash flows.</p> <p>The goodwill of US Dollar 303.86 million arose from the acquisition of a coal mining business in Australia, representing 67% of the net value of the goodwill. The key assumptions applied in establishing a recoverable amount of the coal mining business in Australia include global coal price trends, estimated coal reserves, production plans, foreign exchange rate forecasts, cost structures, inflation rates, and the discount rate applied to the projected cash flows.</p>	<p>The audit procedures for assessing the impairment of goodwill arising from the acquisition of the coal mining business in Australia were performed by the component auditor in Australia. I planned and designed the overall audit procedures for the Group and communicated these to the component auditor. Additionally, I reviewed and evaluated the work of the component auditor to obtain sufficient and appropriate audit evidence regarding the impairment testing of the goodwill from the acquisition of the coal mining business in Australia. I also assessed the appropriateness of the identification of the Group's cash-generating units and evaluated the Group's impairment control testing process.</p> <p>The component auditor carried out the following procedures to assess management's impairment testing of goodwill which I have reviewed.</p> <ul style="list-style-type: none">• inquired with management to understand the assumptions used and assessed the impairment testing process and assumptions applied by management.• evaluated management's key assumptions used in the impairment testing of goodwill, particularly information related to global coal price trends, estimated coal reserves, production plans, foreign exchange rate forecasts, cost structures, inflation rates, and the discount rate. The procedures included comparing key assumptions with external reliable sources and approved business and mining plans.

Key audit matter	How my audit addressed the key audit matter
<p>I focused on the impairment test of goodwill arising from the acquisition of coal mining business in Australia due to its significant value and because establishing the recoverable amount involves numerous assumptions. Moreover, the determination of these assumptions involves management's significant judgments in assessing the possibility of future business plans.</p>	<ul style="list-style-type: none">• assessed the reasonableness of the business and mining plans by comparing them with the actual results of the year 2024.• tested the reasonableness of the discount rate by considering and comparing it with data from companies in the same industry, which can be referenced from publicly available information, to assess whether the discount rate used by management is within an acceptable range.• tested the sensitivity analysis of the key assumptions used by management to identify factors affecting the sensitivity analysis and the potential impact of changes in the assumptions. <p>Based on the results of the aforementioned procedures, I found that the key assumptions used by management in assessing the recoverable amount of goodwill are reasonable and consistent with the supporting evidence.</p>

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to the audit committee.



Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRS, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group's and the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated and separate financial statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the audit committee with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers ABAS Ltd.

Amornrat Pearmpoonvatanasuk

Certified Public Accountant (Thailand) No. 4599

Bangkok

26 February 2025



STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

	Notes	Consolidated financial statements			
		US Dollar'000		Baht'000	
		2024	2023	2024	2023
Assets					
Current assets					
Cash and cash equivalents	11	1,595,623	1,574,962	54,231,862	53,900,381
Investment in debt instruments measured at amortised cost		95,000	-	3,228,850	-
Investment in debt instruments measured at fair value through profit or loss	7	5,480	23,369	186,252	799,777
Investment in debt instruments measured at fair value through other comprehensive income	7	83	62	2,827	2,120
Trade receivables and note receivables, net	12	492,430	528,775	16,736,657	18,096,440
Advances to and amounts due from related parties	30	4,468	1,294	151,866	44,297
Short-term loans to related parties	30	7,264	4,237	246,900	145,000
Current portion of long-term loans to a related party	30	1,495	1,242	50,803	42,489
Inventories, net	13	146,308	183,070	4,972,709	6,265,274
Spare parts and machinery supplies, net		63,380	60,738	2,154,152	2,078,658
Derivative assets due in one year	7	22,451	114,042	763,063	3,902,884
Current portion of deferred exploration and development expenditures and deferred overburden expenditures/stripping costs, net	17	52,466	119,367	1,783,221	4,085,131
Other current assets	14	264,045	464,277	8,974,312	15,889,096
Total current assets		2,750,493	3,075,435	93,483,474	105,251,547

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

	Notes	Consolidated financial statements			
		US Dollar'000		Baht'000	
		2024	2023	2024	2023
Assets (continued)					
Non-current assets					
Long-term loans to related parties	30	22,556	27,658	766,646	946,560
Investments in associates and joint ventures accounted for using the equity method, net	15	2,032,074	1,971,796	69,065,934	67,481,381
Investments in debt instruments measured at amortised cost		154	60,153	5,240	2,058,638
Investment in debt instruments measured at fair value through profit or loss	7	304,747	209,383	10,357,719	7,165,781
Investment in equity instruments measured at fair value through profit or loss	7	29,865	15,817	1,015,047	541,322
Investment in equity instruments measured at fair value through other comprehensive income	7	155,622	167,035	5,289,255	5,716,482
Derivative assets	7	38,132	50,085	1,296,043	1,714,074
Investment property, net		1,488	1,488	50,570	50,910
Property, plant and equipment, net	16	4,280,689	4,601,758	145,491,646	157,487,327
Right-of-use assets, net		55,837	56,460	1,897,795	1,932,236
Deferred exploration and development expenditures and deferred overburden expenditures/stripping costs, net	17	819,330	788,594	27,847,314	26,988,283
Mining property rights, net	18	765,364	862,761	26,013,109	29,526,539
Goodwill, net	19	452,631	484,854	15,383,964	16,593,303
Deferred tax assets	20	91,272	78,691	3,102,150	2,693,065
Other non-current assets	21	599,057	548,315	20,360,664	18,765,137
Total non-current assets		9,648,818	9,924,848	327,943,096	339,661,038
Total assets		12,399,311	13,000,283	421,426,570	444,912,585

The notes to the consolidated and separate financial statements are an integral part of these financial statements.



STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

		Consolidated financial statements			
		US Dollar'000		Baht'000	
Notes		2024	2023	2024	2023
Liabilities and equity					
Current liabilities					
Short-term loans from financial institutions	22	879,701	726,648	29,899,183	24,868,280
Advances from a related party	30	-	2	-	72
Trade payables		140,448	139,708	4,773,529	4,781,259
Accrued interest expenses		41,761	56,956	1,419,359	1,949,217
Accrued royalty expenses		4,797	5,351	163,026	183,134
Accrued overburden and coal transportation costs		116,609	88,864	3,963,310	3,041,211
Current corporate income tax payable		28,980	16,987	984,958	581,352
Current provisions for employee benefits		71,046	79,212	2,414,706	2,710,911
Derivative liabilities due in one year	7	50,760	77,796	1,725,215	2,662,453
Current portion of long-term loans from financial institutions, net	24	748,294	885,295	25,432,943	30,297,733
Current portion of debentures, net	25	172,096	204,493	5,849,195	6,998,419
Current portion of lease liabilities, net		9,892	13,245	336,204	453,295
Other current liabilities	23	431,774	464,762	14,675,093	15,905,691
Total current liabilities		2,696,158	2,759,319	91,636,721	94,433,027
Non-current liabilities					
Long-term loans from financial institutions, net	24	1,812,700	2,251,629	61,609,872	77,058,184
Debentures, net	25	2,559,986	2,430,573	87,008,550	83,182,220
Non-current provisions for employee benefits		45,054	37,137	1,531,295	1,270,965
Derivative liabilities	7	52,348	4,688	1,779,182	160,446
Lease liabilities, net		27,975	30,451	950,825	1,042,136
Deferred tax liabilities	20	195,073	276,232	6,630,133	9,453,574
Provision for decommissioning, restoration, and mine and natural gas rehabilitation		298,202	277,947	10,135,273	9,512,266
Other non-current liabilities		10,533	104,511	357,989	3,576,646
Total non-current liabilities		5,001,871	5,413,168	170,003,119	185,256,437
Total liabilities		7,698,029	8,172,487	261,639,840	279,689,464

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

		Consolidated financial statements			
		US Dollar'000		Baht'000	
	Note	2024	2023	2024	2023
Liabilities and equity (continued)					
Equity					
Share capital	26				
Registered share capital					
10,018,902,725 ordinary shares at par of Baht 1 each					
(31 December 2023: 10,149,163,028 ordinary shares at par of Baht 1 each)					
				10,018,903	10,149,163
Issued and paid-up share capital					
10,018,902,725 ordinary shares at paid-up of Baht 1 each					
		285,394	285,394	10,018,903	10,018,903
Premium on share capital	26	1,100,990	1,100,990	39,061,577	39,061,577
Share-based payments		6,228	52,521	211,995	1,802,092
Retained earnings					
Appropriated					
- Legal reserve	26	109,086	109,086	3,643,681	3,643,681
- Other reserves	26	212,254	212,254	7,200,291	7,200,291
Unappropriated		2,552,496	2,688,439	85,995,440	90,717,961
Other components of equity	26	(944,584)	(626,151)	(33,228,679)	(21,624,808)
Equity attributable to owners of the Parent					
		3,321,864	3,822,533	112,903,208	130,819,697
Non-controlling interests		1,379,418	1,005,263	46,883,522	34,403,424
Total equity					
		4,701,282	4,827,796	159,786,730	165,223,121
Total liabilities and equity					
		12,399,311	13,000,283	421,426,570	444,912,585

The notes to the consolidated and separate financial statements are an integral part of these financial statements.



STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

		Separate financial statements			
		US Dollar'000		Baht'000	
Notes		2024	2023	2024	2023
Assets					
Current assets					
Cash and cash equivalents	11	143,504	150,733	4,877,413	5,158,570
Trade receivables	12	18,609	32,988	632,494	1,128,956
Advances to and amounts due from related parties	30	275,827	180,553	9,374,777	6,179,110
Short-term loans to related parties	30	2,559	26,551	86,962	908,647
Current portion of long-term loan to a related party	30	9,347	44,077	317,700	1,508,446
Inventories, net	13	6,012	9,867	204,341	337,675
Derivative assets due in one year	7	676	433	22,974	14,822
Other current assets	14	9,752	9,092	331,376	311,168
Total current assets		466,286	454,294	15,848,037	15,547,394
Non-current assets					
Long-term loans to and interest receivables					
from related parties, net	30	2,170,961	2,272,122	73,786,384	77,759,501
Investments in subsidiaries using cost method, net	15	3,964,756	3,914,504	134,753,744	133,967,240
Investment in equity instruments measured at fair value					
through other comprehensive income	7	9,482	11,245	322,277	384,850
Derivative assets	7	7,578	8,600	257,562	294,311
Investment property, net		1,020	1,020	34,681	34,921
Property, plant and equipment, net	16	4,459	4,011	151,551	137,278
Right-of-use assets, net		1,778	514	60,441	17,582
Other non-current assets	21	13,394	10,128	455,224	346,669
Total non-current assets		6,173,428	6,222,144	209,821,864	212,942,352
Total assets		6,639,714	6,676,438	225,669,901	228,489,746

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

		Separate financial statements			
		US Dollar'000		Baht'000	
Notes		2024	2023	2024	2023
Liabilities and equity					
Current liabilities					
Short-term loans from financial institutions	22	630,183	464,596	21,418,608	15,900,000
Trade payables to a related party	30	4,970	10,651	168,922	364,496
Advances from and amounts due to related parties	30	1,225	280	41,624	9,570
Accrued interest expenses		34,105	35,089	1,159,157	1,200,867
Derivative liabilities due in one year	7	910	1,318	30,935	45,108
Current portion of long-term loans from					
financial institutions, net	24	620,965	540,599	21,105,282	18,501,097
Current portion of debentures, net	25	172,096	204,493	5,849,195	6,998,419
Current portion of lease liabilities, net		870	399	29,576	13,658
Other current liabilities	23	8,985	11,586	305,376	396,526
Total current liabilities		1,474,309	1,269,011	50,108,675	43,429,741
Non-current liabilities					
Long-term loans from financial institutions, net	24	699,318	862,169	23,768,359	29,506,279
Debentures, net	25	2,398,332	2,270,063	81,514,255	77,689,062
Non-current provisions for employee benefits		20,451	17,671	695,074	604,773
Derivative liabilities	7	4,990	4,688	169,589	160,446
Lease liabilities, net		1,108	148	37,643	5,076
Deferred tax liabilities	20	10,346	17,453	351,656	597,281
Other non-current liabilities		2,853	907	96,963	31,035
Total non-current liabilities		3,137,398	3,173,099	106,633,539	108,593,952
Total liabilities		4,611,707	4,442,110	156,742,214	152,023,693

The notes to the consolidated and separate financial statements are an integral part of these financial statements.



STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

		Separate financial statements			
		US Dollar'000		Baht'000	
Note		2024	2023	2024	2023
Liabilities and equity (continued)					
Equity					
Share capital	26				
Registered share capital					
10,018,902,725 ordinary shares at par of Baht 1 each					
(31 December 2023: 10,149,163,028 ordinary shares at par of Baht 1 each)				10,018,903	10,149,163
Issued and paid-up share capital					
10,018,902,725 ordinary shares at paid-up of Baht 1 each		285,394	285,394	10,018,903	10,018,903
Premium on share capital	26	1,100,990	1,100,990	39,061,577	39,061,577
Retained earnings					
Appropriated					
- Legal reserve	26	28,539	28,539	1,001,890	1,001,890
Unappropriated		606,443	806,591	19,579,258	26,597,996
Other components of equity	26	6,641	12,814	(733,941)	(214,313)
Total equity		2,028,007	2,234,328	68,927,687	76,466,053
Total liabilities and equity		6,639,714	6,676,438	225,669,901	228,489,746

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2024

		Consolidated financial statements			
		US Dollar'000		Baht'000	
Notes		2024	2023	2024	2023
Sales and service income		5,148,446	5,083,007	181,549,286	176,955,269
Cost of sales and services		(3,900,127)	(3,665,388)	(137,558,710)	(127,662,601)
Gross profit		1,248,319	1,417,619	43,990,576	49,292,668
Dividend income from investment in equity instruments		10,066	12,885	353,314	450,933
Management fee and others		60,992	67,288	2,152,553	2,332,721
Interest income		57,011	48,386	2,011,883	1,684,868
Selling expenses		(236,406)	(167,988)	(8,328,477)	(5,825,465)
Administrative expenses		(378,772)	(387,993)	(13,309,457)	(13,544,121)
Royalty fee		(329,150)	(378,903)	(11,593,080)	(13,143,159)
Impairment loss on investment in a joint venture	15	(48,035)	-	(1,633,147)	-
Loss from remeasurement of previously held equity interest		-	(6,387)	-	(224,596)
Bargain purchase from business combination		-	88,515	-	3,008,506
Net gains (losses) from changes in fair value of financial instruments		116,571	(89,120)	4,084,844	(3,143,004)
Net gains (losses) on exchange rate		(87,994)	1,923	(2,998,542)	(5,027)
Interest expenses		(376,862)	(373,870)	(13,314,737)	(13,030,516)
Other finance costs		(23,656)	(10,225)	(851,707)	(356,451)
Share of profit from associates and joint ventures accounted for using the equity method	15	196,032	268,290	6,929,595	9,297,035
Profit before income taxes		208,116	490,420	7,493,618	16,794,392
Income taxes	20	(96,807)	(118,670)	(3,433,580)	(4,031,887)
Profit for the year		111,309	371,750	4,060,038	12,762,505
Other comprehensive income (expense), net of taxes:					
Items that will not be reclassified to profit or loss					
- Remeasurements of post-employment benefit obligations		(8,507)	(2,611)	(288,897)	(90,896)
- Changes in fair value of financial assets measured at fair value through other comprehensive income		(2,027)	4,399	(66,928)	168,748
- Share of other comprehensive income (expense) from joint ventures accounted for using the equity method	15	(471)	14,426	(16,019)	507,737
- Translation differences		-	-	(302,653)	(1,570,596)
Total items that will not be reclassified to profit or loss, net of taxes		(11,005)	16,214	(674,497)	(985,007)

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2024

		Separate financial statements			
		US Dollar'000		Baht'000	
	Notes	2024	2023	2024	2023
Sales		59,181	62,222	2,092,181	2,169,265
Cost of sales		(54,249)	(59,676)	(1,917,946)	(2,081,391)
Gross profit		4,932	2,546	174,235	87,874
Dividend income from subsidiaries	30	46,484	432,534	1,668,688	15,003,762
Dividend income from investment in equity instruments		195	122	7,169	4,197
Management fee and others		33,764	37,486	1,188,093	1,300,810
Interest income		159,856	140,713	5,650,495	4,902,205
Selling expenses		(4,718)	(5,636)	(166,132)	(195,863)
Administrative expenses		(57,142)	(56,676)	(2,007,744)	(1,976,489)
Expected credit losses	30	(10,621)	-	(361,092)	-
Net gains from changes in fair value of financial instruments		1,690	24,077	58,411	845,839
Net gains (losses) on exchange rate		(55,827)	2,550	(1,871,360)	35,295
Interest expenses		(214,147)	(218,262)	(7,559,307)	(7,597,417)
Other finance costs		(2,966)	(3,331)	(104,714)	(115,859)
Profit (loss) before income taxes		(98,500)	356,123	(3,323,258)	12,294,354
Income taxes	20	6,265	5,136	196,433	218,417
Profit (loss) for the year		(92,235)	361,259	(3,126,825)	12,512,771
Other comprehensive income (losses), net of taxes:					
Items that will not be reclassified to profit or loss					
- Remeasurements of post-employment benefit obligations		(2,518)	(2,188)	(85,597)	(78,019)
- Changes in fair value of financial assets measured at fair value through other comprehensive income		(1,685)	1,054	(59,104)	36,599
- Translation differences		-	-	(302,653)	(1,570,596)
Total items that will not be reclassified to profit or loss, net of taxes		(4,203)	(1,134)	(447,354)	(1,612,016)

The notes to the consolidated and separate financial statements are an integral part of these financial statements.



STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2024

Note	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Other comprehensive income (expense), net of taxes: (continued)				
Item that will be reclassified subsequently to profit or loss				
- Losses on cash flow hedge reserve	(4,488)	(27,374)	(157,871)	(962,923)
Total item that will be reclassified subsequently to profit or loss, net of taxes				
	(4,488)	(27,374)	(157,871)	(962,923)
Other comprehensive expense for the year, net of taxes				
	(8,691)	(28,508)	(605,225)	(2,574,939)
Total comprehensive income (expense) for the year				
	(100,926)	332,751	(3,732,050)	9,937,832
Earnings (losses) per share				
Basic earnings (losses) per share				
28	(0.009)	0.041	(0.312)	1.416

STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2024

Consolidated financial statements																US Dollar'000
Attributable to owners of the Parent																
Other components of equity																
Other comprehensive income (expense)																
Charges in parent's ownership interests in subsidiaries																
Total other components of equity																
Non-controlling interests																
Total equity																
Notes	Issued and paid-up share capital	Premium on share capital	Share-based payment	Legal reserve	Other reserves	Unappropriated	Fair value reserve of financial assets	Cash flow hedge reserve	Net investment hedge	Translation differences	Other reserves	Total other components of equity	Non-controlling interests	Total equity		
Opening balance as at 1 January 2024																
29	285,394	1,100,990	52,521	109,086	212,254	2,688,439	27,455	88,535	24,417	(1,082,028)	372,098	(56,628)	1,005,263	4,827,796		
	-	-	-	-	-	(105,395)	-	-	-	-	-	-	-	(105,395)		
	-	-	-	-	-	-	-	-	-	-	-	-	(87,977)	(87,977)		
	-	-	-	-	-	-	-	-	-	-	-	-	2,870	2,870		
	-	-	-	-	-	-	-	-	-	-	(1,833)	-	2,870	-		
15 e)	-	-	-	-	-	-	-	-	-	-	(1,833)	-	-	(1,833)		
	-	-	-	-	-	-	-	-	-	-	(34,272)	-	(1,833)	-		
15 e)	-	-	(50,870)	-	-	-	-	-	-	-	(28,814)	-	(34,272)	287,828		
	-	-	-	-	-	-	-	-	-	-	(28,814)	-	(28,814)	52,851		
	-	-	4,577	-	-	-	-	-	-	-	-	-	-	-		
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7	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	-	-	-	-	-	-	-	-	-	-	34,832	-	-	34,832		
	-	-	-	-	-	-	-	-	-	-	21,119	-	-	21,119		
	-	-	-	-	-	-	-	-	-	-	677	-	-	677		
	-	-	-	-	-	(23,666)	-	-	-	-	-	-	-	134,975		
	-	-	-	-	-	(6,882)	(2,042)	(108,319)	(6,075)	(193,706)	-	-	-	111,309		
	-	-	-	-	-	-	-	-	-	-	-	-	-	(16,392)		
	-	-	-	-	-	-	-	-	-	-	-	-	-	(333,416)		
Closing balance as at 31 December 2024																
	285,394	1,100,990	6,228	109,086	212,254	2,552,496	25,413	(19,784)	18,342	(1,275,734)	307,179	-	1,379,418	4,701,282		
Opening balance as at 1 January 2023																
26	243,199	826,726	45,578	104,867	183,921	2,793,829	24,848	(72,336)	36,777	(1,091,064)	372,098	(59,367)	(789,044)	999,589		
	42,195	274,264	-	-	-	-	-	-	-	-	-	-	-	-		
26	-	-	-	4,219	-	(4,219)	-	-	-	-	-	-	-	-		
	-	-	-	-	28,333	(28,333)	-	-	-	-	-	-	-	-		
29	-	-	-	-	-	(244,677)	-	-	-	-	-	-	-	-		
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The notes to the consolidated and separate financial statements are an integral part of these financial statements.

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STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2024

Consolidated financial statements															Baht'000
Attributable to owners of the Parent															
Other components of equity															
Changes in parent's ownership interests in subsidiaries															
Other components of equity															
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The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2024

Separate financial statements										US Dollar'000	
Other components of equity											
Other comprehensive income (expense)											
Retained earnings										Total other components of equity	
Fair value reserve of financial assets										Total equity	
Cash flow hedge reserve											
Issued and paid-up share capital											
Premium on share capital											
Legal reserve											
Unappropriated											
Notes											
Opening balance as at 1 January 2024											
29	285,394	1,100,990	28,539	806,591	3,283	9,531	12,814	2,234,328			
	-	-	-	(105,395)	-	-	-	(105,395)			
	-	-	-	(92,235)	-	-	-	(92,235)			
	-	-	-	(2,518)	(1,685)	(4,488)	(6,173)	(8,691)			
Closing balance as at 31 December 2024											
	285,394	1,100,990	28,539	606,443	1,598	5,043	6,641	2,028,007			
Opening balance as at 1 January 2023											
	243,199	826,726	24,320	696,416	2,229	36,905	39,134	1,829,795			
	42,195	274,264	-	-	-	-	-	316,459			
	-	-	4,219	(4,219)	-	-	-	-			
	-	-	-	(244,677)	-	-	-	(244,677)			
	-	-	-	361,259	-	-	-	361,259			
	-	-	-	(2,188)	1,054	(27,374)	(26,320)	(28,508)			
Other comprehensive income (expense) for the year											
Closing balance as at 31 December 2023											
	285,394	1,100,990	28,539	806,591	3,283	9,531	12,814	2,234,328			

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Separate financial statements										Baht'000			
										Other components of equity			
										Other comprehensive income (expense)			
										Cash flow		Total other	
										Fair value reserve of	Translation	components of	Total
Notes	Issued and paid-up share capital	Premium on share capital	Legal reserve	Unappropriated	Fair value reserve of financial assets	hedge reserve	differences	equity	equity	equity	equity		
Opening balance as at 1 January 2024													
29	10,018,903	39,061,577	1,001,890	26,597,996	113,826	296,503	(624,642)	(214,313)	76,466,053				
	-	-	-	(3,806,316)	-	-	-	-	(3,806,316)				
	-	-	-	(3,126,825)	-	-	-	-	(3,126,825)				
	-	-	-	(85,597)	(59,104)	(157,871)	(302,653)	(519,628)	(605,225)				
Closing balance as at 31 December 2024													
	10,018,903	39,061,577	1,001,890	19,579,258	54,722	138,632	(927,295)	(733,941)	68,927,687				
Opening balance as at 1 January 2023													
	8,454,161	28,890,758	845,416	22,769,187	77,227	1,259,426	945,954	2,282,607	63,242,129				
26	1,564,742	10,170,819	-	-	-	-	-	-	11,735,561				
26	-	-	156,474	(156,474)	-	-	-	-	-				
29	-	-	-	(8,449,469)	-	-	-	-	(8,449,469)				
	-	-	-	12,512,771	-	-	-	-	12,512,771				
	-	-	-	(78,019)	36,599	(962,923)	(1,570,596)	(2,496,920)	(2,574,939)				
Closing balance as at 31 December 2023													
	10,018,903	39,061,577	1,001,890	26,597,996	113,826	296,503	(624,642)	(214,313)	76,466,053				

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

For the year ended 31 December 2024

	Notes	Consolidated financial statements			
		US Dollar'000		Baht'000	
		2024	2023	2024	2023
Cash flows from operating activities					
Profit for the year before income taxes		208,116	490,420	7,493,618	16,794,392
Adjustment to reconcile profit before taxes to cash receipts from (payments in) operations					
- Depreciation and amortisation		604,119	572,506	21,343,074	19,891,480
- Write-off property, plant and equipment and intangible assets		5,913	12,841	294,475	443,770
- Write-off of right-of-use assets		621	601	21,530	20,705
- Write-off of deferred exploration and development expenditures		3,072	-	106,754	-
- (Reversal of) expected credit losses		(2,619)	6,850	(95,553)	236,323
- Allowance for slow-moving of inventories		1,607	949	54,637	33,833
- (Reversal of) allowance for slow-moving of spare parts and machinery supplies		554	(704)	19,225	(25,505)
- Dividend income from invesment in equity instruments		(10,066)	(12,885)	(353,314)	(450,933)
- Interest income		(57,011)	(48,386)	(2,011,883)	(1,684,868)
- Interest expenses		376,862	373,870	13,314,737	13,030,516
- Other finance costs		23,656	10,225	851,707	356,451
- Share of profit from associates and joint ventures accounted for using the equity method	15	(196,032)	(268,290)	(6,929,595)	(9,297,035)
- Loss from remeasurement of previously held equity interest		-	6,387	-	224,596
- Bargain purchase from business combination		-	(88,515)	-	(3,008,506)
- Gain on disposal of a subsidiary	15	(7,410)	-	(272,009)	-
- Impairment loss on investment in a joint venture	15	48,035	-	1,633,147	-
- Net gains from disposal of property, plant and equipment and intangible assets		(969)	(43)	(34,342)	(1,458)
- Impairment loss on property, plant and equipment		-	9,814	-	349,763
- Share based payment expenses		4,577	6,943	155,765	246,552
- Net (gains) losses from changes in fair value of financial instruments		(63,224)	143,423	(2,193,286)	4,954,103
- Net losses on exchange rate		208,902	50,611	7,285,779	1,977,615
Cash flow before changes in working capital		1,148,703	1,266,617	40,684,466	44,091,794
Changes in working capital (excluding effects from business combination)					
- Trade receivables and note receivables		38,403	150,957	1,290,561	4,984,190
- Advances to and amounts due from related parties		(748)	(546)	(28,629)	(19,360)
- Inventories		35,155	3,949	1,263,509	153,141
- Spare parts and machinery supplies		(3,196)	(9,874)	(126,222)	(337,984)
- Other current assets		50,666	(27,976)	1,848,888	(983,510)
- Deferred overburden expenditures/stripping costs		(82,248)	(8,875)	(2,889,307)	(322,910)
- Other non-current assets		(21,634)	(48,924)	(787,103)	(1,737,113)
- Trade payables		740	(7,798)	41,302	(283,435)
- Advances from a related party		(2)	2	(71)	72
- Accrued royalty expenses		(554)	(493)	(14,220)	(15,068)
- Accrued overburden and coal transportation costs		27,745	(24,166)	988,215	(847,233)
- Employee benefit obligation		(3,171)	3,525	(112,794)	123,978
- Other current liabilities		14,841	(339,849)	486,710	(11,727,241)
- Other non-current liabilities		(103,961)	(22,574)	(3,565,555)	(732,701)
Cash generated from operating activities		1,100,739	933,975	39,079,750	32,346,620
- Interest paid and other finance costs paid		(407,040)	(367,015)	(14,408,329)	(12,802,509)
- Income tax paid		(163,450)	(453,684)	(5,777,454)	(15,701,862)
- Income tax refund		4,627	8,562	169,845	296,760
Net cash generated from operating activities		534,876	121,838	19,063,812	4,139,009

The notes to the consolidated and separate financial statements are an integral part of these financial statements.



STATEMENT OF CASH FLOWS

For the year ended 31 December 2024

Consolidated financial statements				
Notes	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cash flows from investing activities				
Cash receipts from financial assets measured at fair value through profit or loss	100,126	40,777	3,510,710	1,436,250
Cash payments for financial assets measured at fair value through profit or loss	(145,104)	(95,757)	(5,154,478)	(3,325,587)
Cash receipts from financial assets measured at fair value through other comprehensive income	907	12,621	38,074	446,968
Cash payments for financial assets measured at fair value through other comprehensive income	(3,041)	(2,337)	(109,847)	(80,688)
Cash payments for financial assets measured at amortised cost	(35,000)	(60,153)	(1,189,976)	(2,040,583)
Cash receipts from short-term loans to related parties	30	-	39,739	-
Cash payments for short-term loans to related parties	30	(2,899)	(6,823)	(101,900)
Cash receipts from long-term loans to related parties	30	2,658	-	92,397
Cash payments for long-term loans to related parties	30	(754)	(12,136)	(26,458)
Cash payment for an acquisition of investment in a subsidiary	-	(465,153)	-	(16,358,082)
Net cash receipts from business combination	-	13,762	-	466,700
Net cash payments for business combination	-	(12,530)	-	(433,679)
Net cash receipt from sale of a subsidiary	15	102,810	-	3,773,980
Cash receipt from decrease of investment in a joint venture	15	5,746	-	200,000
Cash payments for additional of investment in associates and joint ventures	15	(33,092)	(37,246)	(1,138,014)
Cash receipts from disposal of property, plant and equipment and intangible assets	27,832	5,760	1,012,390	202,328
Cash payments for purchase of property, plant and equipment and intangible assets	(345,176)	(327,518)	(12,055,367)	(11,315,641)
Cash payments for deferred exploration and development expenditures	(112,459)	(164,645)	(3,981,542)	(5,752,243)
Interest received	51,875	50,118	1,830,065	1,746,607
Cash receipts from dividends from joint ventures	113,941	108,380	3,823,407	3,791,640
Cash receipts from dividends from investment in equity instruments	10,066	12,885	353,314	450,933
Cash receipts (payments) for placement of restricted deposits at banks	143,184	(12,628)	5,252,256	(571,390)
Net cash used in investing activities	(118,380)	(912,884)	(3,870,989)	(31,908,295)

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

For the year ended 31 December 2024

Consolidated financial statements				
Notes	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cash flows from financing activities				
Cash receipts from short-term loans from financial institutions	22	1,734,920	2,150,328	60,930,722
Cash payments of short-term loans from financial institutions	22	(1,588,636)	(1,901,122)	(56,178,047)
Cash receipts from long-term loans from financial institutions	24	935,981	833,930	33,554,593
Cash payments of long-term loans from financial institutions	24	(1,504,403)	(643,575)	(53,817,876)
Cash receipts from debentures	25	267,321	241,135	9,678,356
Cash payments of debentures	25	(191,315)	(251,446)	(7,000,000)
Payments for principal elements of lease payment	-	(18,054)	(31,330)	(638,804)
Dividend paid to shareholders	29	(105,395)	(244,677)	(3,806,316)
Dividend paid to non-controlling interests of subsidiaries	-	(87,977)	(248,021)	(3,113,112)
Cash receipts from increase in share capital	26	-	316,459	-
Cash receipts from increase in share capital of a subsidiary from non-controlling interests	-	2,870	3,054	106,346
Cash payments for decrease in share capital of a subsidiary to non-controlling interests	-	-	(226)	-
Net proceeds from initial public offering of a subsidiary	15	265,081	-	9,217,400
Cash payments for net share settlements related to share-based payment of a subsidiary	15	(53,239)	-	(1,853,063)
Cash payments for treasury stocks of a subsidiary	-	(1,833)	-	(63,813)
Net cash generated from (used in) financing activities	(344,679)	224,509	(12,983,614)	8,751,765
Net increase (decrease) in cash and cash equivalents	71,817	(566,537)	2,209,209	(19,017,521)
Exchange differences on cash and cash equivalents	(51,156)	(12,524)	(1,877,728)	(1,530,319)
Cash and cash equivalents at beginning of the year	1,574,962	2,154,023	53,900,381	74,448,221
Cash and cash equivalents at end of the year	1,595,623	1,574,962	54,231,862	53,900,381

Supplementary information of cash flows

Significant non-cash transactions are as follows:

Other payables for purchase of property, plant and equipment at the end of the year	23	24,993	55,158	849,469	1,887,704
Changes in fair value of contingent liabilities from asset acquisition	7	(7,486)	(24,994)	(263,385)	(866,516)
Changes in fair value of put option over non-controlling interests	7	(21,119)	(2,550)	(705,864)	(79,500)
Acquisitions and remeasurement of right-of-use assets under lease contracts	11,922	8,349	291,202	292,339	
Reclassify deferred offering costs to net with an increase in non-controlling interest upon initial public offering of a subsidiary	15	11,525	-	401,128	-
Decrease of employee compensation liabilities from issuance of new ordinary shares for share-based payment	15	15,941	-	554,850	-
The exercise of the right to convert loans to the other shareholder in Durapower Holdings Pte Ltd. to an investment	-	17,391	-	589,767	
Conversion of short-term loans and its related interest receivable in Durapower Holdings Pte Ltd. to an investment	-	15,842	-	537,237	



STATEMENT OF CASH FLOWS

For the year ended 31 December 2024

Notes	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cash flows from operating activities				
Profit (loss) before income taxes for the period	(98,500)	356,123	(3,323,258)	12,294,354
Adjustments to reconcile profit (loss) before income taxes to cash receipts (payments) from operations				
- Depreciation and amortisation	2,808	2,391	98,872	83,346
- Write-off property, plant and equipment and intangible assets	1,428	-	48,819	6
- Expected credit losses	3010,621	-	361,092	-
- Dividend income from subsidiaries	30(46,484)	(432,534)	(1,668,688)	(15,003,762)
- Dividend income from equity instruments	(195)	(122)	(7,169)	(4,197)
- Interest income	(159,856)	(140,713)	(5,650,495)	(4,902,205)
- Interest expenses	214,147	218,262	7,559,307	7,597,417
- Other finance costs	2,966	3,331	104,714	115,859
- Net gains from disposal of property, plant and equipment and intangible assets	(8)	(15)	(265)	(508)
- Impairment loss on investment in a subsidiary	152,248	-	76,413	-
- Net gains from changes in fair value of financial instruments	(1,355)	(31,837)	(45,056)	(1,113,841)
- Net gains (losses) on exchange rate	48,988	(5,535)	1,632,258	(139,975)
Cash flow before changes in working capital	(23,192)	(30,649)	(813,456)	(1,073,506)
Changes in working capital				
- Trade receivables	13,196	(18,171)	489,357	(642,553)
- Advances to and amounts due from related parties	(3,047)	4,019	(107,227)	132,379
- Inventories	3,855	1,696	134,016	61,051
- Other current assets	(9,912)	(11,496)	(345,901)	(400,272)
- Other non-current assets	(2,037)	1,540	(71,790)	54,915
- Trade payable to related parties	(5,681)	10,651	(209,118)	370,354
- Advances from and amounts due to related parties	945	(373)	31,808	(12,386)
- Provisions for employee benefits	100	1,400	2,748	49,907
- Other current liabilities	(2,998)	(9,896)	(108,634)	(324,752)
- Other non-current liabilities	(658)	-	(22,356)	(5)
Cash used in operating activities	(29,429)	(51,279)	(1,020,553)	(1,784,868)
- Interest paid and other finance costs paid	(207,503)	(211,761)	(7,317,912)	(7,364,888)
Net cash used in operating activities	(236,932)	(263,040)	(8,338,465)	(9,149,756)

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

For the year ended 31 December 2024

Notes	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cash flows from investing activities				
Cash receipts from short-term loans to related parties	3046,362	50,741	1,619,620	1,740,419
Cash payments for short-term loans to related parties	30(56,164)	(38,727)	(2,043,348)	(1,352,826)
Cash receipts from long-term loans to related parties	30198,607	206,385	7,025,394	7,227,909
Cash payments for long-term loans to related parties	30(22,811)	(215,548)	(797,708)	(7,482,312)
Cash payments for additional investment in subsidiaries	15(52,500)	(229,690)	(1,862,659)	(8,103,187)
Cash payments for investment in equity instruments measured at fair value through other comprehensive income	(357)	-	(12,429)	-
Cash receipts from disposal of property, plant and equipment	15175	520	5,997	
Cash payments for purchase of property, plant and equipment and intangible assets	(2,331)	(5,082)	(82,246)	(179,297)
Interest received	25,070	31,756	869,112	1,101,835
Cash receipts from dividends from subsidiaries	47,364	432,212	1,699,307	14,992,409
Cash receipts from dividends from invesment in equity instruments	195	122	7,169	4,197
Net cash generated from investing activities	183,450	232,344	6,422,732	7,955,144
Cash flows from financing activities				
Cash receipts from short-term loans from financial institutions	221,250,013	1,500,503	44,011,394	52,078,060
Cash payments for short-term loans from financial institutions	22(1,089,638)	(1,396,961)	(38,482,521)	(48,584,296)
Cash receipts from short-term loans from related parties	88,000	-	3,196,098	-
Cash payments for short-term loans from related parties	(88,000)	-	(3,181,569)	-
Cash receipts from long-term loans from financial institutions	24309,855	121,373	11,001,386	4,268,350
Cash payments for long-term loans from financial institutions	24(394,534)	(279,660)	(14,074,135)	(9,749,930)
Cash receipts from debentures	25267,321	241,135	9,678,356	8,200,000
Cash payments for debentures	25(191,315)	(251,446)	(7,000,000)	(8,669,423)
Payments for principal elements of lease payment	(928)	(958)	(32,728)	(33,344)
Dividend paid to shareholders	29(105,395)	(244,677)	(3,806,316)	(8,449,469)
Cash receipts from increase in share capital	26-	316,459	-	11,735,561
Net cash generated from financing activities	45,379	5,768	1,309,965	795,509
Net decrease in cash and cash equivalents	(8,103)	(24,928)	(605,768)	(399,103)
Exchange differences on cash and cash equivalents	874	10,998	324,611	(133,476)
Cash and cash equivalents at beginning of the year	150,733	164,663	5,158,570	5,691,149
Cash and cash equivalents at end of the year	143,504	150,733	4,877,413	5,158,570
Supplementary information of cash flows				
Significant non-cash transactions are as follows:				
Other payables for purchase of property, plant and equipment at the end of the year	23253	187	8,589	6,406
Acquisitions and remeasurement of right-of-use assets under lease contracts	2,156	-	79,444	-

The notes to the consolidated and separate financial statements are an integral part of these financial statements.



NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

For the year ended 31 December 2024

1 General information

Banpu Public Company Limited (the Company) is a public limited company which is listed on the Stock Exchange of Thailand. The Company is incorporated and domiciled in Thailand. The address of the Company's registered office is 1550 Thanapoom Tower, 27th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok.

For reporting purposes, the Company and its subsidiaries are referred to as "the Group".

The Group is engaged in three core groups of businesses which are energy resources, energy generation and energy technology. The Group has operations in Thailand and overseas which are mainly in the Indonesia, People's Republic of China, Australia, Mongolia, Socialist Republic of Vietnam, Japan, and the United States.

These consolidated and separate financial statements were authorised by the Board of Directors on 26 February 2025.

2 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards (TFRS) and the financial reporting requirements issued under the Securities and Exchange Act.

The Company's management has determined that the US Dollar is the Company's functional currency and has presented the consolidated and separate financial statements in US Dollar, in accordance with Thai Accounting Standard 21 (TAS 21), the Effects of Changes in Foreign Exchange Rates. The Company is required to present its consolidated and separate financial statements in Baht by converting the US Dollar to Baht, using the basis as described in Note 5.3 c) to comply with the regulations of the Stock Exchange of Thailand and the Department of Business Development.

The consolidated and separate financial statements have been prepared under the historical cost convention except for certain accounts as disclosed in the following accounting policies.

The preparation of financial statements in conformity with TFRS requires management to use certain critical accounting estimates and to exercise its judgement in applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas that are more likely to be materially adjusted due to changes in estimates and assumptions are disclosed in Note 8.

An English version of the consolidated and separate financial statements have been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

3 Amended financial reporting standards

3.1 Commencing 1 January 2024, the Group has adopted amended financial reporting standards that are effective for accounting period beginning or after 1 January 2024 and relevant to the Group. For the amendments to TAS 12 - Income Taxes, related to the Pillar Two model rules, the Group has disclosed the impact of adopting this standard in Note 20.

3.2 Amended financial reporting standards that are effective for the accounting period beginning on or after 1 January 2025.

a) **Amendments to TAS 1 Presentation of Financial Statements** clarified that liabilities are classified as either current or non-current, depending on the rights that exist at the end of the reporting period. Classification is unaffected by the entity's expectations or events after the reporting period (for example, the receipt of a waiver or a breach of covenant).

Covenants of loan arrangements will not affect classification of a liability as current or non-current at the end of reporting period if the entity must only comply with the covenants after the reporting period. However, if the entity must comply with a covenant either before or at the end of reporting period, this will affect the classification as current or non-current even if the covenant is only tested for compliance after the reporting period.

The amendments require disclosures if an entity classifies a liability as non-current and that liability is subject to covenants with which the entity must comply within 12 months of the reporting period. The disclosures include:

- the carrying amount of the liability;
- information about the covenants; and
- facts and circumstances, if any, that indicate that the entity might have difficulty complying with the covenants.

The amendments also clarify what TAS 1 means when it refers to the 'settlement' of a liability. Terms of a liability that could, at the option of the counterparty, result in its settlement by the transfer of the entity's own equity instrument can only be ignored for the purpose of classifying the liability as current or non-current if the entity classifies the option as an equity instrument.

The amendments must be applied retrospectively in accordance with the normal requirements in TAS 8 Accounting Policies, Changes in Accounting Estimates and Errors.



b) **Amendments to TFRS 16 Leases** added to the requirements for sale and leaseback transactions which explain how an entity accounts for a sale and leaseback after the date of the transaction.

The amendments specify that, in measuring the lease liability subsequent to the sale and leaseback, the seller-lessee determines 'lease payments' and 'revised lease payments' in a way that does not result in the seller-lessee recognising any amount of the gain or loss that relates to the right of use that it retains. This could particularly impact sale and leaseback transactions where the lease payments include variable payments that do not depend on an index or a rate.

c) **Amendments to TAS 7 Statement of cash flows and TFRS 7 Financial instruments: Disclosures** require specific disclosures about supplier finance arrangements (SFAs). The amendments respond to investors that said that they urgently needed more information about SFAs to be able to assess how these arrangements affect an entity's liabilities, cash flows and liquidity risk.

To meet investors' needs, the new disclosures will provide information about:

- (1) The terms and conditions of SFAs.
- (2) The carrying amount of financial liabilities that are part of SFAs, and the line items in which those liabilities are presented.
- (3) The carrying amount of the financial liabilities in (2), for which the suppliers have already received payment from the finance providers.
- (4) The range of payment due dates for both the financial liabilities that are part of SFAs, and comparable trade payables that are not part of such arrangements.
- (5) Non-cash changes in the carrying amounts of financial liabilities in (2).
- (6) Access to SFA facilities and concentration of liquidity risk with the finance providers.

The Group has not yet adopted these standards. The Group's management is currently assessing the impact of adoption of these standards.

4 Changes in accounting policy

The Group has reclassified the presentation of realised gains (losses) on derivatives for the forecasted transactions that are hedged. Previously, the Group chose to separately present the realised gains (losses) on derivatives from those forecasted transactions that are hedged, including them in the forecasted transactions that are hedged. This change was made to align with the Group's financial risk management policy and industry practices.

The Group has reclassified comparative figures of the consolidated statement of comprehensive income to conform with the current period presentation of the Group as described below.

	Consolidated financial statements		
	US Dollar'000		
	Previously reported	Reclassifications	Reclassified
For the year ended 31 December 2023			
Sales and services income	5,158,754	(75,747)	5,083,007
Cost of sales and services	(3,666,129)	741	(3,665,388)
Net losses from changes in fair value of financial instruments	(164,126)	75,006	(89,120)

	Consolidated financial statements		
	Baht'000		
	Previously reported	Reclassifications	Reclassified
For the year ended 31 December 2023			
Sales and services income	179,619,126	(2,663,857)	176,955,269
Cost of sales and services	(127,689,315)	26,714	(127,662,601)
Net losses from changes in fair value of financial instruments	(5,780,147)	2,637,143	(3,143,004)



5 Accounting policies

The material accounting policies adopted in the preparation of these consolidated and separate financial statements are set out below.

5.1 Principles of consolidation

a) Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method less accumulated impairment (if any).

b) Associates

Associates are all entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting.

In the separate financial statements, investments in associates are accounted for using cost method less accumulated impairment (if any).

c) Joint arrangements

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

Joint operations

A joint operation is a joint arrangement whereby the Group has rights to the assets, and obligations for the liabilities relating to the arrangement. The Group recognises its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues, and expenses. These have been incorporated in the Group's financial statement line items.

Joint ventures

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method.

In the separate financial statements, the joint arrangements are accounted for using cost method less accumulated impairment (if any).

d) Equity method

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income, respectively. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures together with any long-term interests, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

e) Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A difference between the amount of the adjustment to non-controlling interests to reflect their relative interest in the subsidiary and any consideration paid or received is recognised within equity.

If the ownership interest in associates and joint ventures is reduced but significant influence and joint control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss or retained earnings where appropriate. Profit or loss from reduce of the ownership interest in associates and joint ventures is recognise in profit or loss.

When the Group losses control, joint control or significant influence over investments, any retained interest in the investment is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value becomes the initial carrying amount of the retained interest which is reclassified to investment in an associate, or a joint venture or a financial asset accordingly.



f) Intercompany transactions on consolidation

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

5.2. Business combination

The Group applies the acquisition method to account for business combinations with an exception on business combination under common control. The consideration transferred for the acquisition of a subsidiary comprises fair value of the assets transferred, liabilities incurred to the former owners of the acquiree, and equity interests issued by the Group.

Identifiable assets and liabilities acquired, and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date.

On an acquisition-by-acquisition basis, the Group initially recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest recognised and the acquisition-date fair value of any previous equity interest in the acquiree (for business combination achieved in stages) over the fair value of the identifiable net assets acquired is recorded as goodwill. In the case of a bargain purchase, the difference is recognised directly in profit or loss.

Acquisition-related cost

Acquisition-related cost are recognised as expenses in consolidated financial statements.

Step-up acquisition

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measured are recognised in profit or loss.

Changes in fair value of contingent consideration paid/received

Subsequent changes to the fair value of the contingent consideration that is an asset or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not re-measured.

Business combination under common control

The Group accounts for business combination under common control by measuring acquired assets and liabilities of the acquiree at their carrying values presented in the highest level of the consolidation. The Group retrospectively adjusted the business combination under common control transactions as if the combination had occurred on the later of the beginning of the preceding comparative period and the date the acquiree has become under common control.

Consideration of business combination under common control are the aggregated amount of fair value of assets transferred, liabilities incurred, and equity instruments issued by the acquirer at the date of which the exchange in control occurs.

The difference between consideration under business combination under common control and the acquirer's interests in the carrying value of the acquiree is presented as "surplus arising from business combination under common control" in equity and is derecognised when the investment is disposed of by transferred to retained earnings.

5.3 Foreign currency translation

a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which each entity operates (the Functional Currency). The financial statements are presented in US Dollar, which is the Company's functional currency and presentation currency.

b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transaction.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

Any exchange component of gains and losses on a non-monetary item that recognised in profit or loss, or other comprehensive income is recognised following the recognition of a gain or loss on the non-monetary item.



c) Group companies

The results and financial position of all the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a different functional currency from the Group's presentation currency are translated into the presentation currency as follows:

- assets and liabilities are translated at the closing rate at the date of respective statement of financial position;
- income and expenses for statement of comprehensive income are translated at average exchange rates; and
- all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate.

To comply with the regulations of the Stock Exchange of Thailand and Department of Business Development, the Group has to present the financial statements in Baht that are converted from the US Dollar financial statements by using the basis as described in Note 5.3 c).

5.4 Trade receivables

Trade receivables are amounts due from customers for goods sold or service performed in the ordinary course of business. They are classified as current.

Trade receivables are recognised initially at the amount of consideration that is unconditionally unless they contain significant financing components, when they are recognised at its present value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost.

The impairment of trade receivables has been disclosed in Note 5.6 c).

5.5 Inventories, spare parts and machinery supplies

Inventories

Inventories consist of coal, fuel and natural gas are valued at the lower of cost or net realisable value. Cost is determined by the weighted average method. The cost of coal comprises direct labour, other direct costs, and related production overhead. The cost of fuel and natural gas comprises both the purchase price and costs directly attributable to the acquisition of fuel and natural gas.

Net realisable value is the estimate of the selling price in the ordinary course of business, less the costs of completion and selling expenses. The Group recognises allowance for slow-moving of coal and fuel based on a specific case.

Spare parts and machinery supplies

Spare parts and machinery supplies are stated at cost less allowance for obsolescence, slow-moving and defective. Cost is determined on a weighted average method. The cost of purchase comprises both the purchase price and costs directly attributable to the acquisition of spare parts and machinery supplies, such as import duties and transportation charge, less all attributable discounts, allowances, or rebates. Spare parts and machinery supplies are charged to production costs in the period in which they are used.

Allowance is made for obsolete, slow-moving, and defective spare parts and machinery supplies on a specific case.

5.6 Financial assets

a) Recognition and derecognition

Regular way purchases, acquires and sales of financial assets are recognised on trade-date. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

b) Classification and measurement

Debt instruments

The Group classifies its debt instrument financial assets depending on i) business model for managing the asset and ii) the cash flow characteristics of the asset whether they represent solely payments of principal and interest (SPPI).

Financial assets with embedded derivatives are considered in their entirety when determining whether the cash flows are solely payment of principal and interest (SPPI).



There are three measurement categories into which the Group classifies its debt instruments:

- Amortised cost: Financial assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in interest income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss. Impairment expenses are presented separately in the statement of comprehensive income.
- Fair value through other comprehensive income (FVOCI): Financial assets that are held for i) collection of contractual cash flows; and ii) for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through other comprehensive income (OCI), except for 1) the recognition of impairment losses/reversal of impairment, 2) interest income using the effective interest method, and 3) foreign exchange gains and losses which are recognised in profit or loss. When the financial assets is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other gains (losses). Interest income is included in interest income. Foreign exchange gains and losses are presented in net gains (losses) on exchange rate. Impairment expenses are presented separately in the statement of comprehensive income.
- Fair value through profit or loss (FVPL): Financial assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within net gains (losses) from changes in fair value of financial instruments in the period in which it arises.

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

Equity instruments

Except for equity instruments held for trading, which are measured at FVPL, the Group makes an irrevocable election at the time of initial recognition, classifying its equity instruments into two measurement categories.

- FVPL: the equity instruments are measured at fair value and changes in the fair value are recognised in net gains (losses) from changes in fair value of financial instruments in the statement of comprehensive income.
- FVOCI: the equity instruments are measured at fair value and changes in the fair value are recognised in OCI. There is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Impairment losses (and reversal of impairment losses) are not reported separately from other changes in fair value.

Dividends from such investments (FVPL/FVOCI) continue to be recognised in profit or loss as dividend income when the right to receive payments is established.

c) **Impairment**

The Group applies the TFRS 9 simplified approach in measuring the impairment of trade receivables and other receivables, which applies lifetime expected credit loss, from initial recognition, for trade receivables and other receivables.

To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected credit loss rates are based on payment profiles, historical credit losses as well as forward-looking information and factors that may affect the ability of the customers to settle the outstanding balances.

For other financial assets carried at amortised cost and FVOCI, the Group applies TFRS 9 general approach in measuring the impairment of those financial assets. Under the general approach, the 12-month or the lifetime expected credit loss is applied depending on whether there has been a significant increase in credit risk since the initial recognition.

The significant increase in credit risk (from initial recognition) assessment is performed every end of reporting period by comparing i) expected risk of default as of the reporting date and ii) estimated risk of default on the date of initial recognition.

The Group assesses expected credit loss by taking into consideration forward-looking information and past experiences. The expected credit loss is a probability-weighted estimate of credit losses (probability-weighted present value of estimated cash shortfall). The cash shortfall is the difference between all contractual cash flows that are due to the Group and all cash flows expected to receive, discounted at the original effective interest rate.

When measuring expected credit losses, the Group reflects the following:

- probability-weighted estimated uncollectible amounts
- time value of money; and
- supportable and reasonable information as of the reporting date about past experience, current conditions, and forecasts of future situations.

Impairment (and reversal of impairment) losses are recognised in profit or loss as a separate line item.



5.7 Property, plant and equipment

Property, plant and equipment are initially recorded at cost including contingent consideration arrangement. Subsequently, all plant and equipment are stated at historical cost less accumulated depreciation and impairment losses. Subsequent changes in contingent consideration shall be recognised as part of its cost.

Subsequent costs are included in the asset's carrying amount, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised.

The Group will recognise other repairs and maintenance to profit or loss when incurred.

Land is not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost net of their residual values over their estimated useful lives, as follows:

Land improvement	10 years
Buildings, construction and building improvement	depend on period of the mine or 5 to 30 years and 30 years for power plants
Machinery and equipment	5 to 40 years
Furniture	3 and 5 years
Office equipment and tools	3 and 5 years
Motor vehicles	4 and 5 years
Equipment under finance lease	5 to 15 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each financial year-end.

Gains or losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised in the profit or loss.

Gas exploration and producing assets

Probable reserves represent reserves that are assessed by the Group at the time when there is an acquisition of business. Probable reserves will be classified as gas properties once there are proved reserves and are amortised using the unit of production method.

Costs of properties comprise total acquisition costs of natural gas rights or the acquisition costs of the portion of properties, decommissioning costs as well as equipment and support equipment.

Exploratory drilling costs are capitalised and will be classified as deferred exploration and development expenditures if their exploratory wells have identified proved reserves that have been found to be commercially viable. However, if proved reserves are not identified or are not commercially viable, such drilling costs will be expensed in the profit or loss.

Exploration costs, comprising geological and geophysical costs as well as area reservation fees during the exploration stage, are charged to expenses in the profit or loss when incurred.

Development costs, whether relating to the successful or unsuccessful development of wells, are capitalised.

The capitalised acquisition costs of natural gas rights are amortised using the unit of production method based on proved reserves. Depreciation of exploratory wells, development costs and decommissioning costs, except unsuccessful projects, are calculated using the unit of production method based on proved reserves or proved developed reserves. The Group recognises changes in reserve estimates prospectively.

Proved reserves and proved developed reserves are calculated by the Group's engineers and the geologists and reservoir engineers based on the information received from the joint operators.

Midstream assets

Costs of properties comprise purchase prices and other direct costs necessary to bring the asset to a working condition suitable for its intended use. Depreciation is calculated on the straight-line method over their estimated useful life as follows:

Compressor station and meter station	25 years
Pipelines	40 years

5.8 Goodwill

Goodwill is tested for impairment annually, or more frequently if events or changes in circumstances indicate that it might be impaired. It is carried at cost less accumulated impairment losses.

For the purpose of impairment testing, goodwill is allocated to cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose. The units or groups of units are identified at the lowest level at which goodwill is monitored for internal management purposes.



5.9 Intangible assets

a) Computer software

Computer software development costs recognised as assets are amortised over their estimated useful lives, which do not exceed 5 years.

b) Mining property rights

Mining property rights represent the excess of the cost of an acquisition over the fair value of net assets, which in managements' view represents future economic benefits attributable to the mining rights held by subsidiaries. Mining property rights are amortised using the units of production.

c) Deferred unfavourable contract liabilities

Deferred unfavourable contract liabilities are recognised as identifiable liabilities of acquiree as part of the purchase price allocation at the acquisition date. The unfavourable contract liabilities incurred from an excess of the fair value of long-term coal sales contracts than sales values specified in such coal sales contracts. The deferred unfavourable contract liabilities are amortised based on delivered units of coal.

d) Deferred exploration and development expenditures

Exploration expenditures are capitalised on an area of interest basis. Such expenditures comprise net direct costs such as licence, geology and geophysics expenditures and do not include general overheads or administrative expenditures not directly attributable to a particular area of interest. Exploration expenditures are capitalised as deferred expenditures when the following conditions are met:

- such costs are expected to be recouped through successful development and exploitation of the area of interest or, by its sales; and
- exploration activities in the area of interest have not yet reached the stage which permits a reasonable assessment of the existence of economically recoverable reserves, and active operations in the area are continuing.

Recoupment of exploration expenditure carried forward is dependent upon successful development and commercial exploitation, or sale of the respective area. Each area of interest is reviewed at the end of period. Exploration expenditures in respect of an area of interest, which has been abandoned or for which a decision has been made by the Group against the commercial viability of the area of interest, are written-off in the period the decision is made to the profit or loss.

Development expenditures and incorporated costs in developing an area of interest prior to commencement of operations in the respective area, as long as they meet the criteria for deferral, are capitalised.

Deferred exploration and development expenditure is principally amortised using the units of production of each area of interest starting from the commencement of commercial operations.

e) Stripping costs/Overburden costs

The Group recognises the production stripping costs as assets if, and only if, all of the following are met:

- It is probable that the future economic benefit associated with the stripping activity will flow to the entity.
- The entity can identify the component of the ore body for which access has been improved; and
- The costs relating to the stripping activity associated with that component can be measured reliably.

The deferred overburden expenditures/stripping costs shall be initially measured at cost and subsequently stated at cost less accumulated amortisation and impairment losses, if any. Amortisation is calculated using the units of production method.

f) Rights to operate the power plants

The rights to operate the power plants arising from purchase of investments are amortised over the periods of estimated useful life of the power plants.

g) Rights in patents

The rights in patents arising from purchase of investments are amortised over the periods of estimated useful life of the assets.

h) Customer relationship

Customer relationship represents identifiable customer list arising from purchase of investments are amortised over the periods of estimated useful life of the assets.

5.10 Impairment of assets

Assets that have an indefinite useful life are tested annually for impairment, or more frequently if events or changes in circumstances indicate that it might be impaired. Assets that are subject to amortisation are reviewed for impairment whenever there is an indication of impairment. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. Where the reasons for previously recognised impairments no longer exist, the impairment losses on the assets concerned other than goodwill is reversed.



5.11 Financial liabilities

a) Classification

Financial instruments issued by the Group are classified as either financial liabilities or equity securities by considering contractual obligations.

b) Measurement

Financial liabilities are initially recognised at fair value and are subsequently measured at amortised cost.

c) Derecognition and modification

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled, or expired.

Where the terms of a financial liability are renegotiated/modified, the Group assesses whether the renegotiation/ modification results in the derecognition of that financial liability. Where the modification results in an extinguishment, the new financial liability is recognised based on fair value of its obligation. The remaining carrying amount of financial liability is derecognised. The difference as well as proceed paid is recognised as other gains (losses) in profit or loss.

Where the modification does not result in the derecognition of the financial liability, the carrying amount of the financial liability is recalculated as the present value of the renegotiated/modified contractual cash flows discounted at its original effective interest rate. The difference is recognised in other gains (losses) in profit or loss.

5.12 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

Current tax

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax

Deferred income tax is recognised on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not recognised for temporary differences arise from:

- initial recognition of an asset or liability in a transaction other than a business combination that affects neither accounting nor taxable profit or loss and does not give rise to equal taxable and deductible temporary differences.
- investments in subsidiaries, associates and joint arrangements where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the end of the reporting period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and where the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

5.13 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

Provision for environmental rehabilitation is recognised by units of sale at the rate determined by the Group's geologist. The provisioning rate is based on the estimated cost for mine rehabilitation through to the end of the mine. The Group reviews and revises the rate to reflect the actual expenses incurred on a regular basis.



The Group records a provision for decommissioning costs whenever it is probable that there would be an obligation as a result of a past event and the amount of that obligation is reliably estimated by the Group's engineers and management's judgement. The Group recognises provision for decommissioning costs as part of oil and gas properties, using the discounted present value on the estimated eventual costs that relate to the removal of the production facilities and amortised based on the unit of production of the proved reserve or the proved developed reserve. The Group recognises an increase that reflects the passage of time from the unwinding discount in each period, as a finance cost in profit or loss. The provisions are based on the current situation such as regulations, technologies, and prices. The actual results could differ from these estimates as future confirming events occur.

5.14 Revenue recognition

Revenue is recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectability of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfilment of the obligation to the customer. Revenue is recognised as follows.

Revenue from coal sales

The Group recognises revenue from coal sales at a certain point in time when the products is delivered to customers at the delivery point. The transfer of products takes place when the Group delivers products to its destination as specified according to the contracts. Revenue represents the revenue earned from the sale of Group's products with realisable value net of value-added tax, rebate and discounts.

Sales of electricity and steam not under lease agreements

The Group recognises revenue from sales of electricity and steam relating to Power Purchase Agreement and Steam Purchase Agreement at certain points in time when the control of products is transferred to the customer at the delivery point. Revenue represents the revenue earned from the sale of Group's products with realisable value net of value-added tax, rebate, and discounts.

Sales of electricity under lease agreements

Finance lease income under power purchase agreements is recognised on an effective interest method over the period of the agreements.

Service income under finance lease agreements related to the Power Purchase Agreements is recognised when the services have been rendered. Service income comprises income in relation to the availabilities of the power plants, other servicing income and fuel cost received from leases with respect to the leased assets. If the considerations exceed the services rendered, a contract liability is recognised. On the other hand, if the considerations less than the services rendered, a contract asset is recognised.

Revenue from sales of natural gas

Revenues from sales of natural gas are recorded upon transfer of title, according to the terms of related contracts and based on actual volumes sold.

Revenue from pipeline transportation is recognised when services are rendered based on quantities transported and measured according to the underlying contract.

Revenue from rendering of services

The Group recognised service contracts with a continuous service provision as revenue on a straight-line basis over the contract term, regardless of the payment pattern.

Dividend income

Dividend income is recognised when the group's right to receive payment is established.

Interest income

Interest income is recognised using the effective interest method.

5.15 Dividend distribution

Dividends distribution to the Group's shareholders is recognised as a liability in the consolidated and separate financial statements in the period in which the dividends are approved by the shareholders and interim dividends are approved by the Board of Directors of the Company.



5.16 Derivatives and hedging activities

a) Embedded derivative and derivatives that do not qualify for hedge accounting

Embedded derivative that is separately accounted for and derivatives that do not qualify for hedge accounting is initially recognised at fair value. Changes in the fair value are included in "net gains (losses) from changes in fair value of financial instruments".

Fair value of derivatives is classified as a current or non-current following its remaining maturity.

b) Hedge accounting

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The Group designates certain derivatives as either:

- hedges of the fair value of i) recognised assets or liabilities or ii) unrecognised firm commitments (fair value hedges); or
- hedges of a particular risk associated with the cash flows of i) recognised assets and liabilities and ii) highly probable forecast transactions (cash flow hedges); or
- hedges of a net investment in a foreign operation (net investment hedges).

At inception of the hedge relationship, the Group documents i) the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items and ii) its risk management objective and strategy for undertaking its hedge transactions.

The full fair value of a hedging derivative is classified as a current or non-current asset or liability following the maturity of related hedged item.

Hedge effectiveness

Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic prospective effectiveness assessments, to ensure that an economic relationship exists between the hedged item and hedging instrument.

For hedges of foreign currency, the Group enters hedge relationships where the critical terms of the hedging instrument match with the terms of the hedged item. The Group therefore performs a qualitative assessment of effectiveness. If changes in circumstances affect the terms of the hedged item such that the critical terms no longer match exactly with the critical terms of the hedging instrument, the Group uses the hypothetical derivative method to assess effectiveness.

In hedges of foreign currency, ineffectiveness may arise if the timing of the forecast transaction changes from what was originally estimated, or if there are changes in the credit risk of the derivative counterparty.

The Group enters interest rate swaps that have similar critical terms as the hedged item, such as reference rate, reset dates, payment dates, maturities, and notional amount. The Group does not hedge all of its loans; therefore, the hedged item is identified as a proportion of the outstanding loans up to the notional amount of the swaps. As all critical terms matched during the year, there is an economic relationship.

Hedge ineffectiveness for interest rate swaps is assessed using the same principles as for hedges of foreign currency purchases. It may occur due to:

- the credit value/debit value adjustment on the interest rate swaps which is not matched by the loan, and
- differences in critical terms between the interest rate swaps and loans.

Cash flow hedges that qualify for hedge accounting

The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges is recognised in the cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss.

When derivatives such as foreign exchange forward contracts, currency and interest rate swaps contracts are used to hedge forecast transactions, the Group generally designates only the change in fair value of the forward contract related to the spot component as the hedging instrument. Gains or losses relating to the effective portion of the change in the spot component of the forward contracts are recognised in the cash flow hedge reserve in other comprehensive income within equity. The change in the forward element of the contract that relates to the hedged item ('aligned forward element') is recognised within other comprehensive income in the costs of hedging reserve within equity.

In some cases, the Group may designate the full change in fair value of the forward contract (including forward points) as the hedging instrument. In such cases, the gains or losses relating to the effective portion of the change in fair value of the entire forward contract are recognised in the cash flow hedge reserve within equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss.

When a hedging instrument expires, or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity at that time remains in equity until the forecasted transaction occurs. When the forecasted transaction is no longer expected to occur, the cumulative gain or loss and deferred costs of hedging that were reported in equity are immediately reclassified to profit or loss.



Net investment hedges

Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges.

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in other comprehensive income and accumulated in reserves in equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss within net gains (losses) from changes in fair value of financial instruments. Gains and losses accumulated in equity are reclassified to profit or loss when the foreign operation is partially disposed of or sold.

5.17 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The Chief Executive Officer is the chief operating decision-maker, responsible for allocating resources, assessing performance of the operating segments, and making strategic decisions.

6 Financial risk management

6.1 Financial risk

The Group's activities expose it to a variety of financial risks, market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group uses derivatives to hedge certain exposures.

Risk management is carried out by a central treasury department under policies approved by the Board of Directors. Group treasury identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units.

6.1.1 Market risk

a) Foreign exchange rate risk

The Group operates internationally and is exposed to foreign exchange rate risk arising from various currency exposures, primarily with respect to Baht, US Dollar, Indonesian Rupiah, Australian Dollar and Chinese Yuan. Foreign exchange risk arises from future commercial transactions, net investment in foreign operations and net monetary assets and liabilities that are denominated in a currency that is not the entity's functional currency.

Instruments used by the Group

The Group uses the foreign exchange forward contracts and the currency and interest rate swaps contracts to hedge its exposure to foreign exchange rate risk. Under the group's policy, the critical terms of the derivative instruments must align with the hedged items.

Net investment hedges in foreign operations

The Group has adopted accounting policy for net investment hedges in foreign operations. The Group designates certain Baht debentures to be hedging instruments for net investments in subsidiaries whose functional currency is Baht, by using the foreign exchange rate of the debentures at the designated date.

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in other comprehensive income and accumulated as reserves in equity. Gains or losses relating to the ineffective portion are recognised immediately in profit or loss. Gains and losses accumulated in equity are recognised to profit or loss when the foreign operation is disposed.

As at 31 December	Consolidated financial statements	
	US Dollar'000	
	2024	2023
Carrying amount of debentures at inception date	US Dollar 902 million	US Dollar 902 million
Debentures in Baht	Baht 30,018 million	Baht 30,018 million
Change in carrying amount of debentures as a result of foreign currency movement from inception date, in the year, recognised in other comprehensive income (expense)	-	(4,304)
Change in carrying amount of debentures as a result of foreign currency movement from 1 January, recognised in other comprehensive income (expense)	(6,075)	(8,056)
Change in value of hedge item used to determine hedge effectiveness	6,075	12,360



Exposure

The Group and the Company have significant exposure to foreign exchange rate risk that are denominated in a currency that is not entity's functional currency expressed in US Dollar currency, was as follows:

Currency that is not entity's functional currency	Consolidated financial statements					
	US Dollar'000			Baht'000		
	USD	THB	AUD	USD	THB	AUD
As at 31 December 2024						
Financial assets						
Cash and cash equivalents	89,611	135,999	-	3,045,702	4,622,317	-
Financial assets at fair value through other comprehensive income	208	-	-	7,061	-	-
Trade receivables and note receivables, net	-	25,978	-	-	882,935	-
Amounts due from related parties	14,492	200,113	6,270	492,551	6,801,405	213,112
Short-term loans to related parties	18,000	-	-	611,782	-	-
Dividend receivables from a related party	157	-	-	5,340	-	-
Long-term loans to related parties	232,627	1,417,260	387,427	7,906,509	48,169,683	13,167,823
Financial liabilities						
Short-term loans from financial institutions	-	515,183	-	-	17,510,000	-
Short-term loans from related parties	18,185	-	-	618,084	-	-
Trade payables	2,657	64	-	90,321	2,160	-
Amounts due to related parties	18,401	194,943	98	625,422	6,625,709	3,341
Accrued interest expenses	1,101	28,097	-	37,425	954,972	-
Other current liabilities	8,224	7,221	-	279,516	245,415	-
Long-term loans from financial institutions	79,108	163,382	-	2,688,711	5,553,000	-
Debentures	-	2,523,019	-	-	85,752,124	-
Long-term loans from related parties	100,360	1,333,429	-	3,411,015	45,320,441	-
Derivative assets						
Derivative assets applied hedge accounting						
- Currency and interest rate swaps contracts	48,000	-	-	1,631,419	-	-
Derivative liabilities						
Derivative liabilities applied hedge accounting						
- Currency and interest rate swaps contracts	-	68,255	-	-	2,319,850	-

Currency that is not entity's functional currency	Consolidated financial statements					
	US Dollar'000			Baht'000		
	USD	THB	AUD	USD	THB	AUD
As at 31 December 2023						
Financial assets						
Cash and cash equivalents	48,005	145,525	226	1,642,901	4,980,362	7,740
Trade receivables and note receivables, net	30,825	41,673	-	1,054,920	1,426,182	-
Amounts due from related parties	33,436	103,604	23,282	1,144,294	3,545,672	796,798
Short-term loans to related parties	16,000	-	23,992	547,573	-	821,083
Long-term loans to related parties	247,417	1,463,900	356,839	8,467,432	50,099,500	12,212,197
Financial liabilities						
Short-term loans from financial institutions	-	464,596	-	-	15,900,000	-
Short-term loans from related parties	16,054	-	-	549,411	-	-
Trade payables	1,228	61	-	42,015	2,083	-
Amounts due to related parties	25,681	102,037	108	878,889	3,492,048	3,700
Accrued interest expenses	1,312	29,441	-	44,915	1,007,575	-
Long-term loans from financial institutions	88,062	52,596	-	3,013,771	1,800,000	-
Debentures	-	2,427,294	-	-	83,070,000	-
Long-term loans from related parties	117,772	1,345,101	-	4,030,550	46,033,800	-
Derivative assets						
Derivative assets recognised at fair value through profit or loss						
- Warrant	-	275	-	-	9,419	-
Derivative liabilities						
Derivative liabilities recognised at fair value through profit or loss						
- Foreign exchange forward contracts	-	78	-	-	2,663	-
Derivative liabilities applied hedge accounting						
- Currency and interest rate swaps contracts	-	116,101	-	-	3,973,350	-



Currency that is not entity's functional currency	Separate financial statements			
	US Dollar'000		Baht'000	
	THB	AUD	THB	AUD
As at 31 December 2024				
Financial assets				
Cash and cash equivalents	127,086	-	4,319,369	-
Trade receivables	18,282	-	621,354	-
Amounts due from related parties	143,895	1,491	4,890,702	50,673
Long-term loans to related parties	1,005,244	349,922	34,166,142	11,893,102
Financial liabilities				
Short-term loans from financial institutions	515,183	-	17,510,000	-
Amounts due to related parties	26	98	886	3,341
Accrued interest payables	28,097	-	954,972	-
Other current liabilities	7,221	-	245,415	-
Long-term loans from financial institutions	163,382	-	5,553,000	-
Debentures	2,523,019	-	85,752,124	-
Derivative liabilities				
Derivative liabilities applied hedge accounting				
- Currency and interest rate swaps contracts	68,255	-	2,319,850	-

Currency that is not entity's functional currency	Separate financial statements			
	US Dollar'000		Baht'000	
	THB	AUD	THB	AUD
As at 31 December 2023				
Financial assets				
Cash and cash equivalents	130,282	-	4,458,691	-
Trade receivables	32,988	-	1,128,956	-
Amounts due from related parties	75,178	21,605	2,572,845	739,389
Short-term loans to related parties	-	23,992	-	821,083
Long-term loans to related parties	1,033,875	315,583	35,382,600	10,800,285
Financial liabilities				
Short-term loans from financial institutions	464,596	-	15,900,000	-
Accrued interest payable	29,441	-	1,007,575	-
Long-term loans from financial institutions	52,596	-	1,800,000	-
Debentures	2,427,294	-	83,070,000	-
Derivative assets				
Derivative assets recognised at fair value through profit or loss				
- Warrant	275	-	9,419	-
Derivative liabilities				
Derivative liabilities recognised at fair value through profit or loss				
- Foreign exchange forward contracts	78	-	2,663	-
Derivative liabilities applied hedge accounting				
- Currency and interest rate swaps contracts	116,101	-	3,973,350	-



The effects of the foreign currency-related hedging instruments on the Group's and the Company's financial position and performance are as follows:

Foreign exchange forward contracts	Consolidated financial statements	
	US Dollar'000	Baht'000
As at 31 December 2024		
Carrying amount - Derivative liabilities	(7,511)	(255,281)
Notional amount	130,000	4,418,427
Maturity	January 2025 to September 2025	
Change in discounted spot value of outstanding hedging instruments for the year	7,090	240,964
Change in value of hedged item used to determine hedge effectiveness	(7,090)	(240,964)
Weighted average hedged rate for outstanding hedging instruments (including forward points)	AUD 1 : USD 0.6599	
As at 31 December 2023		
Carrying amount - Derivative assets	2,303	78,832
Notional amount	180,000	6,160,194
Maturity	January 2024 to November 2024	
Change in discounted spot value of outstanding hedging instruments for the year	(867)	(29,672)
Change in value of hedged item used to determine hedge effectiveness	867	29,672
Weighted average hedged rate for outstanding hedging instruments (including forward points)	AUD 1 : USD 0.6773	

Currency and interest rate swaps contracts	Consolidated financial statements	
	US Dollar'000	Baht'000
As at 31 December 2024		
Carrying amount - Derivative assets	2,030	68,987
Notional amount	48,000	1,631,419
Maturity	October 2028	
Change in discounted spot value of outstanding hedging instruments for the year	2,030	68,987
Change in value of hedged item used to determine hedge effectiveness	(2,030)	(68,987)
Weighted average hedged rate for outstanding hedging instruments (including forward points)	Baht 1 : USD 31.2528	
Strike rate for outstanding hedging instruments (Swap rate)	2.38% - 2.47%	

Currency and interest rate swaps contracts	Consolidated and separate financial statements	
	US Dollar'000	Baht'000
As at 31 December 2024		
Carrying amount - Derivative liabilities	(5,435)	(184,747)
Notional amount	68,255	2,319,850
Maturity	July 2025 to April 2026	
Change in discounted spot value of outstanding hedging instruments for the year	(66)	(2,257)
Change in value of hedged item used to determine hedge effectiveness	66	2,257
Weighted average hedged rate for outstanding hedging instruments (including forward points)	USD 1 : Baht 30.8011	
Strike rate for outstanding hedging instruments (Swap rate)	3.88% - 6.39%	

As at 31 December 2023		
Carrying amount - Derivative liabilities	5,369	183,754
Notional amount	125,317	4,288,762
Maturity	August 2024 to April 2026	
Change in discounted spot value of outstanding hedging instruments for the year	9,417	322,271
Change in value of hedged item used to determine hedge effectiveness	(9,417)	(322,271)
Weighted average hedged rate for outstanding hedging instruments (including forward points)	USD 1: Baht 31.7064	
Strike rate for outstanding hedging instruments (Swap rate)	1.61% - 6.39%	



Sensitivity

As shown in the table above, the Group is primarily exposed to changes in US Dollar and Baht exchange rates and Australian Dollar and US Dollar. The sensitivity of profit or loss to changes in the exchange rates arises mainly from financial assets and financial liabilities and the impact on other components of equity arises from foreign forward exchange contracts and certain financial liabilities designated as cash flow hedges. Foreign exchange exposure in other currencies do not have material impact to the Group.

Consolidated financial statements			
US Dollar'000		Baht'000	
Impact to net profit before income tax	Impact to other components of equity before income tax	Impact to net profit before income tax	Impact to other components of equity before income tax

As at 31 December 2024

US Dollar to Baht

- Increase 5%*	114,253	-	3,883,217	-
- Decrease 5%*	(124,549)	-	(4,233,164)	-

Australian Dollar to US Dollar

- Increase 5%*	19,175	(6,758)	651,714	(229,690)
- Decrease 5%*	(19,167)	6,114	(651,443)	207,815

As at 31 December 2023

US Dollar to Baht

- Increase 5%*	90,193	-	3,086,686	-
- Decrease 5%*	(98,711)	-	(3,378,205)	-

Australian Dollar to US Dollar

- Increase 5%*	18,447	8,391	631,304	287,170
- Decrease 5%*	(18,308)	(9,274)	(626,557)	(317,399)

Separate financial statements

US Dollar'000		Baht'000	
Impact to net profit before income tax	Impact to other components of equity before income tax	Impact to net profit before income tax	Impact to other components of equity before income tax

As at 31 December 2024

US Dollar to Baht

- Increase 5%*	90,178	-	3,064,964	-
- Decrease 5%*	(99,671)	-	(3,387,592)	-

Australian Dollar to US Dollar

- Increase 5%*	17,566	-	597,022	-
- Decrease 5%*	(17,566)	-	(597,022)	-

As at 31 December 2023

US Dollar to Baht

- Increase 5%*	77,295	-	2,645,281	-
- Decrease 5%*	(85,372)	-	(2,921,715)	-

Australian Dollar to US Dollar

- Increase 5%*	18,054	-	617,853	-
- Decrease 5%*	(18,054)	-	(617,853)	-

* Holding all other variables constant

b) Cash flow and fair value interest rate risk

The Group manages interest rate risk by closely monitoring the trend of interest rates in the world's markets as well as in Thailand. The Group allocates its debt portfolio in either short and long-term contracts or loans with fixed and floating interest rates corresponding to their types of investments. The Group has chosen financial instruments to create an alternative source of funding and to manage its financial structure properly in which it invests. For example, interest rate swaps are being used to manage the proportion of fixed interest rates.

The interest rate of the Group's long-term loans and debentures at the end of the reporting period is provided in Note 24 and Note 25, respectively.



Instruments used by the Group

The Group entered interest rate swaps covering approximately 5% of the variable long-term loan principal outstanding (2023: 5%). The fixed interest rates of the swaps range between 1.17% and 4.05% per annum (2023: 1.17% and 4.05% per annum), and the variable rates of the loans are between 3.85% and 10.31% (2023: 3.79% and 11.37% per annum) at the end of the reporting period.

The effects of the foreign currency-related hedging instruments on the Group's and the Company's financial position and performance are as follows:

	Consolidated and Separate	
	financial statements	
Interest rate swaps	US Dollar'000	Baht'000
As at 31 December 2024		
Carrying amount - Derivative assets	6,363	216,283
Notional amount	123,676	4,203,494
Maturity	February 2025 to September 2027	
Change in fair value of outstanding hedge instruments for the year	2,794	90,470
Change in value of hedged item used to determine hedge effectiveness	(2,794)	(90,470)
Strike rate for outstanding hedging instruments (Swap rate)	1.17% - 4.05%	
As at 31 December 2023		
Carrying amount - Derivative assets	8,325	284,892
Notional amount	152,300	5,212,209
Maturity	February 2025 to September 2027	
Change in fair value of outstanding hedge instruments for the year	(15,310)	(523,975)
Change in value of hedged item used to determine hedge effectiveness	15,310	523,975
Strike rate for outstanding hedging instruments (Swap rate)	1.17% - 4.05%	

The impact of interest rate hedging instruments on the Group's financial position and performance by entering currency and interest rate swap contracts was disclosed in Note 6.1.1 a) with the hedging of foreign exchange rate risk.

Sensitivity

Profit or loss is sensitive to higher or lower interest expenses from borrowings as a result of changes in interest rates from variable interest rate loan. Other components of equity changes as a result of an increase or decrease in the fair value of the cash flow hedges of interest rate swaps.

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	Impact to net profit before income tax	Impact to other components of equity before income tax	Impact to net profit before income tax	Impact to other components of equity before income tax

As at 31 December 2024

- Interest rates increase 0.1%*	(2,060)	206	(70,031)	6,976
- Interest rates decrease 0.1%*	1,846	(206)	62,753	(6,999)

As at 31 December 2023

- Interest rates increase 0.1%*	(3,253)	654	(111,335)	22,389
- Interest rates decrease 0.1%*	3,253	(667)	111,335	(22,822)

	Separate financial statements			
	US Dollar'000		Baht'000	
	Impact to net profit before income tax	Impact to other components of equity before income tax	Impact to net profit before income tax	Impact to other components of equity before income tax

As at 31 December 2024

- Interest rates increase 0.1%*	(1,087)	205	(36,941)	6,976
- Interest rates decrease 0.1%*	1,086	(206)	36,896	(6,999)

As at 31 December 2023

- Interest rates increase 0.1%*	(1,421)	321	(48,645)	10,996
- Interest rates decrease 0.1%*	1,421	(323)	48,645	(11,044)

* Holding all other variables constant



c) Price risk

The Group is exposed to coal price risk, fuel price and natural gas price risks from substantial fluctuations in the world market price. The Group uses coal swap contracts, fuel swap contracts, natural gas swap and option contracts and natural gas liquids swap contracts to minimise its exposure to fluctuations in its business operations.

In addition, the Group is exposed to electricity price risk in the United States and Australia since the spot price depends on demand and supply in the market and other factors, such as cost of fuel for electricity generation. The Group entered into electricity forward contracts, electricity swaption, and heat rate call option to maintain the ability to generate income.

Significant contracts

Coal swap contracts

As at 31 December 2024, the Group has outstanding coal swap contracts with no physical delivery of selling and buying side of 225,000 tonnes at the average rate of US Dollar 150.82 per ton (2023: 480,000 tonnes at the average rate of US Dollar 153.69 ton). Such contracts are due within 1 year.

Natural gas swap, options and natural gas liquids contracts

As at 31 December 2024, the Group has natural gas swap and option contracts of 343,647,500 MMBTU at the average rate US Dollar 3.48 per MMBTU (2023: 132,304,460 MMBTU at the average rate US Dollar 3.54 per MMBTU) and natural gas liquids swap and option contracts of 8,769,125 BBL at the average rate US Dollar 21.75 per BBL (2023: 6,360,125 BBL at the average rate US Dollar 21.90 per BBL). Such contracts are due between 1 and 3 years and settle on monthly basis.

Electricity forward contracts and Heat rate call option

As at 31 December 2024, the Group has outstanding power fixed price contracts of 4,380,000 Megawatt hour (MWh) at the average selling price of US Dollar 46.71 per MWh (2023: 10,540,800 Megawatt hour (MWh) at the average selling price of US Dollar 43.39 per MWh) and heat rate call options for the capacity of 200 Megawatt (MW) (2023: 400 Megawatt hour (MWh)). The Group receives profit from option premium and power price which referred to natural gas price as specified in the option contracts. The contracts are due within 1 year.

Sensitivity

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	Impact to net	Impact to other	Impact to net	Impact to other
	profit before	components of	profit before	components of
	income tax	equity before	income tax	equity before
		income tax		income tax
As at 31 December 2024				
Coal prices				
- Increase 5%*	-	(1,447)	-	(49,166)
- Decrease 5%*	-	1,447	-	49,166
Oil and natural gas prices				
- Increase 5%*	(1,120)	(31,218)	(38,072)	(1,061,050)
- Decrease 5%*	1,120	31,218	38,072	1,061,050
Electricity prices				
- Increase 5%*	(5,724)	(10,553)	(194,547)	(358,676)
- Decrease 5%*	5,410	10,553	183,866	358,676
As at 31 December 2023				
Coal prices				
- Increase 5%*	-	(3,183)	-	(108,935)
- Decrease 5%*	-	3,183	-	108,935
Oil and natural gas prices				
- Increase 5%*	-	(8,930)	-	(305,631)
- Decrease 5%*	-	8,930	-	305,631
Electricity prices				
- Increase 5%*	(7,738)	(6,863)	(264,809)	(234,889)
- Decrease 5%*	7,692	6,826	263,231	233,598
* Holding all other variables constant				



6.1.2 Credit risk

a) Risk management

The Group has no significant concentrations of credit risk. The Group has policies in place to ensure that sales of goods and services are made to customers with an appropriate credit history. Derivative counter parties and cash transactions are limited to high credit quality financial institutions. The Group has policies that limit the amount of credit exposure to any financial institutions.

b) Impairment of financial assets

The Group and the Company has financial assets that are subject to the expected credit loss model as follow:

- Cash and cash equivalents
- Trade receivables and note receivables
- Amount due from related parties
- Short-term loans to related parties
- Long-term loan to related parties and other company
- Investment in debt instruments measured at amortised cost and fair value through other comprehensive income

Expected credit losses for trade receivables and amount due from related parties are disclosed in Note 12 and Note 30, respectively. Impairment loss for other financial assets is not material.

6.1.3 Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of credit facilities and the ability to close out market positions. Due to the dynamic nature of the underlying business, Group Treasury aims at maintaining flexibility in funding by keeping credit lines available.

The tables below analyse the maturity of financial liabilities and derivative liabilities, net grouping based on their contractual maturities. The amounts disclosed are the contractual undiscounted cash flows including notional and interest.

	Consolidated financial statements							
	US Dollar'000				Baht'000			
	Within 1 year	1 - 5 years	Over 5 years	Total	Within 1 year	1 - 5 years	Over 5 years	Total
As at 31 December 2024								
Non-derivatives								
Short-term loans from financial institutions	946,908	-	-	946,908	32,183,420	-	-	32,183,420
Trade payables	140,448	-	-	140,448	4,773,529	-	-	4,773,529
Accrued overburden and coal transportation costs	116,609	-	-	116,609	3,963,310	-	-	3,963,310
Other current liabilities	392,372	-	-	392,372	13,335,906	-	-	13,335,906
Long-term loans from financial institutions	960,790	1,478,624	802,869	3,242,283	32,655,228	50,255,330	27,287,833	110,198,391
Debentures	302,060	1,780,732	1,185,942	3,268,734	10,266,379	60,523,347	40,307,660	111,097,386
Lease liabilities	10,086	17,362	11,562	39,010	342,804	590,085	392,952	1,325,841
Other non-current liabilities	-	6,825	-	6,825	-	231,965	-	231,965
Total non-derivatives	2,869,273	3,283,543	2,000,373	8,153,189	97,520,576	111,600,727	67,988,445	277,109,748
Derivative liabilities								
Derivatives recognised at FVPL								
- Interest rate swap contracts	19	-	-	19	630	-	-	630
- Foreign exchange forward contracts	2,539	-	-	2,539	86,289	-	-	86,289
- Heat rate call option	3,595	-	-	3,595	122,187	-	-	122,187
- Electricity forward contracts	1,130	-	-	1,130	38,405	-	-	38,405
- Natural gas and natural gas liquids swap and option	-	25,917	-	25,917	-	880,834	-	880,834
Derivatives applied hedge accounting								
- Foreign exchange forward contracts	7,511	-	-	7,511	255,281	-	-	255,281
- Currency and interest rate swap contracts	864	5,538	-	6,402	29,366	188,233	-	217,599
- Electricity forward contracts	14,518	-	-	14,518	493,447	-	-	493,447
- Natural gas and natural gas liquids swap and option	21,079	21,441	-	42,520	716,390	728,759	-	1,445,149
Total derivative liabilities	51,255	52,896	-	104,151	1,741,995	1,797,826	-	3,539,821
As at 31 December 2023								
Non-derivatives								
Short-term loans from financial institutions	744,725	-	-	744,725	25,486,931	-	-	25,486,931
Trade payables	139,708	-	-	139,708	4,781,259	-	-	4,781,259
Accrued overburden and coal transportation costs	88,864	-	-	88,864	3,041,211	-	-	3,041,211
Other current liabilities	447,411	-	-	447,411	15,311,891	-	-	15,311,891
Long-term loans from financial institutions	1,100,381	2,430,583	264,091	3,795,055	37,658,653	83,182,575	9,038,072	129,879,300
Debentures	332,735	1,474,392	1,382,636	3,189,763	11,387,302	50,458,546	47,318,363	109,164,211
Lease liabilities	13,010	25,622	4,226	42,858	445,230	876,883	144,631	1,466,744
Other non-current liabilities	-	104,511	-	104,511	-	3,576,646	-	3,576,646
Total non-derivatives	2,866,834	4,035,108	1,650,953	8,552,895	98,112,477	138,094,650	56,501,066	292,708,193
Derivative liabilities								
Derivatives recognised at FVPL								
- Interest rate swap contracts	90	42	-	132	3,080	1,422	-	4,502
- Foreign exchange forward contracts	184	-	-	184	6,293	-	-	6,293
- Heat rate call option	42,091	-	-	42,091	1,440,477	-	-	1,440,477
- Coal price swap	23	-	-	23	788	-	-	788
Derivatives applied hedge accounting								
- Currency and interest rate swap contracts	1,212	4,779	-	5,991	41,479	163,568	-	205,047
- Natural gas and natural gas liquids swap and option	21,205	-	-	21,205	725,718	-	-	725,718
- Fuel swap	1,005	-	-	1,005	34,401	-	-	34,401
- Electricity forward contracts	12,481	-	-	12,481	427,153	-	-	427,153
Total derivative liabilities	78,291	4,821	-	83,112	2,679,389	164,990	-	2,844,379



	Separate financial statements							
	US Dollar'000				Baht'000			
	Within 1 year	1 - 5 years	Over 5 years	Total	Within 1 year	1 - 5 years	Over 5 years	Total
As at 31 December 2024								
Non-derivatives								
Short-term loans from financial institutions	631,449	-	-	631,449	21,461,633	-	-	21,461,633
Trade payables to a related party	4,970	-	-	4,970	168,922	-	-	168,922
Advances from and amounts								
due to related parties	1,225	-	-	1,225	41,624	-	-	41,624
Other current liabilities	7,549	-	-	7,549	256,555	-	-	256,555
Long-term loans from financial institutions	703,287	533,053	274,422	1,510,762	23,903,246	18,117,358	9,327,031	51,347,635
Debentures	295,148	1,695,251	1,074,497	3,064,896	10,031,476	57,618,009	36,519,897	104,169,382
Lease liabilities	968	1,156	-	2,124	32,893	39,299	-	72,192
Other non-current liabilities	-	2,600	-	2,600	-	88,360	-	88,360
Total non-derivatives	1,644,596	2,232,060	1,348,919	5,225,575	55,896,349	75,863,026	45,846,928	177,606,303
Derivative liabilities								
Derivatives recognised at FVPL								
- Interest rate swap contracts	19	-	-	19	630	-	-	630
- Coal price swap	446	-	-	446	15,146	-	-	15,146
Derivatives applied hedge accounting								
- Currency and interest rate swap contracts	864	5,538	-	6,402	29,366	188,233	-	217,599
Total derivative liabilities	1,329	5,538	-	6,867	45,142	188,233	-	233,375
As at 31 December 2023								
Non-derivatives								
Short-term loans from financial institutions	468,830	-	-	468,830	16,044,906	-	-	16,044,906
Trade payables to a related party	10,651	-	-	10,651	364,496	-	-	364,496
Advances from and amounts								
due to related parties	280	-	-	280	9,570	-	-	9,570
Other current liabilities	10,377	-	-	10,377	355,145	-	-	355,145
Long-term loans from financial institutions	640,764	899,223	78,555	1,618,542	21,929,036	30,774,383	2,688,404	55,391,823
Debentures	326,244	1,408,134	1,246,849	2,981,227	11,165,131	48,190,983	42,671,276	102,027,390
Lease liabilities	412	151	-	563	14,096	5,169	-	19,265
Other non-current liabilities	-	628	-	628	-	21,490	-	21,490
Total non-derivatives	1,457,558	2,308,136	1,325,404	5,091,098	49,882,380	78,992,025	45,359,680	174,234,085
Derivative liabilities								
Derivatives recognised at FVPL								
- Interest rate swap contracts	90	42	-	132	3,080	1,422	-	4,502
- Foreign exchange forward contracts	78	-	-	78	2,663	-	-	2,663
- Coal price swap	433	-	-	433	14,822	-	-	14,822
Derivatives applied hedge accounting								
- Currency and interest rate swap contracts	1,212	4,779	-	5,991	41,479	163,568	-	205,047
Total derivative liabilities	1,813	4,821	-	6,634	62,044	164,990	-	227,034

Management monitors rolling forecasts of the Group's liquidity reserve cash and cash equivalents and undrawn borrowing facilities on the basis of expected cash flows. In addition, the Group's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets and maintaining financing plans.

6.2 Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern, so that they can continue to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

To maintain or adjust the capital structure, the Group may adjust the amounts of dividends paid to shareholders, return capital to shareholders, issue new shares, or sell assets to reduce debt.



7 Fair value

The following table presents financial assets and liabilities that are measured at fair value, also stated fair value of each financial asset and liability, excluding financial assets and financial liabilities measured at amortised cost where the carrying value approximates fair value.

As at 31 December 2024	Consolidated financial statements						
	US Dollar'000						Baht'000
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Total
Financial assets							
Derivative assets recognised at fair value through profit or loss							
- Interest rate swap	-	2,401	-	2,401	-	81,630	- 81,630
- Cross currency and interest rate swap	-	1,445	-	1,445	-	49,106	- 49,106
- Foreign exchange rate forward contracts	-	119	-	119	-	4,031	- 4,031
- Coal price swap	-	446	-	446	-	15,147	- 15,147
- Electricity swaption	-	-	32,072	32,072	-	1,090,050	- 1,090,050
- Heat rate call option	-	358	-	358	-	12,158	- 12,158
- Electricity forward contracts	-	1,625	-	1,625	-	55,242	- 55,242
- Congestion Revenue Rights	-	642	-	642	-	21,815	- 21,815
Derivatives applied hedge accounting							
- Interest rate swap	-	6,363	-	6,363	-	216,283	- 216,283
- Cross currency and interest rate swap	-	2,030	-	2,030	-	68,987	- 68,987
- Natural gas and natural gas liquids swap and option	-	6,094	-	6,094	-	207,134	- 207,134
- Coal price swap	-	4,556	-	4,556	-	154,869	- 154,869
- Electricity forward contracts	-	2,432	-	2,432	-	82,654	- 82,654
Financial assets at fair value through profit or loss	-	197,232	112,995	310,227	-	6,703,525	10,543,971
- Investment in debt instruments	-	-	29,865	29,865	-	-	1,015,047
- Investment in equity instruments							
Financial assets at fair value through other comprehensive income	-	83	-	83	-	2,827	- 2,827
- Investment in debt instruments - Note receivables	8,172	-	147,450	155,622	277,750	-	5,289,255
- Investment in equity instruments	8,172	225,826	322,382	556,380	277,750	7,675,408	10,957,048
Total assets							18,910,206

As at 31 December 2024	Consolidated financial statements						
	US Dollar'000						Baht'000
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Total
Financial liabilities							
Derivative liabilities recognised at fair value through profit or loss							
- Interest rate swap	-	19	-	19	-	630	- 630
- Foreign exchange rate forward contracts	-	2,463	-	2,463	-	83,717	- 83,717
- Natural gas and natural gas liquids swap and option	-	25,917	-	25,917	-	880,834	- 880,834
- Heat rate call option	-	3,595	-	3,595	-	122,187	- 122,187
- Electricity forward contracts	-	1,130	-	1,130	-	38,405	- 38,405
Derivatives applied hedge accounting							
- Cross currency and interest rate swap	-	5,435	-	5,435	-	184,747	- 184,747
- Foreign exchange rate forward contracts	-	7,511	-	7,511	-	255,281	- 255,281
- Natural gas and natural gas liquids swap and option	-	42,520	-	42,520	-	1,445,149	- 1,445,149
- Electricity forward contracts	-	14,518	-	14,518	-	493,447	- 493,447
Other financial liabilities							
- Contingent liabilities from asset acquisition (included in other current liabilities)	-	-	20,000	20,000	-	-	679,758
Total liabilities	-	103,108	20,000	123,108	-	3,504,397	679,758
							4,184,155



As at 31 December 2023	US Dollar'000							Consolidated financial statements	
								Baht'000	
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	
Financial assets									
Derivative assets recognised at fair value through profit or loss									
- Interest rate swap	-	2,751	-	2,751	-	94,147	-	-	94,147
- Electricity swaption	-	-	15,657	15,657	-	-	535,838	-	535,838
- Warrants	275	-	-	275	9,419	-	-	-	9,419
- Coal price swap	-	433	-	433	-	14,822	-	-	14,822
- Electricity forward contracts	-	10,337	-	10,337	-	353,761	-	-	353,761
Derivatives applied hedge accounting									
- Interest rate swap	-	8,734	-	8,734	-	298,894	-	-	298,894
- Foreign exchange rate forward contracts	-	2,303	-	2,303	-	78,832	-	-	78,832
- Coal price swap	-	9,849	-	9,849	-	337,029	-	-	337,029
- Natural gas and natural gas liquids swap and option	-	102,547	-	102,547	-	3,509,504	-	-	3,509,504
- Electricity swaption	-	-	11,241	11,241	-	-	384,712	-	384,712
Financial assets at fair value through profit or loss									
- Investment in debt instruments	-	180,859	51,893	232,752	-	6,189,597	1,775,961	-	7,965,558
- Investment in equity instruments	-	-	15,817	15,817	-	-	541,322	-	541,322
Financial assets at fair value through other comprehensive income									
- Investment in debt instruments - Note receivables	-	62	-	62	-	2,120	-	-	2,120
- Investment in equity instruments	10,470	-	156,565	167,035	358,316	-	5,358,166	-	5,716,482
Total assets	10,745	317,875	251,173	579,793	367,735	10,878,706	8,595,999	-	19,842,440

As at 31 December 2023	Consolidated financial statements							
	US Dollar'000						Baht'000	
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities								
Derivative liabilities recognised at fair value through profit or loss								
- Interest rate swap	-	126	-	126	-	4,315	-	4,315
- Foreign exchange rate forward contracts	-	184	-	184	-	6,293	-	6,293
- Heat rate call option	-	42,091	-	42,091	-	1,440,477	-	1,440,477
- Coal price swap	-	23	-	23	-	788	-	788
Derivatives applied hedge accounting								
- Cross currency and interest rate swap	-	5,369	-	5,369	-	183,754	-	183,754
- Natural gas and natural gas liquids swap and option	-	21,205	-	21,205	-	725,718	-	725,718
- Fuel swap	-	1,005	-	1,005	-	34,401	-	34,401
- Electricity forward contracts	-	12,481	-	12,481	-	427,153	-	427,153
Other financial liabilities								
- Employee compensation liabilities (included in other current liabilities and other non-current liabilities)	-	-	14,288	14,288	-	-	488,975	488,975
- Contingent liabilities from asset acquisition (included in other current liabilities and other non-current liabilities)	-	-	47,486	47,486	-	-	1,625,130	1,625,130
- Contingent liabilities from business combination (included in other non-current liabilities)	-	-	2,190	2,190	-	-	74,936	74,936
- Put option over non-controlling interest (included in other non-current liabilities)	-	-	55,951	55,951	-	-	1,914,830	1,914,830
Total liabilities	-	82,484	119,915	202,399	-	2,822,899	4,103,871	6,926,770



	Separate financial statements						
	US Dollar'000						Baht'000
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
-	446	-	446	-	15,147	-	15,147
-	1,445	-	1,445	-	49,106	-	49,106
-	6,363	-	6,363	-	216,283	-	216,283
6,665	-	2,817	9,482	226,536	-	95,741	322,277
6,665	8,254	2,817	17,736	226,536	280,536	95,741	602,813
-	19	-	19	-	630	-	630
-	446	-	446	-	15,147	-	15,147
-	5,435	-	5,435	-	184,747	-	184,747
-	5,900	-	5,900	-	200,524	-	200,524

	Separate financial statements							
	US Dollar'000							Baht'000
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
275	-	-	-	275	9,419	-	-	9,419
-	433	-	-	433	-	14,822	-	14,822
-	8,325	-	-	8,325	-	284,892	-	284,892
8,428	-	-	2,817	11,245	288,446	-	96,404	384,850
8,703	8,758	2,817	20,278	297,865	299,714	96,404	693,983	
-	126	-	-	126	-	4,315	-	4,315
-	78	-	-	78	-	2,663	-	2,663
-	433	-	-	433	-	14,822	-	14,822
-	5,369	-	-	5,369	-	183,754	-	183,754
-	6,006	-	-	6,006	-	205,554	-	205,554

There were no transfers between Level 1,2 and 3 during the year.

Fair value is categorised into hierarchy based on inputs used as follows:

(a) Financial instruments in level 1

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period.

(b) Financial instruments in level 2

The fair value of financial instruments is determined using significant observable inputs and, as little as possible, entity-specific estimates.

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves.
- The fair value of forward foreign exchange contracts is determined by using forward exchange rates on the statement of financial position date, with the resulting value discounted back to present value.
- The fair value of coal swap contract, fuel swap contract, natural gas swap contract and electricity forward contracts is determined by using forward price on the statement of financial position date, with the resulting value discounted back to present value.
- Fair value of investment in debt instruments and note receivables is determined from discounted contractual cash flows where discount rate quoted in an active market.
- Fair value of investment in debt instruments is determined from net asset value of the investment fund.
- Other techniques, such as discounted cash flow analysis, are used to determine fair value for the remaining financial instruments.

(c) Financial instruments in level 3

The fair value of financial instruments is not based on observable market data.

The following table presents the significant changes in level 3 items:

	Investment in equity instruments						Contingent liabilities from asset acquisition				Put option over non-controlling interests				Consolidated financial statements	
	US Dollar'000		Baht'000		US Dollar'000		Baht'000		US Dollar'000		Baht'000		US Dollar'000		Baht'000	
Opening balance as at 1 January 2023	156,329		5,403,100		137,480		4,751,630		58,501		2,021,942		36,849		1,273,576	
Additions	9,208		312,879		-		-		-		-		-		-	
Decrease of investment	(14,524)		(515,767)		-		-		-		-		-		-	
Increase from business combinations	16,984		593,321		-		-		-		-		-		-	
Reclassification of investment in equity instrument to investment in an associate (Note 15.1)	(420)		(14,965)		-		-		-		-		-		-	
Payment of contingent liabilities from asset acquisition	-		-		(65,000)		(2,204,293)		-		-		-		-	
Changes in fair value recognised to profit or loss	1,790		11,563		-		-		-		-		(4,531)		(155,335)	
Change in fair value recognised in other comprehensive income	11,055		453,871		-		-		-		-		(5,624)		(197,588)	
Changes in fair value recognised as part of its cost of assets	-		-		(24,994)		(866,516)		-		-		-		-	
Change in fair value recognised in equity	-		-		-		-		(2,550)		(79,500)		-		-	
Translation differences	(8,040)		(344,514)		-		(55,691)		-		(27,612)		204		(103)	
Closing balance at 31 December 2023	172,382		5,899,488		47,486		1,625,130		55,951		1,914,830		26,898		920,550	
Additions	11,202		405,383		-		-		-		-		-		-	
Decrease of investment	(4,998)		(176,573)		-		-		-		-		-		-	
Payment of contingent liabilities from asset acquisition	-		-		(20,000)		(713,202)		-		-		-		-	
Maturity of put option over non-controlling interest	-		-		-		-		-		(1,242,242)		-		-	
Exercising the right to convert debt securities into investment in equity instruments	4,265		144,999		-		-		-		-		-		-	
Reclassification from investment in a joint venture	8,649		294,073		-		-		-		-		-		-	
Changes in fair value recognised to profit or loss	2,414		84,198		-		-		-		-		7,860		285,456	
Change in fair value recognised in other comprehensive income	150		12,090		-		-		-		-		-		-	
Changes in fair value recognised as part of its cost of assets	-		-		(7,486)		(263,385)		-		-		-		-	
Change in fair value recognised in equity	-		-		-		-		(21,119)		(705,864)		-		-	
Translation differences	(16,749)		(637,106)		-		31,215		-		33,276		(2,686)		(115,956)	
Closing balance at 31 December 2024	177,315		6,026,552		20,000		679,758		-		-		32,072		1,090,050	



The following table summarises the quantitative information about the significant unobservable inputs used in level 3 fair value measurement.

As at 31 December	Fair value (US Dollar'000)		Unobservable inputs	Range of inputs	
	2024	2023		2024	2023
Investment in equity instruments	177,315	172,382	Discount rate	7.34%	7.39%
Put option over non-controlling interests	-	55,951	Discount rate	-	12.00%
Electricity swaption	32,072	26,898	Forward electricity price curve	AUD 43.69 per MWh - AUD 46.16 per MWh	AUD 43.11 per MWh - AUD 53.33 per MWh

The unobservable inputs and fair values as at 31 December 2024 are shown as follows:

	Changes in fair value			
	US Dollar'000			
	Unobservable inputs	Movement	Increase in assumption	Decrease in assumption
Investment in equity instruments	Discount rate	1.00%	(9,943)	11,113
Electricity swaption	Forward electricity price curve	5.00%	(3,414)	3,101

The main level 3 unobservable inputs used by the Group pertains to the discount rate. It is estimated based on weighted average cost of capital incorporating the average rate of return in the industry that is expected for the given period and forward electricity prices which are refer to an energy consulting firm.

Group’s valuation processes

The Groups' finance department has a working team that performs the valuations of financial instruments required for financial reporting, including level 3 fair values. The team reports directly to the chief financial officer (CFO) and the audit committee.

8 Critical accounting estimates, assumptions, and judgements

Estimates, assumption, and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

8.1 Fair value of certain financial instruments

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses judgement to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period. Details of key assumptions used are disclosed in Note 6.

8.2 Coal and natural gas reserves

The Group estimates coal and natural gas reserves based on its best estimate of products that can be economically extracted from the relevant mining area and proved reserves and proved developed reserves for natural gas. The Group estimates coal reserves based on the geological studies and drilling samples and involves the geologists and reservoir engineers to estimate natural gas reserves.

8.3 Impairment of goodwill and long-lived assets

The Group annually tests for impairment of goodwill, or more frequently if events or changes in circumstances indicate that it might be impaired and tests for impairment of long-lived assets whenever there is an indication for impairment in accordance with the accounting policy stated in Note 5.8 and Note 5.10. The recoverable amounts of cash-generating units have been determined based on value-in-use model or fair value less costs of disposal. The details of the key assumptions used by management to test the impairment of goodwill are disclosed in Note 19.

8.4 Impairment of financial assets

The loss allowances for financial assets are based on assumptions about default risk and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs used in the impairment calculation, based on the Group’s past history and existing market conditions, as well as forward-looking estimates at the end of each reporting period.

9 Segment information

The Group has presented segment information aligned with the current business activities. The Group is organised into the following business segments:

- Energy Resources: The Group operates in coal sales and production both domestic and overseas. The Group also operates in gas production in the United States.
- Energy Generation: The Group operates in electricity generation which consists of thermal and renewable energy both domestic and overseas.
- Energy Technology: The Group's operations comprise of solar rooftop, electric vehicle, energy storage and energy management system.



Consolidated financial statements															Million US Dollar				
	Energy resources					Thermal					Renewable					Energy technology	Head office	Eliminated entries	Total
	Mining		Natural gas			Thailand	China	Japan	Laos	United States	China	Vietnam	Australia						
	Thailand	Indonesia	Australia	Mongolia	China and and Mongolia														
For the year ended																			
31 December 2024																			
Quantity of coal sales (unit: thousand tons)	1,399	24,037	7,922	1,930	-	-	-	-	-	-	-	-	-	-	-	-	35,288	(2,474)	32,814
Quantity of natural gas sales (unit: MMBTU)	-	-	-	-	288,405	-	-	-	-	-	-	-	-	-	-	-	288,405	-	288,405
Sales and service income	128	2,288	911	135	601	-	174	-	-	513	24	-	12	13	349	-	5,148	(180)	4,968
Sales - Realised gains on derivatives applied hedge accounting	-	10	1	-	125	-	-	-	-	44	-	-	-	-	-	-	180	-	180
Cost of sales and services	(118)	(1,336)	(869)	(133)	(604)	-	(148)	-	-	(497)	(9)	-	(6)	(8)	(320)	-	(4,048)	180	(3,868)
Cost of sales - Realised losses on derivatives applied hedge accounting	-	(2)	-	-	-	-	-	-	-	(30)	-	-	-	-	-	-	(32)	-	(32)
Gross profit	10	960	43	2	122	-	26	-	-	30	15	-	6	5	29	-	1,248	-	1,248
Gross profit margin (%)	8%	42%	5%	1%	17%	-	15%	-	-	5%	63%	-	50%	38%	8%	-	23%	-	24%
Share of profit (loss) from associates and joint ventures	-	-	-	80	-	29	4	1	85	-	-	2	(1)	-	(4)	-	196	-	196
Selling expenses	(5)	(178)	(72)	-	-	-	-	-	-	-	-	-	-	-	(9)	-	(264)	28	(236)
Administrative expenses	-	(37)	(16)	(2)	(95)	-	(18)	-	-	(21)	(3)	-	(1)	(8)	(30)	(64)	(295)	-	(295)
Royalty fee	-	(260)	(69)	-	-	-	-	-	-	-	-	-	-	-	-	-	(329)	-	(329)
Interest income	257	41	2	-	15	-	1	-	-	4	-	-	-	-	10	129	459	(402)	57
Profit (loss) from operation before interest expenses and income taxes	262	526	(112)	80	42	29	13	1	85	13	12	2	4	(3)	(4)	65	1,015	(374)	641

Consolidated financial statements															Million US Dollar					
	Energy resources					Thermal					Energy generation					Head office	Energy technology	Total	Eliminated entries	Total
	Mining		Natural gas			Renewable					Renewable									
	Thailand	Indonesia	Australia	Mongolia	China and and	Thailand	China	Japan	Laos	United States	China	Japan	Vietnam	Australia						
For the year ended																				
31 December 2024 (continued)																				
Profit (loss) from operation before interest expenses and income taxes (continued)	262	526	(112)	80	42	29	13	1	85	13	12	2	4	(3)	(4)	65	1,015	(374)	641	
Net losses on exchange rate																		(88)	(88)	
Net gains from changes in fair value of financial instruments																				
Gain on disposal of investment in a joint venture																			117	
Others																			(48)	
Interest expenses																			(37)	
Income taxes																			(377)	
Non-controlling interests																			(97)	
Loss for the year - owners of the Parent																			(135)	
																			(24)	
Timing of revenue recognition																				
- At a point in time	128	2,298	912	135	726	-	174	-	-	557	24	-	12	13	349	-	5,328	(180)	5,148	
- Overtime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	128	2,298	912	135	726	-	174	-	-	557	24	-	12	13	349	-	5,328	(180)	5,148	



Consolidated financial statements															Million US Dollar					
	Energy resources					Thermal					Energy generation					Head office	Energy technology	Total	Eliminated entries	Total
	Mining		Natural gas			United States					Renewable									
	Thailand	Indonesia	Australia	China and Mongolia	United States	Thailand	China	Japan	Laos	United States	China	Japan	Vietnam	Australia						
For the year ended																				
31 December 2023																				
Quantity of coal sales (unit: thousand tons)	999	19,829	6,966	1,941	-	-	-	-	-	-	-	-	-	-	-	-	29,735	(985)	28,750	
Quantity of natural gas sales (unit: MMBTU)	-	-	-	-	313,733	-	-	-	-	-	-	-	-	-	-	-	313,733	-	313,733	
Sales and service income	150	2,390	805	178	735	-	186	-	-	681	26	-	13	13	191	-	5,368	(209)	5,159	
Sales - Realised gains (losses) on derivatives applied hedge accounting	-	11	-	-	(29)	-	-	-	-	(58)	-	-	-	-	-	-	(76)	-	(76)	
Cost of sales and services	(134)	(1,299)	(796)	(176)	(715)	-	(175)	-	-	(391)	(9)	-	(6)	(10)	(162)	-	(3,873)	208	(3,665)	
Cost of sales - Realised gains (losses) on derivatives applied hedge accounting	-	7	-	-	-	-	-	-	-	(7)	-	-	-	-	-	-	0	-	0	
Gross profit	16	1,109	9	2	(9)	-	11	-	-	225	17	-	7	3	29	-	1,419	(1)	1,418	
Gross profit margin (%)	11%	46%	1%	1%	(1%)	-	6%	-	-	36%	65%	-	54%	23%	15%	-	27%	-	28%	
Share of profit (loss) from associates and joint ventures	-	-	(1)	154	-	30	3	(4)	88	-	-	2	-	-	(4)	-	268	-	268	
Selling expenses	(6)	(111)	(75)	-	-	-	-	-	-	(3)	-	-	-	-	(5)	-	(200)	32	(168)	
Administrative expenses	-	(42)	(20)	(2)	(99)	-	(18)	-	-	(29)	(2)	-	(1)	(8)	(27)	(68)	(316)	-	(316)	
Royalty fee	-	(332)	(47)	-	-	-	-	-	-	-	-	-	-	-	-	-	(379)	-	(379)	
Interest income	230	34	3	-	19	-	2	-	-	2	-	-	-	1	12	113	416	(368)	48	
Profit (loss) from operation before interest expenses																				
and income taxes	240	658	(131)	154	(89)	30	(2)	(4)	88	195	15	2	6	(4)	5	45	1,208	(337)	871	

Consolidated financial statements															Million US Dollar				
	Energy resources					Thermal					Energy generation					Head office	Energy technology	Eliminated entries	Total
	Mining		Natural gas			Renewable													
	Thailand	Indonesia	Australia	China and Mongolia	United States	Thailand	China	Japan	Laos	United States	China	Vietnam	Australia						
For the year ended																			
31 December 2023 (continued)																			
Profit (loss) from operation before interest expenses and income taxes (continued)	240	658	(131)	154	(89)	30	(2)	(4)	88	195	15	2	6	(4)	5	1,208	(337)	871	
Net gains on exchange rate																		2	
Net losses from changes in fair value of financial instruments																		(89)	
Loss from remeasurement of previously held equity interest																		(6)	
Bargain purchase from business combination																		89	
Others																		(2)	
Interest expenses																		(374)	
Income taxes																		(119)	
Non-controlling interests																		(212)	
Profit for the year - owners of the Parent																		160	
Timing of revenue recognition																			
- At a point in time	150	2,401	805	178	706	-	186	-	-	623	26	-	13	13	191	5,292	(209)	5,083	
- Over time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	150	2,401	805	178	706	-	186	-	-	623	26	-	13	13	191	5,292	(209)	5,083	



Consolidated financial statements														Million Baht			
	Energy resources				Energy generation								Head office	Energy technology	Total	Eliminated entries	Total
	Mining		Natural gas		Thermal				Renewable								
	China and Mongolia	United States	Thailand	China	Japan	Laos	United States	China	Japan	Vietnam	Australia						
	Thailand	Indonesia	Australia	Thailand	China	Japan	Laos	United States	China	Japan	Vietnam	Australia					
For the year ended 31 December 2024																	
Quantity of coal sales (unit: thousand tons)	1,399	24,037	7,922	1,930	-	-	-	-	-	-	-	-	-	-	35,288	(2,474)	32,814
Quantity of natural gas sales (unit: MMBTU)	-	-	-	-	288,405	-	-	-	-	-	-	-	-	-	288,405	-	288,405
Sales and service income	4,521	80,606	32,233	4,750	21,180	-	6,119	-	18,175	848	-	417	453	12,236	-	181,538	175,162
Sales - Realised gains on derivatives applied hedge accounting	-	375	25	-	4,426	-	-	-	1,561	-	-	-	-	-	-	6,387	-
Cost of sales and services	(4,158)	(47,183)	(30,692)	(4,693)	(21,310)	-	(5,218)	-	(17,557)	(322)	-	(208)	(291)	(11,211)	-	(142,843)	(136,455)
Cost of sales – Realised losses on derivatives applied hedge accounting	-	(53)	-	-	-	-	-	-	(1,051)	-	-	-	-	-	-	(1,104)	(1,104)
Gross profit	363	33,745	1,566	57	4,296	-	901	-	1,128	526	-	209	162	1,025	-	43,978	43,990
Gross profit margin (%)	8%	42%	5%	1%	17%	-	15%	-	6%	62%	-	50%	36%	8%	-	23%	24%
Share of profit (loss) from associates and joint ventures	-	(1)	1	2,831	-	1,005	149	44	3,006	-	83	(39)	-	(149)	-	6,930	6,930
Selling expenses	(165)	(6,287)	(2,519)	(17)	-	-	-	-	-	-	-	-	-	(315)	-	(9,312)	984
Administrative expenses	-	(1,294)	(550)	(61)	(3,333)	-	(648)	-	-	(755)	(92)	(42)	(268)	(1,065)	(2,248)	(10,356)	(10,356)
Royalty fee	-	(9,163)	(2,430)	-	-	-	-	-	-	-	-	-	-	-	-	(11,593)	(11,593)
Interest income	9,097	1,456	68	3	543	-	18	-	-	124	10	2	13	348	4,546	16,228	2,012
Profit (loss) from operation before interest expenses and income taxes	9,295	18,456	(3,864)	2,813	1,506	1,005	420	44	3,006	488	444	83	130	(156)	2,298	35,875	(13,220)
																	22,655

	Consolidated financial statements													Million Baht		
	Energy resources				Energy generation							Head office	Total	Eliminated entries	Total	
	Mining		Natural gas		Thermal			Renewable								
	Thailand	Indonesia	Australia	Mongolia	China	United States	Laos	Japan	China	Vietnam	Australia		Energy technology			
For the year ended																
31 December 2024 (continued)																
Profit (loss) from operation before interest expenses and																
income taxes (continued)	9,295	18,456	(3,864)	2,813	1,506	1,005	44	420	444	83	130	(93)	(156)	2,298	35,875	22,655
Net losses on exchange rate																(2,999)
Net gains from changes in fair value of financial instruments																4,085
Losses on disposal of investment in a joint venture																
Others																
Interest expenses																
Income taxes																
Non-controlling interests																
Loss for the year - owners of the Parent																
Timing of revenue recognition																
- At a point in time	4,521	80,981	32,258	4,750	25,606	-	-	6,119	848	-	417	453	12,236	-	187,925	181,549
- Overtime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4,521	80,981	32,258	4,750	25,606	-	-	6,119	848	-	417	453	12,236	-	187,925	181,549



Consolidated financial statements

	Energy resources															Energy generation					Head office	Energy technology	Eliminated entries	Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Revenue is allocated to the geographic areas where the sale originated and there is no customer who generates significant revenue to the Group.



10 Financial assets and financial liabilities

The classification of the Group's financial assets and financial liabilities are as follows:

As at 31 December 2024	Consolidated financial statements		Separate financial statements	
	US Dollar'000	Baht'000	US Dollar'000	Baht'000
Financial assets				
Financial assets measured at amortised cost				
Cash and cash equivalents	1,595,623	54,231,862	143,504	4,877,413
Investments in debt instruments measured at amortised cost	95,154	3,234,090	-	-
Trade receivables and note receivables, net	492,430	16,736,657	18,609	632,494
Advances to and amounts due from related parties	4,468	151,866	275,827	9,374,777
Short-term loans to related parties	7,264	246,900	2,559	86,962
Other current assets	151,981	5,165,463	753	25,579
Long-term loans to and interest receivables				
from related parties, net	24,051	817,449	2,180,308	74,104,084
Other non-current assets	72,548	2,465,753	148	5,043
Financial assets measured at fair value through profit or loss				
Investments in debt instruments	310,227	10,543,971	-	-
Investments in equity instruments	29,865	1,015,047	-	-
Financial assets measured at fair value through other comprehensive income				
Note receivables	83	2,827	-	-
Investments in equity instruments	155,622	5,289,255	9,482	322,277
Derivative assets				
Held for trading at fair value through profit or loss	39,108	1,329,179	1,891	64,252
Apply hedge accounting	21,475	729,927	6,363	216,284
Financial liabilities				
Financial liabilities measured at amortised cost				
Short-term loans from financial institutions	879,701	29,899,183	630,183	21,418,608
Trade payables	140,448	4,773,529	4,970	168,922
Advance from and amounts due to related parties	-	-	1,225	41,624
Accrued interest expenses	41,761	1,419,359	34,105	1,159,157
Accrued overburden and coal transportation costs	116,609	3,963,310	-	-
Long-term loans from financial institutions, net	2,560,994	87,042,815	1,320,283	44,873,641
Debentures, net	2,732,082	92,857,745	2,570,428	87,363,450
Lease Liabilities, net	37,867	1,287,029	1,978	67,219
Other current liabilities	372,372	12,656,148	7,549	256,555
Other non-current liabilities	6,825	231,965	2,600	88,360
Financial liabilities measured at fair value through profit or loss				
Contingent liabilities from asset acquisition	20,000	679,758	-	-
Derivative liabilities				
Held for trading at fair value through profit or loss	33,124	1,125,773	465	15,777
Apply hedge accounting	69,984	2,378,624	5,435	184,747

As at 31 December 2023	Consolidated financial statements		Separate financial statements	
	US Dollar'000	Baht'000	US Dollar'000	Baht'000
Financial assets				
Financial assets measured at amortised cost				
Cash and cash equivalents	1,574,962	53,900,381	150,733	5,158,570
Trade receivables and note receivables, net	528,775	18,096,440	32,988	1,128,956
Advances to and amounts due from related parties	1,294	44,297	180,553	6,179,110
Short-term loans to related parties	4,237	145,000	26,551	908,647
Other current assets	282,233	9,658,978	275	9,429
Investments in debt instruments measured at amortised cost	60,153	2,058,638	-	-
Long-term loans to related parties	28,900	989,049	2,316,199	79,267,947
Other non-current assets	79,022	2,704,385	154	5,279
Financial assets measured at fair value through profit or loss				
Investments in debt instruments	232,752	7,965,558	-	-
Investments in equity instruments	15,817	541,322	-	-
Financial assets measured at fair value through other comprehensive income				
Note receivables	62	2,120	-	-
Investments in equity instruments	167,035	5,716,482	11,245	384,850
Derivative assets				
Held for trading at fair value through profit or loss	29,453	1,007,987	708	24,241
Apply hedge accounting	134,674	4,608,971	8,325	284,892
Financial liabilities				
Financial liabilities measured at amortised cost				
Short-term loans from financial institutions	726,648	24,868,280	464,596	15,900,000
Trade payables	139,708	4,781,259	10,651	364,496
Advance from and amounts due to related parties	2	72	280	9,570
Accrued interest expenses	56,956	1,949,217	35,089	1,200,867
Accrued overburden and coal transportation costs	88,864	3,041,211	-	-
Long-term loans from financial institutions, net	3,136,924	107,355,917	1,402,768	48,007,376
Debentures, net	2,635,066	90,180,639	2,474,556	84,687,481
Lease Liabilities, net	43,696	1,495,431	547	18,734
Other current liabilities	411,902	14,096,634	10,377	355,145
Other non-current liabilities	9,197	314,683	907	31,035
Financial liabilities measured at fair value through profit or loss				
Employee compensation liabilities	14,288	488,975	-	-
Contingent liabilities from asset acquisition	47,486	1,625,130	-	-
Contingent liabilities from business combination	2,190	74,936	-	-
Put option over non-controlling interest	55,951	1,914,830	-	-
Derivative liabilities				
Held for trading at fair value through profit or loss	42,424	1,451,873	637	21,800
Apply hedge accounting	40,060	1,371,026	5,369	183,754

As at 31 December 2024 and 2023, the financial assets and liabilities measured at amortised cost approximated the fair value except debentures, as disclosed in Note 25.



10.1 Financial assets at fair value through other comprehensive income

Amounts recognised in profit or loss and other comprehensive income

The following gains/(losses) were recognised in profit or loss and other comprehensive income during the year as follows:

	Consolidated financial statements		Separate financial statements	
	US Dollar'000	Baht'000	US Dollar'000	Baht'000
For the year ended 31 December 2024				
Losses recognised in other comprehensive income				
related to equity investment	(2,027)	(66,928)	(1,685)	(59,104)
Dividends from equity investments at FVOCI				
recognised in profit or loss related to investments				
held at the end of the reporting period	10,055	352,913	195	7,169
For the year ended 31 December 2023				
Gains recognised in other comprehensive income				
related to equity investment	12,997	470,459	1,054	36,599
Transfer of net losses on investment in equity				
instruments to retained earnings	7,681	360,517	-	-
Dividends from equity investments at FVOCI				
recognised in profit or loss related to investments				
held at the end of the reporting period	12,885	450,933	122	4,197

10.2 Derivatives

The Group and the Company has derivatives in the statement of financial position as below:

	Consolidated financial statements							
	As at 31 December 2024				As at 31 December 2023			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Current								
Derivative recognised at fair value through profit or loss								
Electricity swaption	6,000	-	203,921	-	3,757	-	128,581	-
Interest rate swap	-	19	-	630	-	-	-	-
Foreign exchange rate forward	119	2,463	4,031	83,717	-	184	-	6,293
Coal price swap	446	-	15,147	-	433	23	14,822	788
Electricity forward contracts	1,625	1,130	55,242	38,405	10,337	-	353,761	-
Heat rate call option	358	3,595	12,158	122,187	-	42,091	-	1,440,477
Congestion Revenue Right	591	-	20,080	-	-	-	-	-
Derivatives applied hedge accounting								
Electricity swaption	-	-	-	-	2,915	-	99,749	-
Interest rate swap	230	-	7,827	-	409	-	14,002	-
Cross currency and interest rate swap	-	445	-	15,158	-	807	-	27,623
Foreign exchange rate forward	-	7,511	-	255,281	2,303	-	78,832	-
Coal price swap	4,556	-	154,869	-	9,849	-	337,029	-
Natural gas and natural gas liquids swap and option	6,094	21,079	207,134	716,390	84,039	21,205	2,876,108	725,718
Fuel swap	-	-	-	-	-	1,005	-	34,401
Electricity forward contracts	2,432	14,518	82,654	493,447	-	12,481	-	427,153
Total current derivatives	22,451	50,760	763,063	1,725,215	114,042	77,796	3,902,884	2,662,453



	Consolidated financial statements							
	As at 31 December 2024				As at 31 December 2023			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Non-current								
Derivative recognised at fair value through profit or loss								
Warrants	-	-	-	-	275	-	9,419	-
Electricity swaption	26,072	-	886,129	-	11,900	-	407,257	-
Interest rate swap	2,401	-	81,630	-	2,751	126	94,147	4,315
Cross currency and interest rate swap	1,445	-	49,106	-	-	-	-	-
Natural gas and natural gas liquids swap and option	-	25,917	-	880,834	-	-	-	-
Congestion Revenue Right	51	-	1,735	-	-	-	-	-
Derivatives applied hedge accounting								
Electricity swaption	-	-	-	-	8,326	-	284,963	-
Interest rate swap	6,133	-	208,456	-	8,325	-	284,892	-
Cross currency and interest rate swap	2,030	4,990	68,987	169,589	-	4,562	-	156,131
Natural gas and natural gas liquids swap and option	-	21,441	-	728,759	18,508	-	633,396	-
Total non-current derivatives	38,132	52,348	1,296,043	1,779,182	50,085	4,688	1,714,074	160,446
Total derivatives	60,583	103,108	2,059,106	3,504,397	164,127	82,484	5,616,958	2,822,899

	Separate financial statements							
	As at 31 December 2024				As at 31 December 2023			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Current								
Derivatives recognised at fair value through profit or loss								
Interest rate swap	-	19	-	630	-	-	-	-
Foreign exchange rate forward contracts	-	-	-	-	-	78	-	2,663
Coal price swap	446	446	15,147	15,147	433	433	14,822	14,822
Derivative applied hedge accounting								
Interest rate swap	230	-	7,827	-	-	-	-	-
Cross currency and interest rate swap	-	445	-	15,158	-	807	-	27,623
Total current derivatives	676	910	22,974	30,935	433	1,318	14,822	45,108
Non-current								
Derivatives recognised at fair value through profit or loss								
Warrants	-	-	-	-	275	-	9,419	-
Interest rate swap	-	-	-	-	-	126	-	4,315
Cross currency and interest rate swap	1,445	-	49,106	-	-	-	-	-
Derivative applied hedge accounting								
Interest rate swap	6,133	-	208,456	-	8,325	-	284,892	-
Cross currency and interest rate swap	-	4,990	-	169,589	-	4,562	-	156,131
Total non-current derivatives	7,578	4,990	257,562	169,589	8,600	4,688	294,311	160,446
Total derivatives	8,254	5,900	280,536	200,524	9,033	6,006	309,133	205,554



10.2.1 Hedging reserve

The cash flow hedge reserve is used to recognise gain/loss relating to the effective portion of the change in fair value of the derivatives for which hedge accounting is applied.

Hedging reserves are listed in other components of equity, which consists of the following hedging instruments.

Cash flow hedge reserves	Consolidated financial statements					
	US Dollar'000					
	Electricity Forward contracts and					
	Electricity	Coal price		Currency and		Total hedge reserve
	Swaption contracts	Natural gas swap contracts	swap contracts	interest rate swap contracts	Interest rate swap contracts	
Opening balance as at 1 January 2023	(1,977)	(114,978)	1,195	(18,394)	61,818	(72,336)
Add: Change in fair value of hedging instrument recognised in other comprehensive income	(6,062)	311,643	25,409	(17,639)	(9,053)	304,298
Less: Reclassification from other comprehensive income to profit or loss	3,022	(68,835)	(18,582)	10,373	(16,079)	(90,101)
Less: Deferred tax	868	(54,678)	(1,645)	(83)	2,212	(53,326)
Closing balance as at 31 December 2023	(4,149)	73,152	6,377	(25,743)	38,898	88,535
Add: Change in fair value of hedging instrument recognised in other comprehensive income	4,227	4,070	4,643	(13,938)	(1,701)	(2,699)
Less: Reclassification from other comprehensive income to profit or loss	(1,909)	(120,568)	(8,894)	(2,561)	(4,756)	(138,688)
Less: Deferred tax	(621)	29,224	615	3,864	(14)	33,068
Closing balance as at 31 December 2024	(2,452)	(14,122)	2,741	(38,378)	32,427	(19,784)

Cash flow hedge reserves	Consolidated financial statements					
	Baht'000					
	Electricity Forward contracts and					
	Electricity	Coal price		Currency and		Total hedge reserve
	Swaption contracts	Natural gas swap contracts	swap contracts	interest rate swap contracts	Interest rate swap contracts	
Opening balance as at 1 January 2023	(48,943)	(2,846,397)	29,583	(455,362)	1,530,363	(1,790,756)
Add: Change in fair value of hedging instrument recognised in other comprehensive income	(261,148)	10,243,719	931,559	(989,620)	592,453	10,516,963
Less: Reclassification from other comprehensive income to profit or loss	102,650	(2,338,170)	(631,188)	352,347	(546,167)	(3,060,528)
Less: Deferred tax	30,889	(1,946,000)	(58,545)	(2,954)	78,749	(1,897,861)
Closing balance as at 31 December 2023	(176,552)	3,113,152	271,409	(1,095,589)	1,655,398	3,767,818
Add: Change in fair value of hedging instrument recognised in other comprehensive income	149,754	144,170	164,493	(493,796)	(61,680)	(97,059)
Less: Reclassification from other comprehensive income to profit or loss	(67,632)	(4,271,492)	(315,097)	(90,731)	(168,495)	(4,913,447)
Less: Deferred tax	(22,028)	1,036,612	21,815	137,063	(497)	1,172,965
Closing balance as at 31 December 2024	(116,458)	22,442	142,620	(1,543,053)	1,424,726	(69,723)

Cash flow hedge reserves	Separate financial statements					
	US Dollar'000			Baht'000		
	Currency and			Currency and		
	interest rate	Interest rate	Total hedge	interest rate	Interest rate	Total hedge
	swap contracts	swap contracts	reserve	swap contracts	swap contracts	reserve
Opening balance as at 1 January 2023	18,629	18,276	36,905	635,724	623,702	1,259,426
Add: Change in fair value of hedging instrument recognised in other comprehensive income	(8,872)	2,679	(6,193)	(315,666)	97,435	(218,231)
Less: Reclassification from other comprehensive income to profit or loss	(7,199)	(17,989)	(25,188)	(246,322)	(635,492)	(881,814)
Less: Deferred tax	1,883	2,124	4,007	64,422	72,700	137,122
Closing balance as at 31 December 2023	4,441	5,090	9,531	138,158	158,345	296,503
Add: Change in fair value of hedging instrument recognised in other comprehensive income	(7,830)	2,794	(5,036)	(267,688)	90,470	(177,218)
Less: Reclassification from other comprehensive income to profit or loss	4,898	(4,755)	143	170,856	(167,380)	3,476
Less: Deferred tax	13	392	405	520	15,351	15,871
Closing balance as at 31 December 2024	1,522	3,521	5,043	41,846	96,786	138,632



10.2.2 Amounts recognised in profit of loss

In addition to the amounts disclosed in the reconciliation of hedging reserves in above table, the following amounts were recognised in profit or loss in relation to derivatives:

	Consolidated financial statements		Separate financial statements	
	US Dollar'000	Baht'000	US Dollar'000	Baht'000
For the year ended 31 December 2024				
Net gains on financial instruments				
not qualifying as hedges included in				
net gains (losses) from changes in fair value				
of financial instruments	69,366	2,437,673	1,833	61,887
Net losses on hedge ineffectiveness				
of financial instruments which hedge				
accounting is applied in net gains (losses)				
from changes in fair value of financial				
instruments	(4,769)	(214,730)	-	-
For the year ended 31 December 2023				
Net gains (losses) on financial instruments				
not qualifying as hedges included in net				
gains (losses) from changes in				
fair value of financial instruments	(83,811)	(3,009,749)	(1,111)	(35,975)
Net losses on hedge ineffectiveness				
of financial instruments which hedge				
accounting is applied in net gains (losses)				
from changes in fair value of financial				
instruments	(4,851)	(127,580)	-	-

11 Cash and cash equivalents

	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
As at 31 December								
Cash on hand	124	124	4,198	4,253	18	18	625	625
Deposits held at call with banks	1,049,842	1,135,526	35,681,923	38,861,430	143,486	150,715	4,876,788	5,157,945
Fixed deposits with banks	545,657	439,312	18,545,741	15,034,698	-	-	-	-
Total cash and cash equivalents	1,595,623	1,574,962	54,231,862	53,900,381	143,504	150,733	4,877,413	5,158,570

As at 31 December 2024, the interest rates on deposits held at call with banks and fixed deposits with banks were 0.30% to 5.40% per annum and 0.25% to 6.00% per annum (2023: 0.30% to 4.47% per annum and 0.50% to 7.95% per annum). These fixed deposits have an original maturity of three months.

12 Trade receivables and note receivables, net

	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
As at 31 December								
Trade receivables								
- third parties	501,125	533,081	17,032,183	18,243,796	18,609	32,988	632,494	1,128,956
Note receivables	-	7,023	-	240,355	-	-	-	-
Less Expected credit losses	(8,695)	(11,329)	(295,526)	(387,711)	-	-	-	-
Trade receivables and note receivables, net	492,430	528,775	16,736,657	18,096,440	18,609	32,988	632,494	1,128,956

Note receivables represent note receivables from sales of power and steam of subsidiaries in the People's Republic of China which are issued by a private company to guarantee the possessors to get money on the maturity date of note receivables. Note receivables are non-interest bearing.

Trade receivables and note receivables can be analysed as follows:

	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
As at 31 December								
Trade receivables and note receivables under credit term	434,770	482,548	14,776,907	16,514,392	18,609	31,160	632,494	1,066,395
Trade receivables and note receivables due for payment								
- Less than 3 months	47,934	44,396	1,629,185	1,519,378	-	1,828	-	62,561
- Over 3 months but less than 6 months	7,860	455	267,129	15,575	-	-	-	-
- Over 6 months but less than 12 months	888	303	30,198	10,369	-	-	-	-
- Over 12 months	9,673	12,402	328,764	424,437	-	-	-	-
Total trade receivables and note receivables	501,125	540,104	17,032,183	18,484,151	18,609	32,988	632,494	1,128,956
Less Expected credit losses	(8,695)	(11,329)	(295,526)	(387,711)	-	-	-	-
Trade receivables and note receivables, net	492,430	528,775	16,736,657	18,096,440	18,609	32,988	632,494	1,128,956



13 Inventories, net

As at 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
Coal	130,887	151,105	4,448,567	5,171,338	9,866	13,721	335,340	469,582
Fuel	139	160	4,733	5,474	-	-	-	-
Natural gas	8,939	6,991	303,814	239,269	-	-	-	-
Batteries and others	9,215	17,096	313,214	585,082	-	-	-	-
Good in transits - coal	7,267	16,250	246,980	556,113	-	-	-	-
Total inventories	156,447	191,602	5,317,308	6,557,276	9,866	13,721	335,340	469,582
<u>Less</u> Allowance for slow-moving of inventories	(10,139)	(8,532)	(344,599)	(292,002)	(3,854)	(3,854)	(130,999)	(131,907)
Inventories, net	146,308	183,070	4,972,709	6,265,274	6,012	9,867	204,341	337,675

14 Other current assets

As at 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
Prepaid expenses	57,482	117,923	1,953,679	4,035,714	7,265	6,050	246,908	207,039
Advance for prepayment	20,016	25,291	680,312	865,554	24	33	811	1,141
Value added tax receivables	12,974	18,272	440,970	625,314	743	2,290	25,259	78,367
Prepaid income tax	2,133	2,761	72,506	94,506	301	423	10,227	14,464
Restricted deposits at banks (Note 15.1 g))	36,198	175,266	1,230,292	5,998,183	-	-	-	-
Other receivables	92,792	81,373	3,153,801	2,784,858	729	243	24,768	8,317
Short-term loans to others	778	303	26,436	10,383	-	-	-	-
Long service leave coal industry fund receivable in Australia	36,402	41,156	1,237,211	1,408,500	-	-	-	-
Others	5,270	1,932	179,105	66,084	690	53	23,403	1,840
Total other current assets	264,045	464,277	8,974,312	15,889,096	9,752	9,092	331,376	311,168

15 Investments in subsidiaries, associates, and joint ventures

Investments in associates and joint ventures using the equity method are as follows:

As at 31 December	Consolidated financial statements (Equity method)			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Associates				
Urban Mobility Tech Co., Ltd.	13,182	10,169	448,024	348,023
FOMM Corporation	18,702	18,574	635,650	635,650
Global Engineering Co., Ltd.	7,254	8,099	246,532	277,180
Port Kembla Coal Terminal Ltd.	74	81	2,510	2,781
GEPP Sa-ard Co., Ltd.	353	351	12,000	12,000
Beyond Green Co., Ltd.	14,485	10,950	492,300	374,760
Solar Esco Joint Stock Company	6,274	2,600	213,257	88,981
Altotech Global Co., Ltd.	1,942	1,929	66,000	66,000
Hauptcar Company Limited	-	420	-	14,366
SVOLT Energy Technology (Thailand) Co., Ltd.	22,067	21,915	750,000	750,000
Joint ventures				
BLCP Power Ltd.	173,273	177,925	5,889,170	6,089,170
Hebi Zhong Tai Mining Co., Ltd.	48,320	48,320	1,642,308	1,653,683
Shanxi Gaohe Energy Co., Ltd.	308,933	308,933	10,499,975	10,572,697
Shanxi Luguang Power Co., Ltd.	72,191	74,016	2,453,601	2,533,088
Hongsa Power Company Limited	385,211	382,562	13,092,534	13,092,534
Phu Fai Mining Company Limited	25	24	836	836
Aura Land Development Pte. Ltd.	2,745	2,726	93,290	93,290
Hokkaido Solar Estate G.K.	1,777	1,765	60,396	60,396
PT. Nusantara Timur Unggul	488	488	16,591	16,706
Nakoso IGCC Management Co., Ltd.	70,799	71,918	2,427,578	2,461,268
EVOLT Technology Co., Ltd.	4,437	4,383	150,818	150,000
LIV Energy Venture Pte. Ltd.	1,000	1,000	33,988	34,223
BNSP Smart Tech Co., Ltd.	3,220	3,198	109,457	109,457
Oyika Pte. Ltd.	-	10,000	-	342,233
PT Centra Multi Suryanesia Aset	1,701	419	57,805	14,328
BNSP Co., Ltd.	11	-	382	-
AJFP	18,804	-	639,100	-
AMP Co., Ltd.	2,974	-	101,071	-
Investments in associates and joint ventures - cost method	1,180,242	1,162,765	40,135,173	39,793,650
<u>Add</u> Cumulative equity account of investments in associates and joint ventures	883,477	809,031	30,020,858	27,687,731
<u>Less</u> Accumulated impairment	(31,645)	-	(1,090,097)	-
Total investments in associates and joint ventures, net	2,032,074	1,971,796	69,065,934	67,481,381



As at 31 December 2024 and 2023, the Group pledged its investments in two joint ventures with a cost of US Dollar 370.82 million, as collateral for loans from financial institutions of such joint ventures, under the conditions of loans for project finance of joint ventures.

Investments in subsidiaries are as follows:

As at 31 December	Separate financial statements (Cost method)			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Subsidiaries				
Banpu Minerals Co., Ltd.	1,569,068	1,569,068	53,329,336	53,698,695
Banpu Power Public Company Limited	687,198	687,198	23,356,395	23,518,160
Banpu Engineering Services Co., Ltd.	6,826	6,826	232,026	233,633
BOG Co., Ltd.	1,138,641	1,138,641	38,699,995	38,968,031
Banpu Innovation & Ventures Co., Ltd.	13,928	13,928	473,382	476,661
Banpu NEXT Co., Ltd.	284,168	284,168	9,658,280	9,725,173
Banpu Vietnam Limited Liability Company	1,000	1,000	33,988	34,223
Banpu Ventures Pte. Ltd.	266,175	213,675	9,046,729	7,312,664
Total investments in subsidiaries	3,967,004	3,914,504	134,830,131	133,967,240
<u>Less</u> Accumulated impairment	(2,248)	-	(76,387)	-
Investments in subsidiaries, net	3,964,756	3,914,504	134,753,744	133,967,240

15.1 Changes in investments in subsidiaries, associates and joint ventures

Movements of investments in associates and joint ventures are as follows:

For the year ended 31 December	Consolidated financial statements (Equity method)			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Opening balance	1,971,796	1,784,138	67,481,381	61,664,098
Increase of investments	33,092	37,246	1,138,014	1,314,682
Decrease of investment	(5,746)	-	(200,000)	-
Impairment loss of investment	(31,645)	-	(1,090,097)	-
Dividend received from associates and joint ventures	(118,470)	(80,884)	(4,192,494)	(2,848,443)
Share of profit from associates and joint ventures	196,032	268,290	6,929,595	9,297,035
Reclassification of investment in a joint venture to investment in a subsidiary	-	(30,557)	-	(1,053,611)
Reclassification of investment in a joint venture to investment in equity instruments	(8,360)	-	(284,227)	-
Reclassification of investment in equity instrument to investment in an associate	-	420	-	14,965
Share of other comprehensive income (expense) from associates and joint ventures				
- Remeasurements of post-employment benefit obligations	(471)	-	(16,019)	-
- Gains on fair value of equity instruments	-	14,426	-	507,737
- Cash flow hedge reserve	(5,089)	(9,981)	(176,375)	(356,620)
Translation differences	935	(11,302)	(523,844)	(1,058,462)
Closing balance	2,032,074	1,971,796	69,065,934	67,481,381

Movements of investments in subsidiaries are as follows:

For the year ended 31 December	Separate financial statements (Cost method)			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Opening balance	3,914,504	3,684,814	133,967,240	127,356,009
Increase of investments	52,500	229,690	1,862,659	8,103,187
Impairment loss of investment	(2,248)	-	(76,413)	-
Translation differences	-	-	(999,742)	(1,491,956)
Closing balance	3,964,756	3,914,504	134,753,744	133,967,240



Significant transactions of investments during the year

a) Increase of investments

Consolidated financial statements

On 21 March 2024, the Group additionally invested in newly issued shares of Urban Mobility Tech Co., Ltd., an associate of the Group, with the total additional consideration of Baht 100 million or equivalent to US Dollar 2.85 million. As of a result, the Group's shareholding increased from 39.74% to 45.61%. The Group fully paid for this investment.

On 11 July 2024, the Group additionally invested in newly issued shares of Beyond Green Co., Ltd. an associate of the Group, for a consideration of Baht 117.54 million or equivalent to US Dollar 3.38 million. As of a result, the Group's shareholding increased from 39.18% to 47.69%. The Group fully paid for this investment.

The Group additionally invested in Solar Esco Joint Stock Company, an associate, in proportion to the original investment of US Dollar 3.67 million. The Group fully paid for this investment.

On 3 October 2024, subsidiaries of the Group entered into a Share Subscription Agreement (SSA) to acquire 33.33% shareholding interest in AMP Co., Ltd. and AJFP. These investments focus on the renewable energy business in Japan, with a total commitment of US Dollar 35 million as per the agreement. As at 31 December 2024, the Group had paid for the share subscriptions in these companies, totalling US Dollar 22.08 million, resulting in a 33.59% shareholding in AMP Co., Ltd. and a 36.72% shareholding in AJFP.

Separate financial statements

The Company additionally invested in Banpu Ventures Pte. Ltd., a subsidiary, in proportion to the original investment of US Dollar 52.50 million. The Company fully paid for this investment.

b) Decrease of investment

BLCP Power Ltd., a joint venture of the Group, registered for a capital reduction with the Ministry of Commerce. The Group received the returned capital reduction in the same proportion as its original investment, amounting to Baht 200 million or equivalent to US Dollar 5.75 million.

c) Disposal of investment and impairment loss of investment

On 25 December 2024, Nakoso IGCC Management Co., Ltd. (NIMCO), a joint venture of the Group, is engaged in investing in the power generation business in Japan and holding investment only in Nakoso IGCC Power Plant G.K. (Nakoso), completed the sale of its entire shareholding in Nakoso at a sale price equivalent to US Dollar 33.65 million. As a result, NIMCO recognised a loss from the sale of Nakoso in its financial statements, and NIMCO has ceased its operation. Therefore, the Group recognised an impairment loss on its investment in NIMCO using the equity method for the remaining amount and transferred the ending balance of cash flow hedge reserve and translation differences of NIMCO's financial statements, totalling USD 48.04 million, in the consolidated statement of comprehensive income for the year ended 31 December 2024.

d) Sales of a subsidiary and non-operated upstream assets held in another subsidiary

In June 2024, BKV Corporation, a subsidiary of the Group, sold its entire 100% interest in BKV Chaffee Corners, LLC, which owns non-operated upstream assets in Northeast Pennsylvania (NEPA), the United States, for a sale price of US Dollar 106.71 million. Additionally, BKV Chelsea, LLC, another subsidiary of the Group, sold non-operated upstream assets, also in NEPA, for a sale price of US Dollar 25 million. The Group recognised a net profit from the sale of this subsidiary and assets held in another subsidiary of US Dollar 7.41 million in the consolidated statement of comprehensive income for the year ended 31 December 2024.

e) Changes in ownership interests of subsidiary in the United States

Issuance of new ordinary shares for share-based payment

During the third quarter of 2024, BKV Corporation, a subsidiary of the Group, issued shares to its employees under the 2021 share-based payment program, The number of shares issued was net of shares withheld for applicable taxes, which BKV Corporation paid on behalf of the employees.

The completion of its initial public offering and its listing on the New York Stock Exchange (NYSE) of a subsidiary

On 25 September 2024 (New York Time), BKV Corporation (BKV), a subsidiary, announced its initial public offering (IPO) of 15,000,000 shares of its common stock at US Dollar 18 per share and its listing on the New York Stock Exchange (NYSE). BKV's shares began trading on the NYSE on 26 September 2024 (New York Time). BKV raised US Dollar 253.80 million in proceeds from the IPO, consisting entirely of newly issued ordinary shares, after deducting underwriting discounts and commissions.

Additionally, the underwriters have a 30-day option from the first trading date to purchase an additional 2,250,000 shares from BKV at the IPO price, less underwriting discounts and commissions (Greenshoe option).



On 28 October 2024 (New York Time), the underwriters exercised their right to purchase an additional 701,003 newly issued ordinary shares at the IPO price of US Dollar 18 per share. BKV received US Dollar 11.86 million from the underwriters, after deducting underwriting discounts and commissions.

As a result of the aforementioned events, the Group's ownership interest in BKV has been diluted from 96.38% to 75.51%. The Group recognised an increase in non-controlling interests of US Dollar 340.68 million and a decrease in changes in parent's ownership interests in subsidiaries of US Dollar 63.09 million in the consolidated statement of changes in equity for the year ended 31 December 2024.

f) Dividend income from joint ventures

For the year ended 31 December	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Joint ventures				
BLCP Power Ltd.	6,367	1,009	225,755	35,495
Hongsa Power Company Limited	29,055	26,759	1,018,346	921,486
Phu Fai Mining Company Limited	5,880	2,875	207,065	101,096
Aizu Energy Pte. Ltd.*	-	454	-	15,383
Evolt Technology Co., Ltd.	92	-	3,290	-
Hebi Zhong Tai Mining Co., Ltd.	1,658	-	60,823	-
Global Engineering Co., Ltd.	80	-	2,772	-
Shanxi Gaohe Energy Company Limited	41,689	49,787	1,530,391	1,774,983
Nakoso IGCC Management Co., Ltd.	33,649	-	1,144,052	-
Total dividend income from joint ventures	118,470	80,884	4,192,494	2,848,443

* In quarter three of 2023, the Group entered into a share sale and purchase agreement to acquire the remaining 25% interest in Aizu Energy Pte. Ltd. (Aizu), a former joint venture of the Group. As a result, the Group obtained control over Aizu. Therefore, the Group reclassified investment in Aizu from investment in joint venture to investment in subsidiary.

Banpu Power Public Company Limited, a subsidiary, has provided the Standby Letters of Credit, issued by commercial banks under the subsidiary's name amounting to Baht 1,548 million or equivalent to US Dollar 45.55 million and US Dollar 22.00 million as a guarantee for lenders of Hongsa Power Company Limited (2023: Baht 1,600 million or equivalent to US Dollar 46.75 million and US Dollar 22.00 million). However, the Group considered that there are no financial liabilities expected from this financial guarantee.

g) Significant restrictions

As at 31 December	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Deposits held at banks as a guarantee for bank loan for subsidiaries in the People's Republic of China ⁽¹⁾	233	245	7,905	8,379
Deposits held at banks as reserve for debt service of subsidiaries in the United States of America ⁽¹⁾	-	139,661	-	4,779,749
Deposits held at banks as reserve for bank guarantee of subsidiaries in Australia ⁽¹⁾	1,584	1,740	53,841	59,540
Deposits held at banks as reserve for debt service of subsidiaries in Australia ⁽¹⁾	34,381	33,620	1,168,546	1,150,515
Restricted cash used in mine closure activities of subsidiaries in Indonesia ⁽²⁾	39,453	49,108	1,340,922	1,680,834
	75,651	224,374	2,571,214	7,679,017

⁽¹⁾ Presented in other current assets

⁽²⁾ Presented in other non-current assets

15.2 Material subsidiaries

As at 31 December, the Group had the following significant subsidiaries:

Name of company	Country	Business	Proportion of ordinary shares held by the Group (%)		Proportion of ordinary shares held by non-controlling interests (%)	
			2024	2023	2024	2023
PT. Indo Tambangraya Megah Tbk. and its subsidiaries	Indonesia	Investment in coal mining	65.14	65.14	34.86	34.86
Banpu Australia Co., Pty Ltd. and its subsidiaries	Australia	Investment in coal mining	100.00	100.00	-	-
Banpu Power Public Company Limited and its subsidiaries	Thailand	Investment in power business	78.66	78.66	21.34	21.34
BKV Corporation and its subsidiaries	United States	Natural gas business	75.51	96.38	24.49	3.62

List of subsidiaries of the Group is disclosed in Note 15.6.

15.3 Non-controlling interests

Set out below are the summarised financial information for each subsidiary that has non-controlling interests that are material to the Group. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised statement of financial position

As at 31 December	PT Indo Tambangraya Megah Tbk				Banpu Power Public Company Limited				BKV Corporation			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
Current assets	1,404,755	1,279,873	47,744,676	43,801,486	373,944	404,489	12,709,575	13,842,951	93,482	314,967	3,177,250	10,779,222
Current liabilities	(313,880)	(294,253)	(10,668,121)	(10,070,298)	(312,857)	(288,931)	(10,633,348)	(9,888,182)	(160,676)	(404,664)	(5,461,051)	(13,848,932)
Total current assets, net	1,090,875	985,620	37,076,555	33,731,188	61,087	115,558	2,076,227	3,954,769	(67,194)	(89,697)	(2,238,801)	(3,069,710)
Non-current assets	1,001,790	907,976	34,048,723	31,073,925	2,520,464	2,490,423	85,665,268	85,230,480	2,185,266	2,378,128	74,272,597	81,387,390
Non-current liabilities	(157,511)	(103,638)	(5,353,462)	(3,546,848)	(957,978)	(1,003,375)	(32,559,662)	(34,338,806)	(468,490)	(791,298)	(15,922,881)	(27,080,843)
Total non-current assets, net	844,279	804,338	28,695,261	27,527,077	1,562,485	1,487,048	53,105,606	50,891,674	1,716,776	1,586,830	58,349,616	54,306,547
Net assets	1,935,154	1,789,958	65,771,816	61,258,265	1,623,572	1,602,606	55,181,834	54,846,443	1,649,582	1,497,133	56,065,815	51,236,837
Accumulated non-controlling interest	634,737	583,928	21,573,361	19,983,923	349,204	342,225	11,868,722	11,712,053	373,980	50,607	12,710,791	1,731,930

Summarised statement of comprehensive income

For the years ended 31 December	PT Indo Tambangraya Megah Tbk.				Banpu Power Public Company Limited				BKV Corporation			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
Revenue	2,299,113	2,390,324	81,143,984	83,188,547	731,230	874,745	25,826,965	30,443,044	726,010	706,329	25,623,506	24,581,803
Profit (loss) before income tax	495,116	644,362	17,474,437	22,425,199	56,252	196,545	2,042,729	6,840,183	(13,916)	(123,964)	(491,146)	(4,314,220)
Income tax expense	(119,285)	(144,547)	(4,209,959)	(5,030,551)	(11,140)	(11,565)	(331,790)	(402,462)	7,773	33,293	274,337	1,158,670
Post-tax profit (loss) from continuing operations	375,831	499,815	13,264,438	17,394,648	45,112	184,980	1,710,939	6,437,721	(6,143)	(90,671)	(216,809)	3,155,550
Other comprehensive income (expense)	(17,641)	6,072	(622,597)	211,332	6,663	(59,014)	235,161	(2,053,804)	(100,086)	93,530	(3,532,395)	3,255,050
Total comprehensive income (expense)	358,190	505,887	12,641,841	17,605,980	51,775	125,966	1,946,100	4,383,917	(106,229)	2,859	(3,749,204)	99,500
Total comprehensive income (expense) allocated to non-controlling interests	126,105	175,980	4,450,693	6,124,486	14,710	24,611	519,160	856,507	(17,306)	5,523	(602,660)	187,886
Dividend paid to non-controlling interests	75,289	234,902	2,678,696	8,180,475	12,696	13,120	455,372	455,368	-	-	-	-



Summarised statement of cash flows

For the years ended 31 December	PT Indo Tambangraya Megah Tbk.			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cash flow from operating activities				
Cash generated from operations	589,272	620,190	20,797,471	21,583,976
Income tax paid	(137,139)	(399,147)	(4,840,115)	(13,891,193)
Net cash generated from operating activities	452,133	221,043	15,957,356	7,692,783
Net cash used in investing activities	(109,074)	(137,570)	(3,849,603)	(4,787,739)
Net cash used in financing activities	(198,882)	(665,660)	(7,019,242)	(23,166,432)
Net increase (decrease) in cash and cash equivalents	144,177	(582,187)	5,088,511	(20,261,388)
Cash and cash equivalents at beginning of the year	851,149	1,430,327	29,129,128	49,435,534
Exchange gains (losses) on cash and cash equivalents	(4,962)	3,009	(557,246)	(45,018)
Cash and cash equivalents at ending of the year	990,364	851,149	33,660,393	29,129,128

For the years ended 31 December	Banpu Power Public Company Limited			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cash flow from operating activities				
Cash generated from operations	75,532	170,365	2,665,793	5,929,096
Interest paid	(81,896)	(59,229)	(2,890,384)	(2,061,307)
Income tax paid	(5,924)	(3,280)	(209,091)	(114,162)
Net cash generated from (used in) operating activities	(12,288)	107,856	(433,682)	3,753,627
Net cash used in investing activities	(4,476)	(385,788)	(157,981)	(13,426,268)
Net cash generated from (used in) financing activities	(31,201)	432,373	(1,101,180)	15,047,518
Net increase (decrease) in cash and cash equivalents	(47,965)	154,441	(1,692,843)	5,374,877
Cash and cash equivalents at beginning of the year	273,260	117,333	9,351,876	4,055,323
Exchange gains (losses) on cash and cash equivalents	(1,946)	1,486	(67,864)	(78,324)
Cash and cash equivalents at ending of the year	223,349	273,260	7,591,169	9,351,876

For the years ended 31 December	BKV Corporation			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cash flow from operating activities				
Cash generated from operations	223,861	263,325	7,900,849	9,164,298
Interest paid	(76,601)	(70,696)	(2,703,525)	(2,460,392)
Net cash generated from operating activities	147,260	192,629	5,197,324	6,703,906
Net cash generated from (used in) investing activities	6,626	(247,481)	233,841	(8,612,899)
Net cash generated from (used in) financing activities	(304,507)	66,540	(10,747,116)	2,315,747
Net increase (decrease) in cash and cash equivalents	(150,621)	11,688	(5,315,951)	406,754
Cash and cash equivalents at beginning of the year	165,548	153,860	5,665,582	5,317,768
Exchange gains (losses) on cash and cash equivalents	-	-	157,696	(58,940)
Cash and cash equivalents at ending of the year	14,927	165,548	507,327	5,665,582

15.4 Investments in associates

The Group has interests in a number of individually immaterial associates that are accounted for using the equity method.

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Aggregate carrying amount of individually immaterial associates	59,107	52,773	2,008,916	1,806,073
Aggregate amounts of the reporting entity's share of:				
Loss from continuing activities	(2,103)	(2,936)	(73,646)	(101,738)
Other comprehensive expense	(1,468)	(15,350)	(72,357)	(581,492)
Total comprehensive expense	(3,571)	(18,286)	(146,003)	(683,230)



15.5 Investments in joint ventures

Below are the joint ventures that are material to the Group. These joint ventures have share capital consisting solely of ordinary shares, which are held directly by the Group, which has voting rights in proportion to the ordinary shares.

Name of company	Country	Business	Measurement method	Percent of ownership interest	
				2024 %	2023 %
Hongsa Power Company Limited	Lao People's Democratic Republic	Power concession	Equity	40.00	40.00
Shanxi Gaohe Energy Co., Ltd.	People's Republic of China	Coal mining and trading	Equity	45.00	45.00

Summarised financial information for joint ventures

Set out below are the summarised financial information for the joint ventures that are material to the Group. The information disclosed reflects the amounts presented in the financial statements of the relevant joint ventures (not the Group's shares of those amounts). They have been amended to reflect adjustments made using the equity method, including fair value adjustments and modifications for differences in the accounting policies of the Group and its joint ventures.

Summarised statement of financial position

As at 31 December	US Dollar'000			
	Hongsa Power Company Limited		Shanxi Gaohe Energy Co., Ltd.	
	2024	2023	2024	2023
Current assets				
Cash and cash equivalents	155,694	152,463	32,053	38,944
Restricted deposits at financial institutions	101,426	99,137	76,462	60,806
Current portion of lease accounts receivable, net	240,367	227,015	-	-
Other current assets	193,132	188,635	1,049,107	962,399
Total current assets	690,619	667,250	1,157,622	1,062,149
Non-current assets				
Lease accounts receivable, net	1,587,128	1,767,472	-	-
Property, plant and equipment, net	231,749	173,246	519,066	548,214
Mining property rights, net	-	-	449,549	509,257
Other non-current assets	580,914	551,389	29,907	29,784
Total non-current assets	2,399,791	2,492,107	998,522	1,087,255
Current liabilities				
Current portion of long-term loans from financial institutions, net	268,571	258,519	-	-
Other current liabilities	88,549	85,612	222,172	272,371
Total current liabilities	357,120	344,131	222,172	272,371
Non-current liabilities				
Long-term loans from financial institutions, net	707,575	971,248	-	-
Other non-current liabilities	85,705	33,198	78,760	73,795
Total non-current liabilities	793,280	1,004,446	78,760	73,795
Net assets	1,940,010	1,810,780	1,855,212	1,803,238



As at 31 December	Baht'000			
	Hongsa Power Company Limited		Shanxi Gaohe Energy Co., Ltd.	
	2024	2023	2024	2023
Current assets				
Cash and cash equivalents	5,291,726	5,217,771	1,089,408	1,332,798
Restricted deposits at financial institutions	3,447,244	3,392,783	2,598,782	2,080,966
Current portion of lease accounts receivable, net	8,169,568	7,769,209	-	-
Other current assets	6,564,139	6,455,708	35,656,928	32,936,472
Total current assets	23,472,677	22,835,471	39,345,118	36,350,236
Non-current assets				
Lease accounts receivable, net	53,943,133	60,488,728	-	-
Property, plant and equipment, net	7,876,672	5,929,053	17,641,965	18,761,678
Mining property rights, net	-	-	15,279,225	17,428,460
Other non-current assets	19,744,039	18,870,366	1,016,467	1,019,354
Total non-current assets	81,563,844	85,288,147	33,937,657	37,209,492
Current liabilities				
Current portion of long-term loans from financial institutions, net	9,128,155	8,847,370	-	-
Other current liabilities	3,009,598	2,929,934	7,551,130	9,321,446
Total current liabilities	12,137,753	11,777,304	7,551,130	9,321,446
Non-current liabilities				
Long-term loans from financial institutions, net	24,048,977	33,239,299	-	-
Other non-current liabilities	2,912,925	1,136,141	2,676,872	2,525,518
Total non-current liabilities	26,961,902	34,375,440	2,676,872	2,525,518
Net assets	65,936,866	61,970,874	63,054,773	61,712,764

Summarised statement of comprehensive income

For the years ended 31 December	US Dollar'000			
	Hongsa Power Company Limited		Shanxi Gaohe Energy Co., Ltd.	
	2024	2023	2024	2023
Sales and service income	627,548	623,985	792,594	1,091,778
Cost of sales and services	(290,755)	(281,701)	(385,232)	(423,543)
Depreciation and amortisation	(1,800)	(1,719)	(171,944)	(194,622)
Interest income	5,859	4,351	-	3,533
Interest expense	(83,447)	(86,855)	(6,996)	(13,970)
Income taxes	(36,524)	(31,344)	(52,076)	(125,994)
Profit for the year	195,442	203,289	176,296	337,182
Other comprehensive expense for the year	6,426	(243)	(31,676)	(22,641)
Total comprehensive income for the year	201,868	203,046	144,620	314,541
Dividend paid to shareholders of joint ventures	72,638	66,898	92,646	110,639

For the years ended 31 December	Baht'000			
	Hongsa Power Company Limited		Shanxi Gaohe EnergyCo., Ltd.	
	2024	2023	2024	2023
Sales and service income	21,662,753	21,716,051	27,973,487	37,996,272
Cost of sales and services	(10,036,775)	(9,803,828)	(13,596,227)	(14,740,226)
Depreciation and amortisation	(62,132)	(59,830)	(6,070,301)	(6,773,289)
Interest income	202,260	151,426	-	122,972
Interest expense	(2,880,547)	(3,022,729)	(246,916)	(486,190)
Income taxes	(1,260,785)	(1,090,841)	(1,837,966)	(4,384,857)
Profit for the year	6,945,772	7,017,450	6,222,078	11,673,599
Other comprehensive expense for the year	(430,530)	(580,536)	(1,610,268)	(1,387,235)
Total comprehensive income for the year	6,515,242	6,436,914	4,611,810	10,286,364
Dividend paid to shareholders of joint ventures	2,549,250	2,345,310	3,269,801	3,850,472



Reconciliation of the summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in joint ventures.

	US Dollar'000			
	Hongsa Power Company Limited		Shanxi Gaohe Energy Co., Ltd.	
	2024	2023	2024	2023
Net assets as at 1 January	1,810,780	1,674,632	1,803,238	1,599,336
Profit for the year	195,442	203,289	176,296	337,182
Other comprehensive income (expense)	6,426	(243)	(31,676)	(22,641)
Dividend paid	(72,638)	(66,898)	(92,646)	(110,639)
Net assets as at 31 December	1,940,010	1,810,780	1,855,212	1,803,238
Ownership percentage in joint ventures by the Group	40%	40%	45%	45%
Interests in joint ventures	776,004	724,312	834,846	811,457
Impacts of change in functional currency of joint ventures	14,641	11,991	-	-
Carrying value as at 31 December	790,645	736,303	834,846	811,457
	Baht'000			
	Hongsa Power Company Limited		Shanxi Gaohe Energy Co., Ltd.	
	2024	2023	2024	2023
Net assets as at 1 January	61,970,874	57,879,270	61,712,764	55,276,872
Profit for the year	6,945,772	7,017,450	6,222,078	11,673,599
Other comprehensive expense	(430,530)	(580,536)	(1,610,268)	(1,387,235)
Dividend paid	(2,549,250)	(2,345,310)	(3,269,801)	(3,850,472)
Net assets as at 31 December	65,936,866	61,970,874	63,054,773	61,712,764
Ownership percentage in joint ventures by the Group	40%	40%	45%	45%
Interests in joint ventures	26,374,746	24,788,350	28,374,648	27,770,744
Impacts of change in functional currency of joint ventures	497,617	410,370	-	-
Carrying value as at 31 December	26,872,363	25,198,720	28,374,648	27,770,744

Individually immaterial joint ventures

In addition to the investment in joint ventures disclosed above, the Group also has investments in a number of individually immaterial joint ventures that are accounted for using the equity method.

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Aggregate carrying amount of individually immaterial joint ventures	347,476	371,263	11,810,007	12,705,844
Aggregate amounts of the reporting entity's share of:				
Profit from continuing activities	40,625	38,178	1,424,997	1,338,673
Other comprehensive income	(6,114)	6,789	(244,665)	120,246
Total comprehensive income	34,511	44,967	1,180,332	1,458,919

15.6 List of subsidiaries and associates and joint arrangements

Name of company	Country	Business	Percentage of direct shareholding	
			2024	2023
			%	%
<u>Direct shareholding</u>				
Banpu Minerals Co., Ltd.	Thailand	Coal trading and investment in coal mining	100.00	100.00
Banpu Power Public Company Limited	Thailand	Investment in power	78.66	78.66
BOG Co., Ltd.	Thailand	Investment in power	100.00	100.00
Banpu Engineering Services Co., Ltd.	Thailand	Investment in renewable energy	100.00	100.00
Banpu Innovation & Ventures Co., Ltd.	Thailand	Research and development	100.00	100.00
Banpu NEXT Co., Ltd.	Thailand	Smart clean energy solution	50.00 ^{(5),(10)}	50.00 ^{(5),(10)}
Banpu Vietnam Limited Liability Company	Vietnam	Coal and power management	100.00	100.00
Banpu Ventures Pte. Ltd.	Singapore	Investment in fund	100.00	100.00
<u>Indirect shareholding</u>				
Banpu Minerals Co., Ltd. and subsidiaries, and an associate and a joint venture as follows:				
<u>Subsidiaries</u>				
1) Banpu International Limited	Thailand	Coal trading and project feasibility study	100.00	100.00
2) Banpu Coal Investment Company Limited and a subsidiary	Mauritius	Investment in coal mining	100.00	100.00
- Banpu Minerals (Singapore) Pte. Ltd.	Singapore	Investment in coal mining	50.00 ⁽²⁾	50.00 ⁽²⁾



Name of company	Country	Business	Percentage of direct shareholding	
			2024	2023
			%	%
3) Banpu Minerals (Singapore) Pte. Ltd. and subsidiaries	Singapore	Investment in coal mining	50.00 ⁽²⁾	50.00 ⁽²⁾
- PT. Indo Tambangraya Megah Tbk (ITM) and subsidiaries	Indonesia	Investment in coal mining	65.14	65.14
- PT. Indominco Mandiri (IMM)	Indonesia	Coal mining and trading	100.00	100.00
- PT. Kitadin (KTD)	Indonesia	Coal mining and trading	100.00	100.00
- PT. Trubaindo Coal Mining (TCM)	Indonesia	Coal mining and trading	100.00	100.00
- PT. Bharinto Ekatama (BEK)	Indonesia	Coal mining and trading	100.00	100.00
- PT. Jorong Barutama Greston (JBG)	Indonesia	Coal mining and trading	100.00	100.00
- PT. Tambang Raya Usaha Tama	Indonesia	Coal mining and trading	100.00	100.00
- PT. ITM Energi Utama	Indonesia	Investment in power	99.99	99.99
- PT. Energi Batubara Perkasa	Indonesia	Coal Trading	100.00	100.00
- PT. Nusa Persada Resources	Indonesia	Coal mining and trading	100.00	100.00
- PT. ITM Bhinneka Power and subsidiaries and a joint venture as follows:	Indonesia	Electric power generator	70.00 ⁽⁴⁾	70.00 ⁽⁴⁾
<u>Subsidiaries</u>				
- PT. IBP Hydro Power	Indonesia	Management Consulting	100.00	100.00
- PT. Cahaya Power Indonesia	Indonesia	Energy and electricity support	79.50	79.50
<u>Joint arrangement - Joint venture</u>				
- PT Centra Multi Suryanesia Aset	Indonesia	Renewable Energy Business	65.00	65.00
- PT. ITM Batubara Utama and a joint venture	Indonesia	Investment in coal mining	100.00	100.00
- PT. Sentral Mutiara Energy	Indonesia	Coal trading and transportation of coal product	4.93	4.93
- PT. Tepian Indah Sukses	Indonesia	Coal mining and trading	100.00	100.00
- PT. Gasemas	Indonesia	Fuel trading	96.70	94.80
- PT. Sentral Mutiara Energy and a subsidiary	Indonesia	Coal trading and transportation of coal product	95.07	95.07
- PT. Graha Panca Karsa	Indonesia	Coal mining and trading	70.00	70.00
- PT. ITM Indonesia and joint ventures	Indonesia	Coal mining and trading	100.00	100.00
- PT. Nusantara Timur Unggul	Indonesia	Logistic service	33.34 ⁽¹⁾	33.34 ⁽¹⁾
- PT. Gasemas	Indonesia	Fuel trading	2.50	3.90
- Banpu (Beijing) Trading Ltd.	People's Republic of China	Investment in coal mining and trading	100.00	100.00
- Hunnu Coal Pty Ltd. and a subsidiary	Australia	Investment in coal mining and trading	100.00	100.00
- Hunnu Resources LLC and subsidiaries	Mongolia	Coal mining and trading	100.00	100.00
- Munkh Sumber Uul LLC	Mongolia	Coal mining and trading	100.00	100.00
- Bilegt Khairkhan Uul LLC	Mongolia	Coal mining and trading	100.00	100.00
- Munkhnoyon Suvrager LLC	Mongolia	Business consult in coal mining and trading	100.00	100.00
- Hunnu Investments Pte Ltd. and a subsidiary	Singapore	Coal trading	100.00	100.00
- Hunnu Altai LLC and subsidiaries	Mongolia	Coal mining and trading	100.00	100.00
- Hunnu Global Altai LLC	Mongolia	Coal mining and trading	80.00	80.00
- Hunnu Altai Minerals LLC	Mongolia	Coal mining and trading	100.00	100.00
4) BP Overseas Development Co., Ltd. and subsidiaries	Mauritius	Investment in coal mining and trading	100.00	100.00
- Asian American Coal Inc. and a subsidiary and a joint venture as follows:	British Virgin Islands	Investment in coal mining	100.00	100.00

			Percentage of direct	
			shareholding	
			2024	2023
Name of company	Country	Business	%	%
<u>Subsidiaries</u>				
- Banpu Singapore Pte. Ltd. and subsidiaries	Singapore	Coal trading	100.00	100.00
- Banpu Australia Co. Pty Ltd. and subsidiaries	Australia	Investment in coal mining	100.00	100.00
- AFE Investments Pty Ltd.	Australia	Investment in coal mining	100.00	100.00
- ACN 152 429 206 Pty. Ltd.	Australia	Investment in coal mining	100.00	100.00
- Banpu Energy Australia Pty. Ltd.	Australia	Investment in renewable energy	100.00	100.00
and subsidiaries				
- Pinecrest Development Pty Limited	Australia	Renewable energy	100.00	100.00
(formerly named Airly Solar Pty Limited)				
- Banpu Energy Holding Pty Ltd.	Australia	Investment in renewable energy	80.00 ⁽⁶⁾	80.00 ⁽⁶⁾
- Banpu Energy Hold Trust and subsidiaries	Australia	Investment in renewable energy	80.00 ⁽⁶⁾	80.00 ⁽⁶⁾
- FS NSW Project No. 1 HT Pty Ltd.	Australia	Investment in renewable energy	100.00	100.00
- FS NSW Project No. 1 Hold Trust	Australia	Investment in renewable energy	100.00	100.00
- FS NSW Project No. 1 AT Pty Ltd.	Australia	Investment in renewable energy	100.00	100.00
- FS NSW Project No. 1 Asset Trust	Australia	Investment in renewable energy	100.00	100.00
- FS NSW Project No. 1 Finco Pty Ltd.	Australia	Investment in renewable energy	100.00	100.00
- Manildra Prop Hold Pty Ltd.	Australia	Investment in renewable energy	100.00	100.00
- Manildra Hold Trust	Australia	Investment in renewable energy	100.00	100.00
- Manildra Prop Pty Ltd.	Australia	Investment in renewable energy	100.00	100.00
- Manildra Asset Trust	Australia	Investment in renewable energy	100.00	100.00
- Manildra Finco Pty Ltd.	Australia	Investment in renewable energy	100.00	100.00
- Manildra Solar Farm Pty Ltd.	Australia	Investment in renewable energy	100.00	100.00
- Centennial Coal Company Pty Ltd.	Australia	Investment in coal mining and trading	100.00	100.00
and subsidiaries and an associate as follows:				
<u>Subsidiaries</u>				
- Centennial Wallarah Pty Ltd.	Australia	Investment in coal mining	100.00	100.00
- Centennial Inglenook Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Coal Sales and Marketing Pty Ltd.	Australia	Sales and marketing	100.00	100.00
- Centennial Northern Coal Services Pty Ltd.	Australia	Mining Services	100.00	100.00
- Centennial Airly Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Berrima Coal Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Angus Place Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Coal Infrastructure Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Fassifern Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
and a subsidiary				
- Powercoal Pty Ltd. and subsidiaries	Australia	Investment in coal mining and trading	100.00	100.00
- Elcom Collieries Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Huntley Colliery Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Mandalong Pastoral Management Pty Ltd.	Australia	Investment in coal mining and trading	100.00	100.00
- Collieries Superannuation Pty Ltd.	Australia	Manage provident fund	100.00	100.00
- Powercoal Superannuation Pty Ltd.	Australia	Manage provident fund	100.00	100.00
- Centennial Northern Mining Services Pty Ltd.	Australia	Coal service provider	100.00	100.00
- Centennial Mandalong Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Mannering Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Munmorah Pty Ltd.	Australia	Coal mining and trading	100.00	100.00



Name of company	Country	Business	Percentage of direct shareholding	
			2024	2023
			%	%
- Centennial Myuna Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Springvale Holdings Pty Ltd. and a subsidiary	Australia	Coal mining and trading	100.00	100.00
- Centennial Springvale Pty Ltd. and subsidiaries	Australia	Coal mining and trading	100.00	100.00
- Boulder Mining Pty Ltd. and a subsidiary	Australia	Coal mining and trading	100.00	100.00
- Springvale Coal Sales Pty Ltd.	Australia	Coal trading	50.00	50.00
- Springvale Coal Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Springvale Coal Sales Pty Ltd.	Australia	Coal trading	50.00	50.00
- Centennial Newstan Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Charbon Coal Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Coalex Pty Ltd. and subsidiaries	Australia	Coal mining and trading	100.00	100.00
- Clarence Coal Investments Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Clarence Coal Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Clarence Colliery Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Hartley Valley Coal Company Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Centennial Clarence Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Ivanhoe Coal Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
- Powercoal Employees Entitlements Company Pty Ltd.	Australia	Manage provident fund	50.00	50.00
- Centennial Drilling Services Pty Ltd.	Australia	Coal mining and trading	100.00	100.00
<u>Associate</u>				
- Port Kembla Coal Terminal Ltd	Australia	Port service	16.66	16.66
<u>Joint arrangement - Joint venture</u>				
- Shanxi Gaohe Energy Co., Ltd.	People's Republic of China	Coal mining and trading	45.00 ⁽¹⁾	45.00 ⁽¹⁾
<u>Joint arrangement - Joint venture</u>				
5) Hebi ZhongTai Mining Co., Ltd.	People's Republic of China	Coal mining and trading	40.00 ⁽¹⁾	40.00 ⁽¹⁾
Banpu Power Public Company Limited and subsidiaries, and an associate, and joint ventures as follows:				
<u>Subsidiaries</u>				
1) Banpu Coal Power Limited and a joint venture	Thailand	Investment in power	100.00	100.00
<u>Joint arrangement - Joint venture</u>				
- BLCP Power Limited	Thailand	Power production and trading	50.00 ⁽¹⁾	50.00 ⁽¹⁾
2) Banpu Power International Limited and subsidiaries	Mauritius	Investment in power	100.00	100.00
- Banpu Power Investment Co., Ltd.	Singapore	Investment in power	100.00	100.00
and subsidiaries and joint ventures as follows:				
<u>Subsidiaries</u>				
- Shijiazhuang Chengfeng Cogen Co., Ltd. and a subsidiary	People's Republic of China	Power and steam production and trading	100.00	100.00
- Shijiazhuang Chengfeng New Energy Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
- Zouping Peak Pte. Ltd. and a subsidiary	Singapore	Investment in power	100.00	100.00
- Zouping Peak CHP Co., Ltd.	People's Republic of China	Power and steam production and trading	70.00	70.00

Name of company	Country	Business	Percentage of direct shareholding	
			2024	2023
			%	%
- Pan-Western Energy Corporation LLC and a subsidiary	Cayman Islands	Investment in power	100.00	100.00
- Tangshan Banpu Heat and Power Co., Ltd.	People's Republic of China	Power and steam production and trading	87.92 ⁽³⁾	87.92 ⁽³⁾
- Banpu Investment (China) Ltd. and a subsidiary	People's Republic of China	Investment in power	100.00	100.00
- Tangshan Banpu Heat and Power Co., Ltd.	People's Republic of China	Power and steam production and trading	12.08 ⁽³⁾	12.08 ⁽³⁾
<u>Joint arrangement - Joint ventures</u>				
- Shanxi Lu Guang Power Co., Ltd.	People's Republic of China	Power and steam production and trading	30.00 ⁽¹⁾	30.00 ⁽¹⁾
- Nakoso IGCC Management Co., Ltd.	Japan	Investment in power	33.50 ⁽¹⁾	33.50 ⁽¹⁾
3) Banpu Power (Japan) Co., Ltd.	Thailand	Investment in renewable energy	100.00	100.00
4) Banpu Power US Corporation and subsidiaries and a joint venture as follows:	United States	Investment in power	100.00	100.00
<u>Subsidiaries</u>				
- BKV-BPP Power LLC and a subsidiary	United States	Investment in power	50.00 ⁽⁷⁾	50.00 ⁽⁷⁾
- Temple Generation Holdings LLC and a subsidiary	United States	Investment in power	100.00	100.00
- Temple Generation Intermediate Holdings II, LLC and subsidiaries are as follows :	United States	Investment in power	100.00	100.00
- Temple Generation I, LLC and a joint venture	United States	Energy generation and distribution	100.00	100.00
- Temple Generation SF, LLC	United States	Energy generation support	50.00 ⁽¹⁾	50.00 ⁽¹⁾
- Temple Generation II, LLC and a joint venture	United States	Energy generation and distribution	100.00	100.00
- Temple Generation SF, LLC	United States	Energy generation support	50.00 ⁽¹⁾	50.00 ⁽¹⁾
- BKV-BPP Retail LLC	United States	Energy retailing and related business	100.00	100.00
- BKV-BPP Ponder Solar LLC	United States	Renewable energy business	100.00	100.00
- BPPUS Power Trading LLC	United States	Power trading business	100.00	100.00
<u>Joint arrangement - Joint venture</u>				
- BKV-BPP Cotton Cove, LLC	United States	Carbon capture business	49.00 ⁽⁸⁾	49.00 ⁽⁸⁾
<u>Associate</u>				
5) Banpu NEXT Co., Ltd.	Thailand	Investment in clean energy	50.00 ^{(5),(10)}	50.00 ^{(5),(10)}
<u>Joint arrangement - Joint ventures</u>				
6) Hongsa Power Company Limited	Laos	Power concession	40.00 ⁽¹⁾	40.00 ⁽¹⁾
7) Phu Fai Mining Company Limited	Laos	Mining concession	37.50 ⁽¹⁾	37.50 ⁽¹⁾
BOG Co., Ltd.				
and a subsidiary as follows;				
Banpu North America Corporation and a subsidiary	United States	Natural gas business	100.00	100.00
- BKV Corporation and subsidiaries	United States	Natural gas business	75.71	96.38
and a joint venture as follows:				
<u>Subsidiaries</u>				
- BKV Upstream Midstream, LLC	United States	Natural gas business	100.00	-
- Kalnin Ventures, LLC	United States	Natural gas business	100.00	100.00
- BKV Midstream, LLC	United States	Natural gas business	100.00	100.00
- BKV North Texas, LLC	United States	Natural gas business	100.00	100.00



Name of company	Country	Business	Percentage of direct shareholding	
			2024	2023
			%	%
- BKV Chaffee Corners, LLC	United States	Natural gas business	-	100.00
- BKV Chelsea, LLC	United States	Natural gas business	100.00	100.00
- BKV Operating, LLC	United States	Natural gas business	100.00	100.00
- BKV Barnett, LLC	United States	Natural gas business	100.00	100.00
- BKV dCarbon Ventures, LLC and subsidiaries	United States	Carbon capture business	100.00	100.00
- BKVerde, LLC and subsidiaries	United States	Carbon capture business	100.00	100.00
- BKVerde Donaldsonville, LLC	United States	Carbon capture business	100.00	-
- BKVerde White Bayou, LLC	United States	Carbon capture business	100.00	-
- BKV dCarbon High West, LLC	United States	Carbon capture business	100.00	100.00
- BKV dCarbon Temple, LLC	United States	Carbon capture business	100.00	100.00
- High West Sequestration, LLC	United States	Carbon capture business	100.00	100.00
- BKV dCarbon Barnett Zero, LLC	United States	Carbon capture business	100.00	100.00
- BKV-BPP Cotton Cove, LLC	United States	Carbon capture business	51.00 ⁽⁸⁾	51.00 ⁽⁸⁾
- BKV dCarbon Las Tiendas, LLC	United States	Carbon capture business	100.00	-
- BKV Cadiz Colorado, LLC	United States	Carbon capture business	100.00	-
- BKV Cadiz Nebraska, LLC	United States	Carbon capture business	100.00	-
- BKV-1878, LLC	United States	Natural gas business	100.00	-
<u>Joint arrangement - Joint venture</u>				
- BKV-BPP Power LLC	United States	Natural gas business	50.00 ⁽⁷⁾	50.00 ⁽⁷⁾

Banpu Engineering Services Co., Ltd.

and a subsidiary as follows:

Banpu Energy Services (Thailand) Co., Ltd. and joint ventures	Thailand	Investment in renewable energy	100.00	100.00
- Aura Land Development Pte. Ltd.	Singapore	Investment in renewable energy	75.00 ⁽¹⁾	75.00 ⁽¹⁾
- Hokkaido Solar Estate G.K.	Japan	Investment property	60.00 ⁽¹⁾	60.00 ⁽¹⁾

Banpu Innovation & Ventures Co., Ltd.

and a subsidiary as follows:

Banpu Innovation & Ventures (Singapore) Pte. Ltd.	Singapore	Research and development	100.00	100.00
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and a subsidiary and a joint venture as follows:

Subsidiary

- Banpu Innovation & Ventures LLC	United States	Research and development	100.00	100.00
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Joint arrangement - Joint venture

- LIV Energy Venture Pte. Ltd.	Singapore	Hybrid Energy storage solution	30.00 ⁽¹⁾	30.00 ⁽¹⁾
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Banpu NEXT Co., Ltd.⁽⁶⁾ and subsidiaries,

and associates and joint ventures as follows:

Subsidiaries

1) BPIN Investment Co., Ltd. and subsidiaries	Mauritius	Investment in renewable energy	100.00	100.00
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and a joint venture as follows:

- Banpu Carbon Neutral Energy Technology (Jinhu)	People's Republic of China	Solar power generation	100.00	-
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Company Limited

- Durapower Holding Pte. Ltd. and subsidiaries	Singapore	Energy storage system	65.10	65.10
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Name of company	Country	Business	Percentage of direct shareholding	
			2024	2023
			%	%
- Durapower Technology (Singapore) Pte. Ltd.	Singapore	Marketing and sales of batteries and energy storage solution and wholesale of parts and accessories for vehicles	100.00	100.00
- Suzhou Durapower Technology Co., Ltd.	People's Republic of China	Manufacture and sales of Lithium batteries for hybrid and electronic vehicles	100.00	100.00
- Durapower Technology Group B.V.	Netherlands	Marketing, technical and product application support of batteries and energy storage system	100.00	100.00
- Durapower Technology (Thailand) Co., Ltd. and an associate	Thailand	Manufacture of batteries and accumulators	100.00	100.00
- DP NEXT Co., Ltd.	Thailand	Manufacture of batteries and accumulators	30.00	30.00
<u>Joint arrangement - Joint ventures</u>				
- Oyika Pte. Ltd.	Singapore	Energy storage solution	-	15.91
- AMP Japan Funding Partners	Japan	Investment in renewable energy	36.72	-
2) BRE Singapore Pte. Ltd. and subsidiaries and an associate as follows:	Singapore	Investment in renewable energy	100.00	100.00
<u>Subsidiaries</u>				
- BPP Vinh Chau Wind Power Limited Liability Company	Vietnam	Investment in renewable energy	100.00	100.00
- El Wind Mui Dinh Ltd.	Vietnam	Power production and trading	100.00	100.00
- LICOGI 16 NINH THUAN INVESTMENT RENEWABLE ENERGY JOINT STOCK COMPANY	Vietnam	Power production and trading	100.00	100.00
<u>Associate</u>				
- Solar Esco Joint Stock Company	Vietnam	Renewable energy business	49.10	49.10
3) Banpu Japan K.K.and subsidiaries	Japan	Investment in renewable energy	100.00	100.00
- J&A Energy GK	Japan	Renewable energy business	75.00	86.80
- Banpu Taiyo 1 G.K.	Japan	Power generation and sale of electricity	-	100.00
- Aizu Renewable Services G.K.	Japan	Renewable Energy Business	100.00	100.00
- Tokyoto Uminomori Battery Jigyo G.K.	Japan	Renewable Energy Business	49.00	-
- Kamisu Battery G.K.	Japan	Renewable Energy Business	100.00	-
- Aizu Wakamatsu Battery Jigyo G.K.	Japan	Renewable Energy Business	100.00	-
- Miyazaki Ken Tsuno Battery G.K.	Japan	Renewable Energy Business	100.00	-
4) Banpu Renewable Singapore Pte. Ltd. and subsidiaries, and an associate and a joint venture as follows:	Singapore	Investment in renewable energy	100.00	100.00
<u>Subsidiaries</u>				
- Banpu Power Trading GK	Japan	Energy trading	100.00	100.00
- Banpu Renewable Australia Pty Limited and associates	Australia	Renewable energy	100.00	100.00
- Banpu Energy Holding Pty Ltd.	Australia	Investment in renewable energy	20.00 ⁽⁶⁾	20.00 ⁽⁶⁾
- Banpu Energy Hold Trust	Australia	Investment in renewable energy	20.00 ⁽⁶⁾	20.00 ⁽⁶⁾
<u>Associate</u>				
- Global Engineering Co., Ltd.	Japan	Virtual power plant and power trading	19.16	19.16



			Percentage of direct shareholding	
			2024	2023
Name of company	Country	Business	%	%
<u>Joint arrangement - Joint ventures</u>				
- AMP Co., Ltd.	Japan	Renewable Energy Business	33.59	-
5) BPP Renewable Investment (China) Co., Ltd.	People's Republic of China	Investment in renewable energy	100.00	100.00
and subsidiaries as follows:				
- Anqiu Huineng Renewable Energy Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
- Weifang Tian'en Jinshan Comprehensive Energy Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
- Dongping County Haoyuan Solar Power Generation Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
- Anqiu County Hui'en PV Technology Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
- Jiaxing Deyuan Energy - Saving Technology Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
- Feicheng Xingyu Solar Power PV Technology Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
- Jiangsu Jixin Electric Power Co., Ltd.	People's Republic of China	Solar power generation	100.00	100.00
6) Banpu NEXT Green Leasing Co., Ltd. and a subsidiary	Thailand	Investment in energy and leasing	100.00	100.00
- Banpu NEXT Green Services Co., Ltd.	Thailand	Energy management business	100.00	100.00
7) Banpu NEXT Ecoserve Company Limited and a joint venture	Thailand	Energy management business	100.00	100.00
- BNSP Smart Tech Co., Ltd.	Thailand	Energy management business	51.00	51.00
- BNSP Co., Ltd.	Thailand	Energy management business	51.00	-
8) Banpu NEXT Green Energy Co., Ltd.	Thailand	Smart clean energy solution	100.00	100.00
9) DP NEXT Co., Ltd.	Thailand	Manufacture of batteries and accumulators	70.00	70.00
10) Aizu Energy Pte. Ltd.	Singapore	Investment in renewable energy	100.00	100.00
11) Ecoserve Vietnam Limited Liability Company	Vietnam	Management consulting services	100.00	-
12) Banpu NEXT Solar 1 Co., Ltd.	Thailand	Solar rooftop business	100.00	-
<u>Associates</u>				
13) FOMM Corporation	Japan	Electric vehicle business	21.28	21.32
14) Beyond Green Co.Ltd	Thailand	Electronic utility vehicle distributor	47.69	39.18
15) PT. ITM Bhinneka Power	Indonesia	Electric power generator	30.00 ⁽⁴⁾	30.00 ⁽⁴⁾
16) GEPP Sa-ard Co., Ltd.	Thailand	Trash management services	25.00	25.00
17) Altotech Global Co., Ltd.	Thailand	Electric vehicle charging system service business	25.00 ⁽⁹⁾	25.00 ⁽⁹⁾
18) SVOLT Energy Technology (Thailand) Co., Ltd.	Thailand	Manufacturing battery and energy storage system	40.00	40.00
19) Haupcar Company Limited	Thailand	Application for car rental business	22.54 ⁽⁹⁾	22.54 ⁽⁹⁾
<u>Joint arrangement - Joint ventures</u>				
20) Urban Mobility Tech Co., Ltd.	Thailand	Electric vehicle business	45.61 ⁽⁹⁾	39.74 ⁽⁹⁾
21) Evolt Technology Co., Ltd	Thailand	Electric vehicle charging system service business	23.31 ⁽¹⁾	23.81 ⁽¹⁾

Percentage of shareholding by the Group

- (1) Shareholder agreements of the Group's joint ventures have determined the management structure including strategic financial decisions and operations which required unanimous votes/consents from all shareholders or their representatives. The Group has classified these as investments in joint ventures.
- (2) The Group owns 100% shareholding in Banpu Minerals (Singapore) Pte. Ltd., which is held by Banpu Mineral Co., Ltd. and Banpu Coal Investment Company Limited in the proportion of 50% each.
- (3) The Group owns 100% shareholding in Tangshan Banpu Heat and Power Co., Ltd. of which 12.08% shareholding held by Banpu Investment (China) Ltd. and 87.92% shareholding held by Pan-Western Energy Corporation LLC.
- (4) PT. ITM Bhinneka Power (formerly named PT. ITM Banpu Power) owned by PT. Indo Tambangraya Megah Tbk and Banpu NEXT Company Limited in the proportion of 70% and 30% respectively.
- (5) The Group owns 79.59% of registered ordinary shares in Banpu NEXT Co., Ltd. The Company directly holds 50% and indirectly holds another 50% through Banpu Power Public Company Limited.
- (6) The Group owns 100% shareholding in Banpu Energy Holding Pty Ltd. and Banpu Energy Hold Trust, which are held by Banpu Energy Australia Pty Ltd. in the proportion of 80% and Banpu Renewable Australia Pty Limited in the proportion of 20%.
- (7) The Group owns 100% shareholding in BKV-BPP Power LLC, which is held by Banpu Power US Corporation and BKV Corporation in the proportion of 50% each.
- (8) The Group owns 100% shareholding in BKV-BPP Cotton Cove, LLC, which is held by Banpu Power US Corporation and BKV dCarbon Ventures, LLC in the proportion of 50% each.

Preference shares held by the Group

- (9) The Group holds investments in Urban Mobility Tech Co., Ltd. and Altotech Global Co., Ltd. by newly issued preference shares which are entitled to dividends and voting rights equal to the number of ordinary shares in the proportion of 45.61%, 25.00% and 22.54% of total registered shares, respectively.
- (10) The Group invests in Banpu NEXT Co., Ltd., by holding preferred shares with voting rights and rights to dividends equivalent to 20.41% of the registered ordinary shares. The Company directly holds 50% and indirectly holds another 50% through Banpu Power Public Company Limited.



16 Property, plant and equipment, net

Consolidated financial statements										US Dollar'000
Machinery and equipment and power plants and components of power plants and gas exploration and producing assets and pipelines										
	Land	Land improvement	Building and infrastructures		Furniture and office equipment	Tools	Motor vehicles	Construction in progress	Total	
As at 1 January 2023										
Cost	52,827	193,452	372,823	5,904,980	30,764	33,108	17,862	110,287	6,716,103	
Less Accumulated depreciation	-	(136,406)	(235,839)	(2,091,028)	(23,509)	(28,592)	(8,752)	-	(2,524,126)	
Less Accumulated impairment	-	-	(9)	(1,339)	-	(6)	-	(250)	(1,604)	
Net book amount	52,827	57,046	136,975	3,812,613	7,255	4,510	9,110	110,037	4,190,373	
For the year ended 31 December 2023										
Opening net book amount	52,827	57,046	136,975	3,812,613	7,255	4,510	9,110	110,037	4,190,373	
Additions	-	110	53,231	256,048	2,463	3,465	1,919	64,242	381,478	
Increase from business combinations and acquisition of investment in a subsidiary	2,012	-	7,415	488,995	11	238	59	17,588	496,318	
Increase from remeasurement of previously held equity interest	-	-	-	10,819	-	-	-	-	10,819	
Decrease from the change in fair value of contingent liabilities from an asset acquisition (Note 7)	-	-	-	(24,994)	-	-	-	-	(24,994)	
Disposals - Net book value	(1,191)	-	(1,054)	(3,199)	(49)	(1)	(223)	-	(5,717)	
Reclassification	469	428	(57,765)	87,309	89	373	56	(46,698)	(15,739)	
Write-offs - Net book value	(4,779)	-	(46)	(5,293)	(8)	(43)	(96)	(2,545)	(12,810)	
Translation differences	428	91	(2,235)	4,028	18	39	(2)	(1,550)	817	
Depreciation charge	-	(4,838)	(10,694)	(384,164)	(3,388)	(2,379)	(3,510)	-	(408,973)	
Impairment loss	-	-	-	(176)	-	-	-	(9,638)	(9,814)	
Closing net book amount	49,766	52,837	125,827	4,221,986	6,391	6,202	7,313	131,436	4,601,758	
As at 31 December 2023										
Cost	49,766	192,796	366,315	6,598,983	31,785	35,912	19,035	141,300	7,435,892	
Less Accumulated depreciation	-	(139,959)	(240,488)	(2,376,821)	(25,394)	(29,709)	(11,722)	-	(2,824,093)	
Less Accumulated impairment	-	-	-	(176)	-	(1)	-	(9,864)	(10,041)	
Net book amount	49,766	52,837	125,827	4,221,986	6,391	6,202	7,313	131,436	4,601,758	

Consolidated financial statements										US Dollar'000
Machinery and equipment and power plants and components of power plants and gas exploration and producing assets and pipelines										
	Land	Land improvement	Building and infrastructures		Furniture and office equipment	Tools	Motor vehicles	Construction in progress	Total	
For the year ended 31 December 2024										
Opening net book amount	49,766	52,837	125,827	4,221,986	6,391	6,202	7,313	131,436	4,601,758	
Additions	-	534	1,402	197,617	2,658	1,383	4,792	104,863	313,249	
Decrease from the change in fair value of contingent liabilities from an asset acquisition (Note 7)	-	-	-	(7,486)	-	-	-	-	(7,486)	
Disposals - Net book value	(335)	-	-	(133,994)	15	(4)	(116)	-	(134,434)	
Reclassification	-	12,123	9,304	38,972	181	2,352	74	(82,006)	(19,000)	
Write-offs - Net book value	-	-	(288)	(3,575)	(34)	(293)	(129)	(1,591)	(5,910)	
Translation differences	(3,906)	(32)	(2,900)	(76,815)	(48)	16	(66)	(5,242)	(88,993)	
Depreciation charge	-	(5,509)	(11,026)	(353,662)	(2,956)	(2,099)	(3,243)	-	(378,495)	
Closing net book amount	45,525	59,953	122,319	3,883,043	6,207	7,557	8,625	147,460	4,280,689	
As at 31 December 2024										
Cost	45,525	205,292	371,027	6,391,293	33,622	37,616	21,987	157,324	7,263,686	
Less Accumulated depreciation	-	(145,339)	(248,708)	(2,508,250)	(27,415)	(30,059)	(13,362)	-	(2,973,133)	
Less Accumulated impairment	-	-	-	-	-	-	-	(9,864)	(9,864)	
Net book amount	45,525	59,953	122,319	3,883,043	6,207	7,557	8,625	147,460	4,280,689	



Consolidated financial statements

As at 1 January 2023	Machinery and equipment and power plants and components of power plants and gas exploration and producing assets and pipelines							Total	
	Land	Land improvement	Building and infrastructures		Furniture and office equipment	Tools	Motor vehicles	Construction in progress	Baht'000
Cost	1,825,832	6,686,159	12,885,649	204,090,271	1,063,282	1,144,297	617,350	3,811,799	232,124,639
Less: Accumulated depreciation	-	(4,714,508)	(8,151,173)	(72,270,963)	(812,514)	(988,177)	(302,493)	-	(87,239,828)
Less: Accumulated impairment	-	-	(301)	(46,287)	(11)	(192)	-	(8,656)	(55,447)
Net book amount	1,825,832	1,971,651	4,734,175	131,773,021	250,757	155,928	314,857	3,803,143	144,829,364
For the year ended 31 December 2023									
Opening net book amount	1,825,832	1,971,651	4,734,175	131,773,021	250,757	155,928	314,857	3,803,143	144,829,364
Additions	-	3,929	1,857,891	8,887,518	85,503	121,039	66,873	2,246,408	13,269,161
Increase from business combinations and acquisition of investment in a subsidiary	68,686	-	256,471	16,075,748	376	8,223	2,023	603,950	17,015,477
Increase from remeasurement of previously held equity interest	-	-	-	369,327	-	-	-	-	369,327
Decrease from the change in fair value of contingent liabilities from an asset acquisition (Note 7)	-	-	-	(866,516)	-	-	-	-	(866,516)
Disposals - Net book value	(41,084)	-	(36,333)	(114,011)	(1,705)	(42)	(7,699)	-	(200,874)
Reclassification	16,728	15,274	(2,008,054)	3,022,346	3,137	13,268	1,868	(1,625,508)	(560,941)
Write-offs - Net book value	(164,774)	-	(1,592)	(181,262)	(303)	(1,498)	(3,377)	(90,028)	(442,834)
Translation differences	(2,233)	(14,223)	(124,208)	(1,096,664)	(1,081)	(1,472)	(2,231)	(96,312)	(1,338,424)
Depreciation charge	-	(168,378)	(372,134)	(13,372,979)	(117,953)	(83,134)	(122,072)	-	(14,236,650)
Impairment loss	-	-	-	(6,285)	-	-	-	(343,478)	(349,763)
Closing net book amount	1,703,155	1,806,253	4,306,216	144,490,243	218,731	212,312	250,242	4,498,175	157,487,327
As at 31 December 2023									
Cost	1,703,155	6,598,135	12,536,493	225,838,974	1,087,784	1,229,006	651,413	4,835,766	254,480,726
Less: Accumulated depreciation	-	(4,789,882)	(8,230,277)	(81,342,698)	(869,042)	(1,016,680)	(401,171)	-	(96,649,750)
Less: Accumulated impairment	-	-	-	(6,033)	(11)	(14)	-	(337,591)	(343,649)
Net book amount	1,703,155	1,806,253	4,306,216	144,490,243	218,731	212,312	250,242	4,498,175	157,487,327

Consolidated financial statements

For the year ended 31 December 2024	Machinery and equipment and power plants and components of power plants and gas exploration and producing assets and pipelines							Total	
	Land	Land improvement	Building and infrastructures		Furniture and office equipment	Tools	Motor vehicles	Construction in progress	Baht'000
Opening net book amount	1,703,155	1,808,253	4,306,216	144,490,243	218,731	212,312	250,242	4,498,175	157,487,327
Additions	-	29,939	64,246	9,837,452	117,406	41,977	252,975	5,301,072	15,645,067
Decrease from the change in fair value of contingent liabilities from an asset acquisition (Note 7)	-	-	-	(263,385)	-	-	-	-	(263,385)
Disposals - Net book value	(11,395)	-	(5)	(5,007,726)	2,335	(238)	(529)	-	(5,017,558)
Reclassification	-	801,216	580,133	1,170,567	9,601	151,923	2,937	(4,428,788)	(1,712,411)
Write-offs - Net book value	-	-	(12,692)	(192,994)	(3,005)	(16,811)	(10,202)	(58,771)	(294,475)
Translation differences	(144,474)	(346,982)	(293,824)	(2,397,394)	(4,729)	(38,580)	(57,030)	(299,634)	(3,582,847)
Depreciation charge	-	(254,732)	(486,714)	(15,660,284)	(129,361)	(93,720)	(145,261)	-	(16,770,072)
Closing net book amount	1,547,286	2,037,694	4,157,360	131,976,479	210,978	256,863	293,132	5,011,854	145,491,646
As at 31 December 2024									
Cost	1,547,286	6,977,450	12,610,425	217,226,613	1,142,745	1,278,493	747,271	5,347,090	246,877,373
Less: Accumulated depreciation	-	(4,939,756)	(8,453,065)	(85,250,134)	(931,767)	(1,021,630)	(454,139)	-	(101,050,491)
Less: Accumulated impairment	-	-	-	-	-	-	-	(335,236)	(335,236)
Net book amount	1,547,286	2,037,694	4,157,360	131,976,479	210,978	256,863	293,132	5,011,854	145,491,646



As at 1 January 2023

Cost	2,028	1,380	3,740	885	3,750	102	8	-	11,893
Less Accumulated depreciation	-	(1,323)	(2,577)	(884)	(3,049)	(86)	(8)	-	(7,927)
Net book amount	2,028	57	1,163	1	701	16	-	-	3,966

For the year ended 31 December 2023

Opening net book amount	2,028	57	1,163	1	701	16	-	-	3,966
Additions	-	-	-	96	493	4	-	14	607
Disposals - Net book value	-	-	-	-	(19)	-	-	-	(19)
Write-offs - Net book value	-	-	-	-	-	-	-	-	-
Depreciation charge	-	(4)	(141)	(4)	(386)	(8)	-	-	(543)
Closing net book amount	2,028	53	1,022	93	789	12	-	14	4,011

As at 31 December 2023

Cost	2,028	1,380	3,740	882	3,842	89	8	14	11,983
Less Accumulated depreciation	-	(1,327)	(2,718)	(789)	(3,053)	(77)	(8)	-	(7,972)
Net book amount	2,028	53	1,022	93	789	12	-	14	4,011

For the year ended 31 December 2024

Opening net book amount	2,028	53	1,022	93	789	12	-	14	4,011
Additions	-	-	28	-	358	6	51	600	1,043
Disposals - Net book value	-	-	-	-	(4)	(3)	-	-	(7)
Reclassification	-	-	282	-	65	2	-	(349)	-
Write-offs - Net book value	-	-	-	-	-	-	-	(7)	(7)
Depreciation charge	-	(4)	(150)	(10)	(407)	(6)	(4)	-	(581)
Closing net book amount	2,028	49	1,182	83	801	11	47	258	4,459

As at 31 December 2024

Cost	2,028	1,380	4,050	882	4,009	81	59	258	12,747
Less Accumulated depreciation	-	(1,331)	(2,868)	(799)	(3,208)	(70)	(12)	-	(8,288)
Net book amount	2,028	49	1,182	83	801	11	47	258	4,459



As at 1 January 2023

Cost	70,093	47,710	129,331	30,569	129,622	3,535	265	-	411,125
Less: Accumulated depreciation	-	(45,742)	(89,142)	(30,544)	(105,383)	(2,965)	(265)	-	(274,041)
Net book amount	70,093	1,968	40,189	25	24,239	570	-	-	137,084

For the year ended 31 December 2023

Opening net book amount	70,093	1,968	40,189	25	24,239	570	-	-	137,084
Additions	-	-	-	3,393	17,166	150	-	492	21,201
Disposals - Net book value	-	-	-	-	(661)	-	-	-	(661)
Write-offs - Net book value	-	-	-	-	(6)	-	-	-	(6)
Translation differences	(687)	(17)	(313)	(111)	(244)	(5)	-	(20)	(1,397)
Depreciation charge	-	(146)	(4,905)	(132)	(13,483)	(277)	-	-	(18,943)
Closing net book amount	69,406	1,805	34,971	3,175	27,011	438	-	472	137,278

As at 31 December 2023

Cost	69,406	47,242	128,006	30,177	131,473	3,051	261	472	410,088
Less: Accumulated depreciation	-	(45,437)	(93,035)	(27,002)	(104,462)	(2,613)	(261)	-	(272,810)
Net book amount	69,406	1,805	34,971	3,175	27,011	438	-	472	137,278

For the year ended 31 December 2024

Opening net book amount	69,406	1,805	34,971	3,175	27,011	438	-	472	137,278
Additions	-	-	982	-	12,521	201	1,770	20,672	36,146
Disposals - Net book value	-	-	-	-	(137)	(539)	-	-	(676)
Reclassification	-	-	9,585	-	2,222	75	-	(11,882)	-
Write-offs - Net book value	-	-	-	-	-	-	-	(244)	(244)
Translation differences	(477)	(7)	(91)	(9)	(2)	427	(40)	(275)	(474)
Depreciation charge	-	(148)	(5,289)	(338)	(14,353)	(205)	(146)	-	(20,479)
Closing net book amount	68,929	1,650	40,158	2,828	27,262	397	1,584	8,743	151,551

As at 31 December 2024

Cost	68,929	46,917	137,657	29,969	136,263	2,765	1,988	8,743	433,231
Less: Accumulated depreciation	-	(45,267)	(97,499)	(27,141)	(109,001)	(2,368)	(404)	-	(281,680)
Net book amount	68,929	1,650	40,158	2,828	27,262	397	1,584	8,743	151,551



The Group has mortgaged and pledged the property, plant and equipment of subsidiaries as collateral for long-term loans from financial institutions of subsidiaries (as disclosed in Note 24) with total net book value as details below.

As at 31 December		2024		2023	
Country	Currency	Net book value (Million)	Net book value Million US Dollar	Net book value (Million)	Net book value Million US Dollar
The People's Republic of China	CNY	721.50	98.85	769.81	108.13
Australia	Australian Dollar	1,193.36	743.66	1,339.11	917.94
The United States	US Dollar	931.51	931.51	946.29	946.29
Thailand	Baht	386.58	11.37	385.48	11.26
The Republic of Singapore	US Dollar	17.00	17.00	-	-
Vietnam	VND	1,051,793.01	41.31	1,089,344.33	44.72
Total			1,843.70		2,028.34

Additionally, under the Credit Agreement of a subsidiary in the United States, the subsidiary is required to provide substantially all security interests in its oil and gas properties, as well as other property assets, as collateral for long-term loans from financial institutions.

As at 31 December 2024 and 2023, the Group has capital commitments which are shown in Note 31.2.

17 Deferred exploration and development expenditures and deferred overburden expenditures/stripping costs, net

As at 31 December	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Current portion:				
- Deferred development costs	52,466	119,367	1,783,221	4,085,131
	52,466	119,367	1,783,221	4,085,131
Non-current portion:				
- Deferred exploration and development expenditures	642,884	694,396	21,850,270	23,764,521
- Deferred stripping costs	176,446	94,198	5,997,044	3,223,762
	819,330	788,594	27,847,314	26,988,283
Total deferred exploration and development expenditures and deferred overburden expenditures/stripping costs, net	871,796	907,961	29,630,535	31,073,414

Movement of the deferred exploration and development expenditures and deferred overburden expenditures/stripping costs is as follows:

As at 1 January	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Cost	7,338,303	6,616,164	251,140,928	228,670,499
<u>Less</u> Accumulated amortisation	(6,412,863)	(5,684,564)	(219,469,332)	(196,472,180)
<u>Less</u> Allowance for impairment	(17,479)	(60,522)	(598,182)	(2,091,771)
Net book amount	907,961	871,078	31,073,414	30,106,548
For the year ended 31 December				
Opening net book amount	907,961	871,078	31,073,414	30,106,548
Additions	734,444	764,484	25,913,396	26,640,767
Amortisation	(717,497)	(697,537)	(25,343,203)	(24,240,231)
Write-offs – Net book value	(3,072)	-	(106,754)	-
Translation differences	(50,040)	(30,064)	(1,906,318)	(1,433,670)
Closing net book amount	871,796	907,961	29,630,535	31,073,414
As at 31 December				
Cost	7,878,536	7,338,303	267,774,886	251,140,928
<u>Less</u> Accumulated amortisation	(6,989,347)	(6,412,863)	(237,553,214)	(219,469,332)
<u>Less</u> Accumulated impairment	(17,393)	(17,479)	(591,137)	(598,182)
Net book amount	871,796	907,961	29,630,535	31,073,414

The majority of additions and amortisation represents overburden expenditures. The Group presents the amortisation incurred during the year under cost of sales in the consolidated statements of comprehensive income.



18 Mining property rights, net

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 1 January				
Cost	1,775,719	1,757,942	60,770,948	60,758,709
<u>Less</u> Accumulated amortisation	(598,521)	(567,804)	(20,483,344)	(19,624,692)
<u>Less</u> Accumulated impairment	(314,437)	(314,437)	(10,761,065)	(10,867,691)
Net book amount	862,761	875,701	29,526,539	30,266,326
For the year ended 31 December				
Opening net book amount	862,761	875,701	29,526,539	30,266,326
Amortisation	(27,573)	(22,927)	(974,893)	(797,620)
Translation differences	(69,824)	9,987	(2,538,537)	57,833
Closing net book amount	765,364	862,761	26,013,109	29,526,539
As at 31 December				
Cost	1,655,343	1,775,719	56,261,616	60,770,948
<u>Less</u> Accumulated amortisation	(575,542)	(598,521)	(19,561,461)	(20,483,344)
<u>Less</u> Accumulated impairment	(314,437)	(314,437)	(10,687,046)	(10,761,065)
Closing net book amount	765,364	862,761	26,013,109	29,526,539

19 Goodwill, net

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
For the year ended 31 December				
Opening net book amount	484,854	394,156	16,593,303	13,622,971
Addition from business combination	-	86,095	-	2,919,677
Translation differences	(32,223)	4,603	(1,209,339)	50,655
Closing net book amount	452,631	484,854	15,383,964	16,593,303
As at 31 December				
Cost	484,075	516,298	16,452,670	17,669,409
<u>Less</u> Accumulated impairment	(31,444)	(31,444)	(1,068,706)	(1,076,106)
Closing net book amount	452,631	484,854	15,383,964	16,593,303

Goodwill is allocated to cash-generating units (CGU). Goodwill allocation for each material CGU is presented as follows:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 31 December				
Energy resources				
Coal production and distribution				
Australia	303,861	334,249	10,327,582	11,439,089
Indonesia	17,418	17,418	591,994	596,094
Mongolia	7,062	7,062	240,037	241,699
Natural gas production				
United States	17,509	17,509	595,106	599,228
Energy generation	20,686	22,521	703,051	770,732
Energy technology				
Singapore	86,095	86,095	2,926,194	2,946,461
Total	452,631	484,854	15,383,964	16,593,303

Management tests impairment of goodwill annually, or more frequently if events or changes in circumstances indicate that it might be impaired. The impairment test is carried out at the cash-generating unit (CGU) level, determining the recoverable amount as the higher of the value in use or the fair value less costs of disposal.

Goodwill primarily arose from the acquisition of a mining business in Australia and an energy storage system in Singapore. Management determines the recoverable amount of this goodwill as detailed below:

- The recoverable amount of goodwill arising from the acquisition of the mining business in Australia was calculated using cash flow projections based on financial budgets approved by management. Key assumptions in these projections include global coal price trends, estimated coal reserves, production plans, foreign exchange rate forecasts, cost structures, inflation rates, and the discount rate. Cash inflows are derived from revenue, which is based on each mine's production plan and forecasted selling prices as referenced from energy research and consulting firms. Cash outflows are determined by calculating the estimated production expenses, which are adjusted for inflation during the initial five-year period. For periods beyond five years, a constant inflation rate is applied. The discount rate applied is the Weighted Average Cost of Capital (WACC) of 9.50% per annum (2023: 9.25% per annum). For the year ended 31 December 2024, the recoverable amount, calculated based on fair value less costs of disposal, exceeds the carrying amount by USD 239 million. Additionally, management conducted a sensitivity analysis of key assumptions, considering an increase in the discount rate by 1.00% per annum or a decrease in the estimated coal price by 3.50%, while keeping other assumptions constant. This would result in the recoverable amount being close to the carrying amount.



- The recoverable amount of goodwill arising from the acquisition of the energy storage system in Singapore was calculated using cash flow projections based on financial budgets approved by management. Key assumptions in these projections include key customer contracts, forecasted revenue, forecasted sales volumes, operating expenses and capital expenditures, and the discount rate. Cash inflows are derived from revenue, which is based on forecasted sales volumes and selling prices as referenced from contracts. Cash outflows are calculated based on estimated raw material costs referencing market prices and estimated production expenses for a period of 5 years, with a constant growth rate applied for periods thereafter. The discount rate applied is the WACC of 16.00% per annum (2023: 18.00% per annum). For the year ended 31 December 2024, the recoverable amount, calculated based on fair value less costs of disposal, exceeds the carrying amount by USD 15 million. Additionally, management conducted a sensitivity analysis of key assumptions, considering an increase in the discount rate by 1.00% per annum or the forecasted sales volumes decrease by 5.00%, while keeping other assumptions constant. This would result in the recoverable amount being close to the carrying amount.

20 Deferred income taxes and income taxes

Corporate income tax is calculated based on the net profit (tax base) which excludes the interests in associates and joint ventures. The rates are as follows:

Income tax rate (%)										
People's Republic of										
	Thailand	Australia	Indonesia	Japan	Singapore	Mauritius	China	Mongolia	USA	Vietnam
2024	20	30	22	23.2	17	15	25	10 - 25	21	20
2023	20	30	22	23.2	17	15	12.5 - 25	10 - 25	21	20

20.1 Deferred tax assets and deferred tax liabilities

The analysis of current and non-current deferred tax assets and deferred tax liabilities is as follows:

Consolidated financial statements				
US Dollar'000		Baht'000		
2024	2023	2024	2023	
Deferred tax assets	91,272	78,691	3,102,150	2,693,065
Deferred tax liabilities	(195,073)	(276,232)	(6,630,133)	(9,453,574)
Deferred taxes, net	(103,801)	(197,541)	(3,527,983)	(6,760,509)
Separate financial statements				
US Dollar'000		Baht'000		
2024	2023	2024	2023	
Deferred tax liabilities	(10,346)	(17,453)	(351,656)	(597,281)

The movements in deferred tax assets and liabilities during the year are as follows:

Consolidated financial statements					
US Dollar'000					
	At 1 January 2024	Charged (credited) to profit or loss	Charged (credited) to other comprehensive income or expense	Translation differences	At 31 December 2024
Deferred tax assets:					
Provisions for employee benefits	7,772	808	1,260	(1)	9,839
Loss carried forward	350,391	(4,259)	-	(22,256)	323,876
Derivatives	(1,744)	(169)	3,524	(249)	1,362
Depreciation and amortisation	38,543	(744)	-	(778)	37,021
Investments in joint ventures	14,214	(1,138)	-	-	13,076
Provision for mine rehabilitation	13,726	545	-	-	14,271
Provision for decommissioning	30,768	5,922	-	(2)	36,688
Allowance for slow moving of spare parts	2,184	122	-	-	2,306
Other reserves	28,005	722	-	(2,471)	26,256
Others	99,493	8,278	537	(1,773)	106,535
Total	583,352	10,087	5,321	(27,530)	571,230
Deferred tax liabilities:					
Investments in joint ventures	(82,613)	(13,680)	-	4,169	(92,124)
Mining property rights	(239,952)	(16,242)	-	17,957	(238,237)
Derivatives	(18,067)	(8,628)	36,076	1	9,382
Depreciation and amortisation	(377,029)	62,684	-	10,283	(304,062)
Fair value uplift from the acquisition of power plants	(16,024)	336	-	465	(15,223)
Connection fee	(436)	66	-	9	(361)
Tax effect of currency translation on tax base	(30,833)	8,787	-	-	(22,046)
Others	(15,939)	2,667	-	912	(12,360)
Total	(780,893)	35,990	36,076	33,796	(675,031)
Net	(197,541)	46,077	41,397	6,266	(103,801)



	Consolidated financial statements					
	US Dollar'000					
	Charged (credited)					At
	At	Charged	to other	Increase	Translation	
	1 January	(credited) to	comprehensive	from business	differences	31 December
	2023	profit or loss	income or expense	combination		2023
Deferred tax assets:						
Provisions for employee benefits	5,276	939	101	-	1,456	7,772
Loss carried forward	260,389	75,640	-	3,445	10,917	350,391
Derivatives	53,930	(53,914)	(467)	-	(1,293)	(1,744)
Depreciation and amortisation	43,060	(4,688)	-	114	57	38,543
Investments in joint ventures	15,351	(1,138)	-	-	1	14,214
Provision for mine rehabilitation	10,798	229	-	-	2,699	13,726
Provision for decommissioning	29,266	1,406	-	-	96	30,768
Allowance for slow moving						
of spare parts	2,210	(156)	-	-	130	2,184
Other reserves	26,812	(62)	-	767	488	28,005
Others	89,661	18,936	(317)	-	(8,787)	99,493
Total	536,753	37,192	(683)	4,326	5,764	583,352
Deferred tax liabilities:						
Investments in joint ventures	(81,310)	(6,488)	181	-	5,004	(82,613)
Mining property rights	(242,498)	6,843	-	-	(4,297)	(239,952)
Derivatives	-	35,690	(53,757)	-	-	(18,067)
Depreciation and amortisation	(345,534)	(13,522)	-	(16,758)	(1,215)	(377,029)
Fair value uplift from the acquisition						
of power plants	(17,824)	1,153	-	-	647	(16,024)
Connection fee	(524)	50	-	-	38	(436)
Tax effect of currency translation						
on tax base	(45,426)	14,592	-	-	1	(30,833)
Others	(12,407)	(4,319)	-	-	787	(15,939)
Total	(745,523)	33,999	(53,576)	(16,758)	965	(780,893)
Net	(208,770)	71,191	(54,259)	(12,432)	6,729	(197,541)

	Consolidated financial statements				
	Baht'000				
	Charged (credited)				At
	At	Charged	to other	Translation	
	1 January	(credited) to	comprehensive	differences	31 December
	2024	profit or loss	income or expense		2024
Deferred tax assets:					
Provisions for employee benefits	265,999	27,779	43,325	(2,702)	334,401
Loss carried forward	11,991,528	(146,440)	-	(837,206)	11,007,882
Derivatives	(59,699)	(5,822)	121,156	(9,353)	46,282
Depreciation and amortisation	1,319,078	(25,595)	-	(35,229)	1,258,254
Investments in joint ventures	486,435	(39,121)	-	(2,899)	444,415
Provision for mine rehabilitation	469,749	18,753	-	(3,445)	485,057
Provision for decommissioning	1,052,996	203,600	-	(9,650)	1,246,946
Allowance for slow moving of spare parts	74,744	4,201	-	(562)	78,383
Other reserves	958,411	24,828	-	(90,857)	892,382
Others	3,404,992	284,583	18,472	(87,147)	3,620,900
Total	19,964,233	346,766	182,953	(1,079,050)	19,414,902
Deferred tax liabilities:					
Investments in joint ventures	(2,827,283)	(470,334)	-	166,511	(3,131,106)
Mining property rights	(8,211,944)	(558,395)	-	673,154	(8,097,185)
Derivatives	(618,298)	(296,615)	1,240,311	(6,514)	318,884
Depreciation and amortisation	(12,921,142)	2,155,081	-	431,628	(10,334,433)
Fair value uplift from the acquisition of power plants	(530,417)	11,558	-	1,448	(517,411)
Connection fee	(14,928)	2,271	-	377	(12,280)
Tax effect of currency translation on tax base	(1,055,217)	302,107	-	3,811	(749,299)
Others	(545,513)	91,693	-	33,765	(420,055)
Total	(26,724,742)	1,237,366	1,240,311	1,304,180	(22,942,885)
Net	(6,760,509)	1,584,132	1,423,264	225,130	(3,527,983)



Consolidated financial statements						
Baht'000						
	At 1 January 2023	Charged (credited) to profit or loss	Charged (credited) to other comprehensive income or expense	Increase (decrease) from business combination	Translation differences	At 31 December 2023
Deferred tax assets:						
Provisions for employee benefits	182,366	33,613	3,614	-	46,406	265,999
Loss carried forward	8,999,671	2,706,217	-	123,249	162,391	11,991,528
Derivatives	1,863,937	(1,928,909)	(16,706)	-	21,979	(59,699)
Depreciation and amortisation	1,488,274	(167,743)	-	4,080	(5,533)	1,319,078
Investments in joint ventures	530,582	(40,711)	-	-	(3,436)	486,435
Provision for mine rehabilitation	373,193	8,185	-	-	88,371	469,749
Provision for decommissioning	1,011,513	50,300	-	-	(8,817)	1,052,996
Allowance for slow moving						
of spare parts	76,389	(5,572)	-	-	3,927	74,744
Other reserves	926,681	(2,231)	-	27,458	6,503	958,411
Others	3,098,899	677,486	(11,342)	-	(360,051)	3,404,992
Total	18,551,505	1,330,635	(24,434)	154,787	(48,260)	19,964,233
Deferred tax liabilities:						
Investments in joint ventures	(2,810,279)	(232,131)	6,488	-	208,639	(2,827,283)
Mining property rights	(8,381,303)	244,817	-	-	(75,458)	(8,211,944)
Derivatives	-	1,276,923	(1,923,305)	-	28,084	(618,298)
Depreciation and amortisation	(11,942,499)	(483,775)	-	(599,588)	104,720	(12,921,142)
Fair value uplift from the acquisition						
of power plants	(616,052)	41,245	-	-	44,390	(530,417)
Connection fee	(18,124)	1,779	-	-	1,417	(14,928)
Tax effect of currency translation						
on tax base	(1,570,018)	522,081	-	-	(7,280)	(1,055,217)
Others	(428,839)	(154,519)	-	-	37,845	(545,513)
Total	(25,767,114)	1,216,420	(1,916,817)	(599,588)	342,357	(26,724,742)
Net	(7,215,609)	2,547,055	(1,941,251)	(444,801)	294,097	(6,760,509)

Separate financial statements			
US Dollar'000			
At 1 January 2024	Charged (credited) to profit or loss	Charged (credited) to other comprehensive income or expense	At 31 December 2024
3,534	556	-	4,090
(700)	(232)	406	(526)
(20,328)	5,895	-	(14,433)
41	46	436	523
(17,453)	6,265	842	(10,346)

Separate financial statements				
US Dollar'000				
	At 1 January 2023	Charged (credited) to profit or loss	Charged (credited) to other comprehensive income or expense	At 31 December 2023
Deferred tax assets (liabilities):				
Provisions for employee benefits	2,766	768	-	3,534
Derivatives	733	(5,440)	4,007	(700)
Tax effect of currency translation				
on tax base	(30,108)	9,780	-	(20,328)
Others	266	28	(253)	41
Total	(26,343)	5,136	3,754	(17,453)



Separate financial statements					
					Baht'000
	At 1 January 2024	Charged (credited) to profit or loss	Charged (credited) to other comprehensive income or expense	Translation differences	At 31 December 2024
Deferred tax assets (liabilities):					
Provisions for employee					
benefits	120,955	17,427	-	633	139,015
Derivatives	(23,934)	(7,283)	15,871	(2,537)	(17,883)
Tax effect of currency					
translation on tax base	(695,636)	184,832	-	20,324	(490,480)
Others	1,334	1,457	15,236	(335)	17,692
Total	(597,281)	196,433	31,107	18,085	(351,656)
Separate financial statements					
					Baht'000
	At 1 January 2023	Charged (credited) to profit or loss	Charged (credited) to other comprehensive income or expense	Translation differences	At 31 December 2023
Deferred tax assets (liabilities):					
Provisions for employee	95,603	32,670	-	(7,318)	120,955
benefits					
Derivatives	25,321	(231,347)	137,122	44,970	(23,934)
Tax effect of currency					
translation on tax base	(1,040,550)	415,933	-	(71,019)	(695,636)
Others	9,163	1,161	(8,758)	(232)	1,334
Total	(910,463)	218,417	128,364	(33,599)	(597,281)

Deferred income tax assets are recognised for tax loss and carried forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable. The Group did not recognise deferred tax assets amounting to US Dollar 118.69 million from tax losses of US Dollar 593.46 million that could be carried forward against future taxable income, these tax losses will be expired in 2028 (2023: The Group did not recognise deferred tax assets amounting to US Dollar 120.33 million from tax losses of US Dollar 601.67 million that could be carried forward against future taxable income, these tax losses will be expired in 2027).

20.2 Income taxes

Income taxes for the year ended 31 December consist of:

Consolidated financial statements				
US Dollar'000			Baht'000	
2024	2023	2024	2023	
Current tax:				
Current tax on profit for the year	121,793	143,904	4,270,993	4,983,935
Withholding tax for dividends	21,091	45,957	746,719	1,595,007
Total current taxes	142,884	189,861	5,017,712	6,578,942
Deferred tax:				
Origination and reversal				
of temporary differences	(46,077)	(71,191)	(1,584,132)	(2,547,055)
Total deferred tax	(46,077)	(71,191)	(1,584,132)	(2,547,055)
Total tax expenses				
	96,807	118,670	3,433,580	4,031,887
Separate financial statements				
US Dollar'000			Baht'000	
2024	2023	2024	2023	
Current tax:				
Current tax on profit for the year	-	-	-	-
Total current taxes	-	-	-	-
Deferred tax:				
Origination and reversal				
of temporary differences	(6,265)	(5,136)	(196,433)	(218,417)
Total deferred tax	(6,265)	(5,136)	(196,433)	(218,417)
Total tax expenses				
	(6,265)	(5,136)	(196,433)	(218,417)



The tax on the Group's profit before tax differs from the theoretical amount that would arise using the basic tax rate of the home country of the company as follows:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Profit before tax	208,116	490,420	7,493,618	16,794,392
Tax calculated at a tax rate of 20% (2023: 20%)	41,623	98,084	1,498,724	3,358,879
Tax effect of:				
Income not subject to tax	(46,919)	(8,369)	(1,655,925)	(291,251)
Expenses not deductible for tax purpose	32,067	9,921	1,131,771	345,288
Tax losses for which no deferred tax asset was recognised	54,143	27,809	1,910,902	967,806
Utilisation of previously unrecognised tax losses	(3,048)	(17,038)	(107,565)	(592,958)
Deferred tax assets (liabilities) from exchange rate translation	(3,517)	(14,212)	(124,138)	(494,599)
Withholding tax for dividends	21,091	45,957	744,381	1,595,006
Withholding tax for interest received	147	4,207	5,200	150,807
Tax effect from different tax rates of foreign entities	(12,337)	(37,087)	(435,424)	(1,290,726)
Prior period adjustment	5,202	-	183,598	-
Others	8,355	9,398	282,056	283,635
Tax expense	96,807	118,670	3,433,580	4,031,887

	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Profit (loss) before tax	(98,500)	356,123	(3,323,258)	12,294,354
Tax calculated at a tax rate of 20% (2023: 20%)	(19,700)	71,225	(664,651)	2,458,870
Tax effect of:				
Income not subject to tax	(9,336)	(86,531)	(329,499)	(3,011,478)
Expenses not deductible for tax purpose	1,018	741	35,942	25,805
Recognition of previously unrecognised tax losses	23,673	15,403	835,522	536,055
Deferred tax liabilities from exchange rate translation	(1,566)	(11,037)	(55,255)	(384,119)
Others	(354)	5,063	(18,492)	156,450
Tax expense	(6,265)	(5,136)	(196,433)	(218,417)

In December 2021, the Organisation for Economic Co-operation and Development (OECD) released the Pillar Two model rules to reform international corporate taxation that aim to ensure that large multinationals pay a minimum effective corporate tax rate of 15% in each jurisdiction in which they operate. Under the legislation, the Group is liable to pay a top-up tax for the difference between its GloBE effective tax rate in the jurisdiction of the Group and the 15% minimum rate.

The Group is within the scope of the Pillar Two model rules. In 2024, Pillar Two legislation was enacted in Thailand, the jurisdictions in which the Company is incorporated, and will come into effect on 1 January 2025.

As a result of an effective legislation in Australia, the Netherlands and Vietnam, these three jurisdictions are brought into scope of the rules since 2024.

Therefore, the Group, except for three countries mentioned above, has no related current tax exposure. The Group has applied the exception to recognising and disclosing information about deferred tax assets and liabilities related to Pillar Two income taxes as provided in TAS 12.

All three countries meet the Transitional CbCR Safe Harbour relief under the Pillar Two rules. As a result, from the calculations according to the methods specified under the Pillar Two rules for the three countries, which was effective in 2024. The Group has no additional top-up tax in 2024.

The Group is assessing its exposure to the Pillar Two legislation for when it comes into effect. The Group is currently engaged with tax specialists to prepare and assess the impact in applying the Pillar Two model rules.

21 Other non-current assets

	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
As at 31 December								
Value added tax receivable	222,456	265,166	7,560,819	9,074,862	2,232	-	75,852	-
Prepaid income tax	92,253	64,049	3,135,501	2,191,954	1,396	964	47,447	32,979
Deposits	33,095	29,914	1,124,831	1,023,752	148	154	5,043	5,279
Restricted deposits at banks								
(Note 15.1 g)	39,453	49,108	1,340,922	1,680,633	-	-	-	-
Rights to operate the								
power plants, net	26,446	31,339	898,843	1,072,526	-	-	-	-
Intangible assets	16,191	14,555	550,312	498,104	6,904	7,840	234,645	268,324
Customer relationship								
and patent	57,459	63,964	1,952,927	2,189,076	-	-	-	-
Others	111,704	30,220	3,796,509	1,034,230	2,714	1,170	92,237	40,087
Total other non-current assets	599,057	548,315	20,360,664	18,765,137	13,394	10,128	455,224	346,669



22 Short-term loans from financial institutions

As at 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
- US Dollar loans	152,003	161,333	5,166,262	5,521,357	115,000	-	3,908,608	-
- Baht loans	663,766	523,036	22,560,000	17,900,000	515,183	464,596	17,510,000	15,900,000
- Foreign currency loans	63,932	42,279	2,172,921	1,446,923	-	-	-	-
Total short-term loans from financial institutions	879,701	726,648	29,899,183	24,868,280	630,183	464,596	21,418,608	15,900,000

Movements of short-term loans from financial institutions for the year are as follows:

For the year ended 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
Opening book value	726,648	450,842	24,868,280	15,582,197	464,596	353,853	15,900,000	12,230,000
Cash flows:								
Additions	1,734,920	2,150,328	60,930,722	74,771,606	1,250,013	1,500,503	44,011,394	52,078,060
Repayments	(1,588,636)	(1,901,122)	(56,178,047)	(66,170,779)	(1,089,638)	(1,396,961)	(38,482,521)	(48,584,296)
Other non-cash movements:								
Increase from business Combination	-	18,433	-	325,095	-	-	-	-
Net losses on exchange rate	5,213	7,201	169,415	269,993	5,212	7,201	169,415	269,993
Translation differences	1,556	966	108,813	(209,832)	-	-	(179,680)	(93,757)
Closing book value	879,701	726,648	29,899,183	24,868,280	630,183	464,596	21,418,608	15,900,000

Consolidated financial statements

As at 31 December 2024, short-term loans from financial institutions are unsecured liabilities and bear interest at the rates of 2.00% to 9.87% per annum (2023: 2.60% to 10.23% per annum). The repayments are due within one year.

Separate financial statements

As at 31 December 2024, short-term loans from financial institutions are unsecured liabilities and bear interest at the rates of 2.36% to 5.16% per annum (2023: 2.60% to 2.98% per annum). The repayments are due within one year.

The fair value of short-term loans approximates their carrying amount, as short-term loans from financial institutions had a short period of maturity.

23 Other current liabilities

As at 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
Accrued expenses	347,379	358,067	11,806,679	12,254,234	7,296	10,190	247,966	348,739
Contingent liabilities from an asset acquisition	20,000	20,000	679,758	684,466	-	-	-	-
Value added tax payables	6,586	4,053	223,846	138,712	17	20	563	686
Withholding tax payables	18,519	18,649	629,415	638,221	1,328	1,189	45,131	40,695
Other payables for purchase of property, plant and equipment	24,993	55,158	849,469	1,887,704	253	187	8,589	6,406
Advance from customer	10,992	8,835	373,609	302,354	-	-	-	-
Others	3,305	-	112,317	-	91	-	3,127	-
Total other current liabilities	431,774	464,762	14,675,093	15,905,691	8,985	11,586	305,376	396,526

24 Long-term loans from financial institutions, net

As at 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
- US Dollar	1,859,720	2,514,011	63,207,970	86,037,778	1,160,355	1,354,340	39,438,030	46,349,984
- Foreign currencies	711,697	640,426	24,189,083	21,917,504	163,382	52,596	5,553,000	1,800,000
Total long-term loans from financial institutions	2,571,417	3,154,437	87,397,053	107,955,282	1,323,737	1,406,936	44,991,030	48,149,984
<u>Less</u> Deferred financing service fees	(10,423)	(17,513)	(354,238)	(599,365)	(3,454)	(4,168)	(117,389)	(142,608)
Total long-term loans from financial institutions, net	2,560,994	3,136,924	87,042,815	107,355,917	1,320,283	1,402,768	44,873,641	48,007,376
Current portion	748,294	885,295	25,432,943	30,297,733	620,965	540,599	21,105,282	18,501,097
Non-current portion	1,812,700	2,251,629	61,609,872	77,058,184	699,318	862,169	23,768,359	29,506,279
Total long-term loans from financial institutions, net	2,560,994	3,136,924	87,042,815	107,355,917	1,320,283	1,402,768	44,873,641	48,007,376



Movements of long-term loans from financial institutions for the year are as follows:

For the years ended	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
31 December								
Opening net book value	3,136,924	2,929,416	107,355,917	101,247,671	1,402,768	1,558,089	48,007,376	53,851,284
Cash flows:								
Additions	935,981	833,930	33,554,593	29,293,894	309,855	121,373	11,001,386	4,268,350
Repayments	(1,504,403)	(643,575)	(53,817,876)	(22,457,833)	(394,534)	(279,660)	(14,074,135)	(9,749,930)
Payments of financing service fees	(3,239)	(5,341)	(114,786)	(188,901)	(1,241)	(604)	(43,544)	(21,242)
Other non-cash movements:								
Increase from business combinations	-	13,437	-	455,688	-	-	-	-
Amortisation of deferred financing service fees	9,617	6,209	345,855	215,439	1,954	2,348	68,970	81,645
Net losses on exchange rate	3,423	2,525	120,824	87,311	1,481	1,222	49,934	44,613
Translation differences	(17,309)	323	(401,712)	(1,297,352)	-	-	(136,346)	(467,344)
Closing net book value	2,560,994	3,136,924	87,042,815	107,355,917	1,320,283	1,402,768	44,873,641	48,007,376

Long-term loans from financial institutions are unsecured liabilities except long-term loans of subsidiaries which are secured loans as follows;

As at 31 December		2024		2023	
Country	Currency	Amount (Million)	Amount Million US Dollar	Amount (Million)	Amount Million US Dollar
The People’s Republic of China	CNY	375.37	51.43	397.57	55.84
The Republic of Singapore	CNY	40.47	5.54	56.27	5.78
The Republic of Singapore	Singapore Dollar	3.95	2.91	6.16	4.67
Australia	Australian Dollar	280.70	174.92	355.70	243.82
The United States	US Dollar	517.36	517.36	496.36	496.36
Vietnam	VND	410.82	16.13	-	-
Total			768.29		806.47

The Group has pledged other assets of its subsidiaries in the People’s Republic of China, Australia, the Republic of Singapore and the United States, apart from property, plant and equipment as disclosed on Note 16, as collateral for long-term loans from financial institutions of the subsidiaries with total net book value as details below.

As at 31 December	2024		2023	
	Net book value (Million)	Net book value Million US Dollar	Net book value (Million)	Net book value Million US Dollar
Currency				
CNY	110.98	15.20	90.71	12.74
Australian Dollar	1,576.31	982.30	1,580.19	1,083.20
Baht	91.67	2.70	102.08	2.98
US Dollar	59.18	59.18	65.91	65.91
Total		1,059.38		1,164.83

Details of long-term loans of subsidiaries are shown as follows:

No.	Million US Dollar (Original currency)		Interest rate	Due of loan repayment
	2024	2023		
1	-	50.00	SOFR plus applicable fixed margin	Repayment of principal as agreement expires on 28 June 2024
2	-	40.00	SOFR plus applicable fixed margin	Repayment every 12 months commencing on 28 June 2022 to expiry of agreement on 28 June 2024
3	-	16.00	SOFR plus applicable fixed margin	Repayment every 12 months commencing on 19 December 2022 to expiry of agreement on 19 December 2024
4	-	13.00	SOFR plus applicable fixed margin	Repayment every 6 months commencing on 2 April 2021 to expiry of agreement on 2 October 2024
5	48.00	54.00	SOFR plus applicable fixed margin	Repayment every 3 months commencing on 27 October 2021 to expiry of agreement on 27 October 2028
6	165.00	456.00	SOFR plus applicable fixed margin	Repayment every 12 months commencing on 30 June 2022 to expiry of agreement on 30 June 2027
7	60.00	60.00	SOFR plus applicable fixed margin	Repayment of principal as agreement expired on 9 July 2028
8	426.36	436.00	SOFR plus applicable fixed margin	Repayment every 3 months commencing on 30 September 2023 to expiry of agreement on 10 July 2028
9	31.00	35.00	SOFR plus applicable fixed margin	Repayment every 6 months commencing on 28 April 2023 to expiry of agreement on 28 April 2035
	730.36	1,160.00		



Million Australian Dollar (Original currency)				
No.	2024	2023	Interest rate	Due of loan repayment
1	90.00	70.00	BBSY plus applicable fixed margin	Repayment of principal as agreement expired on 30 September 2027
2	-	90.00	BBSY plus applicable fixed margin	Repayment of principal as agreement expired on 30 September 2027
3	100.00	100.00	BBSY plus applicable fixed margin	Repayment of principal as agreement expired on 30 September 2027
4	90.70	96.00	BBSY plus applicable fixed margin	Repayment every 3 months commencing on 14 August 2023 to expiry of agreement on 14 August 2028
	280.70	356.00		
Million Baht (Original currency)				
No.	2024	2023	Interest rate	Due of loan repayment
1	1,350.00	1,500.00	THOR plus applicable fixed margin	Repayment every 6 months commencing on 30 September 2024 to expiry of agreement on 31 March 2029
2	375.00	750.00	THOR plus applicable fixed margin	Repayment every 6 months commencing on 21 February 2022 to expiry of agreement on 21 August 2025
3	375.00	750.00	THOR plus applicable fixed margin	Repayment every 6 months commencing on 20 June 2022 to expiry of agreement on 20 December 2025
4	4,800.00	5,000.00	BIBOR plus applicable fixed margin	Repayment every 6 months commencing on 25 April 2024 to expiry of agreement on 27 October 2031
5	23.04	27.00	MLR minus fixed rate	Repayment of principal on last working day of every month to expiry of agreement on 19 October 2030
6	305.44	305.00	BIBOR plus applicable fixed margin	Repayment every 3 months commencing on 14 March 2025 to expiry of agreement on 13 December 2035
7	88.90	100.00	MLR minus fixed rate	Repayment every 3 months commencing on 14 September 2024 to expiry of agreement on 20 December 2028
8	17.63	-	BIBOR plus applicable fixed margin	Repayment every 3 months commencing on 14 March 2025 to expiry of agreement on 13 December 2035
9	46.51	-	BIBOR plus applicable fixed margin	Repayment every 3 months commencing on 14 March 2024 to expiry of agreement on 13 December 2035
	7,381.52	8,432.00		

Million CNY (Original currency)				
No.	2024	2023	Interest rate	Due of loan repayment
1	-	2.00	LPR plus applicable fixed margin	Repayment every 3 months commencing on 29 March 2019 to expiry of agreement on 21 January 2024
2	28.59	11.49	LPR plus applicable fixed margin	Repayment every 6 months commencing on 1 January 2023 to expiry of agreement on 27 October 2037
3	52.58	29.08	LPR plus applicable fixed margin	Repayment every 3 months commencing on 30 June 2022 to expiry of agreement on 29 June 2027
4	124.94	157.44	LPR plus applicable fixed margin	Repayment every 3 months commencing on 22 January 2018 to expiry of agreement on 10 January 2027
5	61.30	63.30	LPR plus applicable fixed margin	Repayment every 3 months commencing on 22 February 2023 to expiry of agreement on 22 February 2028
6	17.86	27.50	LPR plus applicable fixed margin	Repayment every 3 months commencing on 31 August 2021 to expiry of agreement on 29 August 2031
7	30.62	37.98	LPR plus applicable fixed margin	Repayment every 3 months commencing on 15 June 2023 to expiry of agreement on 5 June 2029
8	59.47	70.78	LPR plus applicable fixed margin	Repayment every 3 months commencing on 12 May 2023 to expiry of agreement on 16 April 2029
9	40.48	56.27	LPR plus applicable fixed margin	Repayment every month commencing on 1 January 2023 to expiry of agreement on 8 April 2027
	415.84	455.84		
Million VND (Original currency)				
No.	2024	2023	Interest rate	Due of loan repayment
1	408,919.96	450,919.96	Saving deposit rate plus applicable fixed margin	Repayment every 3 months commencing on 25 March 2021 to expiry of agreement on 25 December 2031
2	1,904.74	2,176.85	SOFR plus applicable fixed margin	Repayment every 6 months commencing on 28 April 2023 to expiry of agreement on 28 April 2035
	410,824.70	453,096.81		



Million Indonesian Rupiah (Original currency)				
No.	2024	2023	Interest rate	Due of loan repayment
1	770,674.06	122,861.64	JIBOR plus applicable fixed margin	Repayment every 3 months commencing on 1 September 2023 to expiry of agreement on 15 May 2028
2	22,678.74	36,089.00	JIBOR plus applicable fixed margin	Repayment every 3 months commencing on 25 October 2024 to expiry of agreement on 25 July 2026
	793,352.80	158,950.64		

Million Singapore Dollar (Original currency)				
No.	2024	2023	Interest rate	Due of loan repayment
1	3.95	6.00	Fixed rate	Repayment every 3 months commencing on 1 January 2023 to expiry of agreement on 24 October 2027

Long-term loans of the Company are unsecured loans denominated in Thai Baht and US Dollar as details below:

Million THB Baht (Original currency)				
No.	2024	2023	Interest rate	Due of loan repayment
1	1,543.00	1,800.00	THOR plus applicable fixed margin	Repayment annually commencing on 21 September 2024 to expiry of agreement on 21 September 2030
2	1,710.00	-	Fixed rate	Repayment annually commencing on 20 August 2024 to expiry of agreement on 20 February 2031
3	600.00	-	Fixed rate	Repayment annually commencing on 20 August 2026 to expiry of agreement on 20 February 2029
4	1,700.00	-	THOR plus applicable fixed margin	Repayment annually commencing on 25 May 2025 to expiry of agreement on 25 May 2030
	5,553.00	1,800.00		

Million US Dollar (Original currency)					
No.	2024	2023	Interest rate	Due of loan repayment	
1	80.00	-	SOFR plus applicable fixed margin	Repayment expiry of agreement on 20 September 2030	
2	-	90.00	SOFR plus applicable fixed margin	Repayment expiry of agreement on 29 May 2024	
3	12.00	34.00	SOFR plus applicable fixed margin	Repayment every 6 months commencing on 6 February 2021 to expiry of agreement on 6 February 2025	
4	200.00	230.00	SOFR plus applicable fixed margin	Repayment annually commencing on 22 December 2023 to expiry of agreement on 22 December 2028	
5	10.00	20.00	SOFR plus applicable fixed margin	Repayment annually commencing on 30 June 2021 to expiry of agreement on 26 June 2025	
6	40.00	60.00	SOFR plus applicable fixed margin	Repayment every 6 months commencing on 18 June 2020 to expiry of agreement on 18 December 2025	
7	150.00	150.00	SOFR plus applicable fixed margin	Repayment expiry of agreement on 23 December 2024	
8	16.00	32.00	SOFR plus applicable fixed margin	Repayment every 6 months commencing on 10 September 2019 to expiry of agreement on 10 September 2025	
9	-	35.00	SOFR plus applicable fixed margin	Repayment annually commencing on 16 April 2020 to expiry of agreement on 11 April 2024	
10	-	25.00	SOFR plus applicable fixed margin	Repayment expiry of agreement on 11 April 2024	
11	66.68	133.34	SOFR plus applicable fixed margin	Repayment annually commencing on 22 April 2023 to expiry of agreement on 22 April 2025	
12	30.00	35.00	SOFR plus applicable fixed margin	Repayment every 6 months commencing on 30 July 2021 to expiry of agreement on 30 January 2027	
13	100.00	100.00	SOFR plus applicable fixed margin	Repayment expiry of agreement on 26 August 2025	
14	180.00	240.00	SOFR plus applicable fixed margin	Repayment annually commencing on 23 September 2023 to expiry of agreement on 23 September 2027	
15	100.00	100.00	SOFR plus applicable fixed margin	Repayment expiry of agreement on 23 July 2025	
16	65.00	70.00	SOFR plus applicable fixed margin	Repayment annually commencing on 7 September 2023 to expiry of agreement on 7 September 2030	
17	10.68	-	Fixed rate	Repayment every 6 months commencing on 20 August 2026 to expiry of agreement on 20 February 2029	
18	100.00	-	SOFR plus applicable fixed margin	Repayment at expiry of agreement on 26 June 2027	
	1,160.36	1,354.34			



The effective interest rates are as follows:

As at 31 December	Consolidated financial statements		Separated financial statements	
	2024	2023	2024	2023
	% per annum	% per annum	% per annum	% per annum
Loans from financial institutions	2.50 – 12.70	2.50 - 12.00	0.50 – 7.94	4.47 - 8.83

Most of long-term loans from financial institutions bear floating rates. The fair value of long-term loans approximates their carrying amount. As the interest rates of long-term loans vary with the market interest rates, the impact of discounting is not significant. The fair value is based on discounted cash flows using a discount rate based on the current lending rate as at the reporting date and are within level 2 of the fair value hierarchy.

Maturities of long-term loans from financial institutions are as follows:

As at 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
Within 1 year	752,111	890,100	25,562,672	30,462,174	622,540	542,170	21,158,803	18,554,830
Later than 1 year but not later than 5 years	1,099,761	2,037,467	37,378,567	69,728,863	433,328	789,766	14,727,921	27,028,406
Later than 5 years	719,545	226,870	24,455,814	7,764,245	267,869	75,000	9,104,306	2,566,748
Total loans	2,571,417	3,154,437	87,397,053	107,955,282	1,323,737	1,406,936	44,991,030	48,149,984

The Group is required to comply with certain criteria and conditions; for example, maintaining debt to equity ratio.

25 Debentures, net

As at 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
- US Dollar	50,000	50,000	1,699,395	1,711,165	50,000	50,000	1,699,395	1,711,165
- Thai Baht	2,684,842	2,588,003	91,252,124	88,570,000	2,523,019	2,427,294	85,752,124	83,070,000
Total debentures	2,734,842	2,638,003	92,951,519	90,281,165	2,573,019	2,477,294	87,451,519	84,781,165
<u>Less</u> Deferred financing service fees	(2,760)	(2,937)	(93,774)	(100,526)	(2,591)	(2,738)	(88,069)	(93,684)
Total debentures, net	2,732,082	2,635,066	92,857,745	90,180,639	2,570,428	2,474,556	87,363,450	84,687,481
Current portion	172,096	204,493	5,849,195	6,998,419	172,096	204,493	5,849,195	6,998,419
Non-current portion	2,559,986	2,430,573	87,008,550	83,182,220	2,398,332	2,270,063	81,514,255	77,689,062
Total debentures, net	2,732,082	2,635,066	92,857,745	90,180,639	2,570,428	2,474,556	87,363,450	84,687,481

Movements of debentures for the years are as follows:

For the years ended 31 December	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
Opening net book value	2,635,066	2,623,552	90,180,639	90,676,243	2,474,556	2,464,649	84,687,481	85,184,177
Cash flows:								
Additions	267,321	241,135	9,678,356	8,200,000	267,321	241,135	9,678,356	8,200,000
Repayment	(191,315)	(251,446)	(7,000,000)	(8,669,423)	(191,315)	(251,446)	(7,000,000)	(8,669,423)
Payments of financing service fees	(493)	(499)	(17,869)	(16,907)	(493)	(499)	(17,869)	(16,907)
Other non-cash movements:								
Amortisation of deferred financing service fees and discount	699	637	24,658	22,170	667	605	23,521	21,065
Net losses on exchange rate	19,692	20,112	615,475	815,533	19,692	20,112	615,475	815,533
Translation differences	1,112	1,575	(623,514)	(846,977)	-	-	(623,514)	(846,964)
Closing net book value	2,732,082	2,635,066	92,857,745	90,180,639	2,570,428	2,474,556	87,363,450	84,687,481

Debentures are unsecured liabilities. However, the Group is required to comply with certain procedures and conditions; for example, maintaining debt to equity ratio.

Separate financial information

On 10 May 2024, the Company issued Baht unsubordinated and unsecured debentures totalling Baht 7,390 million or equivalent to US Dollar 200.89 million. There are 5 tranches which are:

- 2 years 3 months debentures of Baht 1,300 million or equivalent to US Dollar 35.34 million at a fixed interest rate of 3.10 per annum,
- 5 years 9 months debentures of Baht 1,859 million or equivalent to US Dollar 50.53 million at a fixed interest rate of 3.50 per annum,
- 7 years debentures of Baht 722 million or equivalent to US Dollar 19.63 million at a fixed interest rate of 3.76 per annum,
- 10 years debentures of Baht 1,099 million or equivalent to US Dollar 29.87 million with a fixed interest rate of 4.08 per annum,
- 12 years debentures of Baht 2,410 million or equivalent to US Dollar 65.51 million with a fixed interest rate of 4.21 per annum.

On 27 December 2024, the Company issued Baht unsubordinated and unsecured debentures of Baht 2,500 million or equivalent to US Dollar 72.58 million. These debentures have a tenor of three years and do not pay interest during their term (zero coupon). The total issued price is Baht 2,288.36 million or equivalent to US Dollar 66.43 million, reflecting a discount rate of 2.98% per annum.

As at 31 December 2024, all debentures bear fixed interest rates at range between 1.76% to 5.25% per annum (2023: 1.58% to 5.25% per annum)



The following table summarises fair value of debentures. The valuation technique used to measure fair value of debenture is level 2 which is calculated based on the market price of each debenture published by the Thai Bond Market Association.

	Consolidated financial statements				Separate financial statements			
	Million US Dollar		Million Baht		Million US Dollar		Million Baht	
	2024	2023	2024	2023	2024	2023	2024	2023
As at 31 December								
Fair value of debentures	2,792	2,656	94,787	90,913	2,625	2,494	89,234	85,360

Maturities of debentures are as follows:

	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
As at 31 December								
Within 1 year	172,120	204,539	5,850,000	7,000,000	172,120	204,539	5,850,000	7,000,000
Later than 1 year								
but not later than 5 years	1,473,564	1,183,199	50,083,319	40,492,965	1,429,430	1,139,369	48,583,319	38,992,965
Later than 5 years	1,089,158	1,250,265	37,018,200	42,788,200	971,469	1,133,386	33,018,200	38,788,200
Total debentures	2,734,842	2,638,003	92,951,519	90,281,165	2,573,019	2,477,294	87,451,519	84,781,165

26 Equity

(a) Reduction of the Company's registered capital

At the Annual General Shareholders' meeting on 1 April 2024, the shareholders approved the reduction of the Company's registered capital of Baht 130,260,303 from Baht 10,149,163,028 to Baht 10,018,902,725 by cancelling 130,260,303 authorised but unissued ordinary shares at Baht 1 par value per share. As a result, the Company's registered capital decreased from 10,149,163,028 shares to 10,018,902,725 shares. The Company already registered for the reduction of the Company's registered capital on 2 April 2024.

	Consolidated and separate financial statements				
	Number of registered shares	Issued and paid-up share capital		Share premium	Total
		Number of shares	Ordinary shares		
	Shares	Shares	US Dollar'000	US Dollar'000	US Dollar'000
As at 1 January 2023	10,149,163,028	8,454,161,388	243,199	826,726	1,069,925
Increase of registered share capital	-	1,564,741,337	42,195	274,264	316,459
As at 31 December 2023	10,149,163,028	10,018,902,725	285,394	1,100,990	1,386,384
Decrease of registered share capital	(130,260,303)	-	-	-	-
As at 31 December 2024	10,018,902,725	10,018,902,725	285,394	1,100,990	1,386,384

	Consolidated and separate financial statements				
	Number of registered shares	Issued and paid-up share capital		Share premium	Total
		Number of shares	Ordinary shares		
	Shares	Shares	Baht'000	Baht'000	Baht'000
As at 1 January 2023	10,149,163,028	8,454,161,388	8,454,161	28,890,758	37,344,919
Increase of registered share capital	-	1,564,741,337	1,564,742	10,170,819	11,735,561
As at 31 December 2023	10,149,163,028	10,018,902,725	10,018,903	39,061,577	49,080,480
Decrease of registered share capital	(130,260,303)	-	-	-	-
As at 31 December 2024	10,018,902,725	10,018,902,725	10,018,903	39,061,577	49,080,480

(b) Legal reserve

The movement of legal reserve is as follows:

	Consolidated and separate financial statements					
	US Dollar'000			Baht'000		
	Company	Subsidiaries	Total	Company	Subsidiaries	Total
As at 1 January 2023	24,320	80,547	104,867	845,416	2,641,791	3,487,207
Appropriation during the year	4,219	-	4,219	156,474	-	156,474
As at 31 December 2023	28,539	80,547	109,086	1,001,890	2,641,791	3,643,681
As at 1 January 2024	28,539	80,547	109,086	1,001,890	2,641,791	3,643,681
Appropriation during the year	-	-	-	-	-	-
As at 31 December 2024	28,539	80,547	109,086	1,001,890	2,641,791	3,643,681

Under the Public Company Act, the Company is required to set aside a statutory reserve of at least 5% of its net profit after accumulated deficit brought forward (if any) until the reserve reaches not less than 10% of the registered capital.

The legal reserve is non-distributable.

As at 31 December 2024 and 2023, the legal reserve has fully recognised at 10% of registered capital.

(c) Other reserves

As at 31 December 2024 and 2023, other reserves of the Group comprised reserves resulting from holding a joint venture in the People's Republic of China. These reserves are in accordance with the regulation of a government department in the People's Republic of China with the objective of future development, safety, and transformation.



(d) Other components of equity

Movements of other components of equity are as follows:

	US Dollar'000													Consolidated financial statements	
														Baht'000	
	Changes in Parent's ownership interests in subsidiaries	Fair value reserve of financial assets	Cash flow Hedge reserve	Net investment hedge	Translation differences	Other reserve	Total	Changes in Parent's ownership interests in subsidiaries	Fair value reserve of financial assets	Cash flow hedge reserve	Net investment hedge	Translation differences	Other reserve	Total	
Opening balance as at 1 January 2024, net of taxes	372,098	27,455	88,535	24,417	(1,082,028)	(56,628)	(626,151)	13,290,971	950,492	3,767,818	753,169	(38,566,794)	(1,820,464)	(21,624,808)	
Treasury shares of a subsidiary	(1,833)	-	-	-	-	-	(1,833)	(63,813)	-	-	-	-	-	(63,813)	
Changes in ownership interests of subsidiaries	(34,272)	-	-	-	-	-	(34,272)	(1,193,232)	-	-	-	-	-	(1,193,232)	
Issuance of new ordinary shares for share- based payment	(28,814)	-	-	-	-	-	(28,814)	(1,009,037)	-	-	-	-	-	(1,009,037)	
Maturity of put option over non-controlling interest	-	-	-	-	-	34,832	34,832	-	-	-	-	-	1,061,091	1,061,091	
Fair value of put options over non-controlling interests	-	-	-	-	-	21,119	21,119	-	-	-	-	-	735,715	735,715	
Fair value of put options over employee compensation liabilities	-	-	-	-	-	677	677	-	-	-	-	-	23,658	23,658	
Other comprehensive expense	-	(2,594)	(141,387)	(6,075)	(193,706)	-	(343,762)	-	(87,853)	(5,010,506)	(186,533)	(7,065,725)	-	(12,350,617)	
Taxes charge to other comprehensive income (expense)	-	552	33,068	-	-	-	33,620	-	19,399	1,172,965	-	-	-	1,192,364	
Closing balance as at 31 December 2024, net of taxes	307,179	25,413	(19,784)	18,342	(1,275,734)	-	(944,584)	11,024,889	882,038	(69,723)	566,636	(45,632,519)	-	(33,228,679)	

	US Dollar'000							Consolidated financial statements						
	Changes in Parent's ownership interests in subsidiaries		Cash flow hedge reserve		Net investment hedge		Translation differences		Other reserve		Total		Baht'000	
	Fair value reserve of financial assets		Cash flow hedge reserve		Translation differences	Other reserve	Total	Changes in Parent's ownership interests in subsidiaries	Fair value reserve of financial assets	Cash flow hedge reserve	Net investment hedge	Translation differences	Other reserve	Total
Opening balance as at 1 January 2023, net of taxes	372,098	24,848	(72,336)	36,777	(1,091,064)	(59,367)	(789,044)	13,290,971	826,065	(1,790,756)	1,225,190	(36,899,084)	(1,905,839)	(25,253,453)
Transfer of net gains on investment in equity instruments to retained earnings	-	(14,317)	-	-	-	-	(14,317)	-	(484,654)	-	-	-	-	(484,654)
Fair value of put options over non-controlling interests	-	-	-	-	-	2,550	2,550	-	-	-	-	-	79,500	79,500
Fair value of put options over employee compensation liabilities	-	-	-	-	-	189	189	-	-	-	-	-	5,875	5,875
Other comprehensive income (expense)	-	17,241	214,197	(12,360)	9,036	-	228,114	-	619,971	7,456,435	(472,021)	(1,667,710)	-	5,936,675
Taxes charge to other comprehensive income (expense)	-	(317)	(53,326)	-	-	-	(53,643)	-	(10,890)	(1,897,861)	-	-	-	(1,908,751)
Closing balance as at 31 December 2023, net of taxes	372,098	27,455	88,535	24,417	(1,082,028)	(56,628)	(626,151)	13,290,971	950,492	3,767,818	753,169	(38,566,794)	(1,820,464)	(21,624,808)



	Separate financial statements					Separate financial statements				
	US Dollar'000				Baht'000	US Dollar'000				Baht'000
	Fair value reserve of financial assets	Cash flow Hedge reserve		Fair value reserve of financial assets	Total	Cash flow Hedge reserve	Cash flow Hedge reserve		Translation differences	Total
Opening balance as at 1 January 2024, net of taxes	3,283	9,531	12,814	113,826	296,503	(624,642)	(214,313)			
Other comprehensive expense	(2,120)	(4,893)	(7,013)	(74,340)	(173,742)	(302,653)	(550,735)			
Taxes charge to other comprehensive income (expense)	435	405	840	15,236	15,871	-	31,107			
Closing balance as at 31 December 2024, net of taxes	1,598	5,043	6,641	54,722	138,632	(927,295)	(733,941)			
Opening balance as at 1 January 2023, net of taxes	2,229	36,905	39,134	77,227	1,259,426	945,954	2,282,607			
Other comprehensive income (expense)	1,307	(31,381)	(30,074)	45,357	(1,100,045)	(1,570,596)	(2,625,284)			
Taxes charge to other comprehensive income (expense)	(253)	4,007	3,754	(8,758)	137,122	-	128,364			
Closing balance as at 31 December 2023, net of taxes	3,283	9,531	12,814	113,826	296,503	(624,642)	(214,313)			

27 Expenses by nature

For the year ended	Consolidated financial statements				Separate financial statements			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
31 December								
Staff costs	482,113	455,115	17,015,503	15,839,003	35,857	38,165	1,265,535	1,328,230
Depreciation and amortisation	604,119	572,506	21,343,074	19,891,480	2,808	2,391	99,872	83,229
Write-off of assets	9,606	13,266	422,759	458,200	1,428	-	48,819	6
Impairment of investment in a subsidiary	-	-	-	-	2,248	-	76,413	-
Impairment of investment in a joint venture	48,035	-	1,633,147	-	-	-	-	-
Inventories recognised as an expense	1,638,050	1,522,050	57,817,650	53,004,452	-	-	-	-
(Reversal of) Allowance for slow moving of spare parts and machinery supplies	554	(704)	19,225	(25,505)	-	-	-	-
Allowance for slow-moving of inventories	1,607	949	54,637	33,833	-	-	-	-
(Reversal of) expected credit loss	(2,619)	6,850	(95,553)	236,323	10,621	-	361,092	-

28 Earnings (losses) per share

Basic earnings (losses) per share is calculated by dividing the net profit (loss) for the year attributable to ordinary shareholders by the weighted average number of ordinary shares issued and paid-up during the year.

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
US Dollar				
Net profit (loss) attributable to ordinary shareholders of the Parent (US Dollar'000)	(23,666)	159,976	(92,235)	361,259
Weighted average number of shares outstanding, (Thousand shares)	10,018,903	8,835,701	10,018,903	8,835,701
Basic earnings (losses) per share (US Dollar)	(0.002)	0.018	(0.009)	0.041
Baht				
Net profit (loss) attributable to ordinary shareholders of the Parent (Baht'000)	(682,421)	5,434,061	(3,126,825)	12,512,771
Weighted average number of shares outstanding, (Thousand shares)	10,018,903	8,835,701	10,018,903	8,835,701
Basic earnings (losses) per share (Baht)	(0.068)	0.615	(0.312)	1.416



29 Dividend paid

For the year ended 31 December 2024

At the Annual General Shareholders' meeting on 1 April 2024, the shareholders approved a payment of final dividends of 2023 of Baht 0.20 per share for 10,018,902,725 shares, totaling of Baht 2,003.78 million or equivalent to US Dollar 55.74 million. The Thailand Securities Depository Company Limited notified the Company that certain shareholders were not entitled to receive dividend totaling Baht 0.83 million or equivalent to US Dollar 0.02 million. Such dividend was paid to the shareholders on 30 April 2024.

At the Board of Directors' meeting on 28 August 2024, the Board of Directors approved a payment of interim dividend of 2024 of Baht 0.18 per share for 10,018,902,725 shares, totalling of Baht 1,803.40 million or equivalent to US Dollar 49.68 million. The Thailand Securities Depository Company Limited notified the Company that certain shareholders were not entitled to receive dividend totalling Baht 0.04 million or equivalent to US Dollar 1.09 thousand. The Company paid such dividend to the shareholders on 26 September 2024.

For the year ended 31 December 2023

At the Annual General Shareholders' meeting on 3 April 2023, the shareholders approved a payment of final dividend of 2022 of Baht 0.75 per share for 8,454,161,388 shares, totalling of Baht 6,340.62 million or equivalent to US Dollar 183.78 million. The Thailand Securities Depository Company Limited notified the Company that certain shareholders were not entitled to receive dividend totalling Baht 4.61 million or equivalent to US Dollar 0.13 million. Such dividend was paid to the shareholders on 28 April 2023.

At the Board of Directors' meeting on 30 August 2023, the Board of Directors approved a payment of interim dividend of 2023 of Baht 0.25 per share for 8,454,161,388 shares, totalling of Baht 2,113.54 million or equivalent to US Dollar 61.03 million. The Thailand Securities Depository Company Limited notified the Company that certain shareholders were not entitled to receive dividend totalling Baht 0.08 million or equivalent to US Dollar 2.31 thousand. Such dividend was paid to the shareholders on 29 September 2023.

30 Related party transactions

Individuals and entities that directly or indirectly control or are controlled by or are under common control with the Company, including investment entities, associates, joint venture and individuals or entities having significant influence over the Company, key management personnel, including directors and officers of the Company and close members of the family of these individuals and entities associated with these individuals also constitute related parties.

In considering each possible related party relationship, attention is directed to the substance of the relationship, and not merely the legal form.

The pricing policies for transactions between subsidiaries, joint ventures and related parties are:

- Coal sales and purchase within the Group are generally set based on international indices as benchmarks adjusted for coal specifications and the location of deliveries.
- Management income represents service fee charged between the Group and joint ventures for rendering the management services in the normal course of business. The fees are based on the service provided in accordance with the conditions in the agreement.
- Marketing Service Agreement to overseas subsidiaries for rendering the marketing consultant and management in transportation. The fees are based on a certain percentage of gross revenue of coal exports which is comparable to other companies.
- The prices of other sales and services charged between the Company and subsidiaries approximate to those charged to third parties.
- For loans to joint ventures and an associate and interest income, the Group charges interest by considering the average cost of borrowing and market interest rate.
- Advance to/from related parties represent the advance payment for related parties which will be reimbursed within the normal credit term.

Significant transactions carried out with related parties are as follows:

30.1 Transactions during the years consist of:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
For the year ended 31 December				
Interest income from associates and joint ventures	3,133	2,635	109,569	105,711
Management income from joint ventures	1,012	1,536	35,951	53,558



	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
For the year ended 31 December				
Purchases of goods from subsidiaries	42,398	49,197	1,501,244	1,698,238
Dividend from subsidiaries	46,484	432,534	1,668,688	15,003,762
Interest income from subsidiaries	157,993	138,893	5,583,805	4,838,469
Management income from subsidiaries and a joint venture	32,762	37,174	1,153,709	1,289,899

30.2 Advances to and amount due from related parties consist of:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 31 December				
Interest receivables from associates and joint ventures	2,916	589	99,103	20,163
Other receivables from an associate and joint ventures	1,552	705	52,763	24,134
Total advances to and amounts due from related parties	4,468	1,294	151,866	44,297

	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 31 December				
Current portion				
Advances to subsidiaries	864	1,036	29,370	35,458
Interest receivables from subsidiaries	263,557	171,330	8,957,749	5,863,475
Other receivables from subsidiaries	11,406	8,187	387,658	280,177
Total advances to and amounts due from related parties	275,827	180,553	9,374,777	6,179,110
Non-current portion				
Interest receivables from subsidiaries	42,005	-	1,427,659	-
<u>Less</u> Expected credit losses	(10,133)	-	(344,405)	-
Total interest receivables, net	31,872	-	1,083,254	-

30.3 Loans to related parties consist of:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 31 December				
Short-term loans to				
- associates	4,413	4,237	150,000	145,000
- joint ventures	2,851	-	96,900	-
Total short-term loans to related parties	7,264	4,237	246,900	145,000
Long-term loans to				
- Current portion				
- an associate	1,495	1,242	50,803	42,489
- Non-current portion				
- associates	22,065	25,830	749,962	883,996
- joint ventures	491	1,828	16,684	62,564
Total long-term loans to related parties	24,051	28,900	817,449	989,049

Movements of short-term loans and long-term loans to related parties are as follows:

	Consolidated financial statements							
	Short-term loans to related parties				Long-term loans to related parties			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
For the year ended 31 December								
Opening book value	4,237	53,473	145,000	1,848,152	28,900	16,952	989,049	585,914
Cash flows:								
Additions	2,899	6,823	101,900	235,000	754	12,136	26,458	420,798
Repayments	-	(39,739)	-	(1,398,652)	(2,658)	-	(92,397)	-
Other non-cash movements:								
Transfer from (to)	-	(544)	-	(19,068)	-	544	-	19,068
Repayment with services	-	-	-	-	(1,916)	(981)	(67,608)	(34,412)
Group restructuring	-	(15,713)	-	(532,845)	-	-	-	-
Losses on exchange rate	-	(87)	-	(3,089)	(4)	(1)	(147)	(45)
Translation differences	128	24	-	15,502	(1,025)	250	(37,906)	(2,274)
Closing book value	7,264	4,237	246,900	145,000	24,051	28,900	817,449	989,049



Consolidated financial statements

Short-term loans to related parties' details are as follows:

Currency	2024			2023		
	Amount	Amount	Average	Amount	Amount	Average
	(Million)	Million US Dollar	interest rate per annum	(Million)	Million US Dollar	interest rate per annum
Baht	150.00	4.41	2.60%	145	4.24	5.94% to 6.51%
Baht	96.90	2.85	6.00%*	-	-	-
Total		7.26			4.24	

* The interest rates are adjusted from time to time upon the change of money market rate.

Long-term loans to related parties' details are as follows:

Currency	2024			2023		
	Amount	Amount	Average	Amount	Amount	Average
	(Million)	Million US Dollar	interest rate per annum	(Million)	Million US Dollar	interest rate per annum
US Dollar	8.23	8.23	22.29%	8.22	8.22	10.11%
US Dollar	0.49	0.49	-	1.78	1.78	7.50%
Baht	184.77	5.43	2.60% to 6.00%	204.51	5.97	5.63% to 6.51%
Australian Dollar	15.88	9.90	-	18.79	12.88	-
Yen	-	-	-	7.04	0.05	10.00%
Total		24.05			28.90	

As at 31 December	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
Short-term loans to subsidiaries	2,559	26,551	86,962	908,647
Long-term loans to subsidiaries				
- Current portion	9,347	44,077	317,700	1,508,446
- Non-current portion	2,139,089	2,272,122	72,703,130	77,759,501
Long-term loans to subsidiaries	2,148,436	2,316,199	73,020,830	79,267,947

Movements of short-term loans and long-term loans to subsidiaries are as follows:

For the year ended 31 December	Short-term loans to related parties				Long-term loans to related parties			
	US Dollar'000		Baht'000		US Dollar'000		Baht'000	
	2024	2023	2024	2023	2024	2023	2024	2023
Opening book value	26,551	63,562	908,647	2,196,871	2,316,199	2,266,499	79,267,947	78,335,659
Cash flows:								
Additions	56,164	38,727	2,043,348	1,352,826	22,811	215,548	797,708	7,482,312
Repayments	(46,362)	(50,741)	(1,619,620)	(1,740,419)	(198,607)	(206,385)	(7,025,394)	(7,227,909)
Other non-cash movements:								
Transfer from (to)	(33,099)	(26,272)	(1,215,022)	(936,636)	33,099	26,272	1,215,022	936,636
Gains (losses) on exchange rate	(695)	1,275	(24,194)	45,489	(25,066)	14,265	(875,718)	562,159
Translation differences	-	-	(6,197)	(9,484)	-	-	(358,735)	(820,910)
Closing book value	2,559	26,551	86,962	908,647	2,148,436	2,316,199	73,020,830	79,267,947

Separate financial statements

Short-term loans to related parties' details are as follows:

Currency	2024			2023		
	Amount	Amount	Average	Amount	Amount	Average
	(Million)	Million US Dollar	interest rate per annum	(Million)	Million US Dollar	interest rate per annum
US Dollar	2.56	2.56	7.00%*	2.56	2.56	7.25%*
Australian Dollar	-	-	-	35.00	23.99	8.70%*
Total		2.56			26.55	

* The interest rates are adjusted from time to time upon the change of money market rate

Long-term loans to related parties' details are as follows:

Currency	2024			2023		
	Amount	Amount	Average	Amount	Amount	Average
	(Million)	Million US Dollar	interest rate per annum	(Million)	Million US Dollar	interest rate per annum
US Dollar	825.14	825.14	6.00%*	966.74	966.74	7.25%*
Baht	34,166.14	1,005.24	2.36% - 6.00%*	35,382.60	1,033.88	7.00%*
Australian Dollar	510.38	318.06	6.50% - 8.70%*	460.38	315.58	8.70%*
Total		2,148.44			2,316.20	

* The interest rates are adjusted from time to time upon the change of money market rate



The fair value of short-term loans to related parties approximates their carrying amount, as the short-term loans to related parties have a short period of maturity.

Most of long-term loans to related parties bear floating rates. The fair value of the long-term loans to related parties approximates their carrying amount because the interest rates of long-term loans are adjusted in accordance with the market interest rates. Therefore, the impact of discounting is not significant. The fair value is based on discounted cash flows using a discount rate based on the current lending rate as at the reporting date (Level 2).

30.4 Trade payables, advances from and amount due to related parties consist of:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 31 December				
Advances from a joint venture	-	2	-	72
	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 31 December				
Trade payables to subsidiaries	4,970	10,651	168,922	364,496
Advances from subsidiaries	536	200	18,222	6,820
Other current payables to subsidiaries	689	80	23,402	2,750
Total advances from and amount due to related parties	1,225	280	41,624	9,570

30.5 Key management compensation consist of:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
For the year ended 31 December				
Salaries and short-term employee benefits	3,327	4,141	116,767	144,871
Post-employment benefits	203	180	7,156	6,303
	3,530	4,321	123,923	151,174

	Separate financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
For the year ended 31 December				
Salaries and short-term employee benefits	2,909	3,706	102,165	129,645
Post-employment benefits	170	150	6,028	5,208
	3,079	3,856	108,193	134,853

31 Commitments, significant contracts and contingent liabilities

31.1 Letters of guarantee and letters of credit with the financial institutions:

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	Million (Original currency)	Million (Original currency)	Million (Original currency)	Million (Original currency)
As at 31 December				
Letters of guarantee				
- Baht	232	102	54	83
- Indonesian Rupiah	357,483	311,997	-	-
- Australian Dollar	275	380	-	-
- Chinese Yuan	-	1	-	-
Letters of credit				
- US Dollar	22	22	-	15
- Baht	1,548	1,600	-	-

31.2 Capital commitments

The Group had capital commitments that were not recognised in the consolidated financial statements as follows:

	Consolidated financial statements			
	US Dollar'000		Baht'000	
	2024	2023	2024	2023
As at 31 December				
Property, plant and equipment	94,817	62,717	3,222,639	2,146,384
Investments	184,015	112,270	6,254,291	3,842,239
	278,832	174,987	9,476,930	5,988,623



31.3 Significant contracts - Coal supply agreement

As at 31 December 2024, a group of Indonesian subsidiaries has coal supply commitments in accordance with the coal supply agreements for 11.2 million tonnes (2023: 16 million tonnes) at the market price. The coal will be delivered during 2025.

31.4 Significant changes in tax investigation of Indonesian subsidiaries

Significant tax investigation by the Directorate General of Tax (DGT) as at 31 December 2024 are as follows:

Fiscal year	Subsidiaries	Tax type	Tax assessment letter	Dispute amount	Status
2011	TCM	Withholding tax 23	Underpayment	Indonesian Rupiah 36.4 billion (equivalent to US Dollar 2.3 million)	Submitted Judicial Review to Supreme Court
2013	IMM	Withholding tax 23/26	Underpayment	Indonesian Rupiah 33.8 billion (equivalent to US Dollar 2.1 million)	Submitted Judicial Review to Supreme Court
2015	IMM	Value added tax	Underpayment	Indonesian Rupiah 69.4 billion (equivalent to US Dollar 4.3 million)	Submitted Judicial Review to Supreme Court
2018	TCM	Corporate income tax	Underpayment	US Dollar 2.0 million	Submitted tax appeal letter to Tax Court
2019	KTD	Corporate income tax	Underpayment	US Dollar 1.5 million	Submitted objection to DGT
2021	TRUST	Corporate income tax	Overpayment	Indonesian Rupiah 61.6 billion (equivalent to US Dollar 3.8 million).	Submitted tax appeal letter to Tax Court
2022	TRUST	Corporate income tax	Overpayment	Indonesian Rupiah 24.2 billion (equivalent to US Dollar 1.5 million).	Submitted objection to DGT
2022	TRUST	Withholding tax 23	Underpayment	Indonesian Rupiah 21.0 billion (equivalent to US Dollar 1.3 million).	Submitted objection to DGT

As at 31 December 2024, the Group recognised prepaid taxes as assets amounting to US Dollar 300.32 million (2023: US Dollar 323.16 million) in the consolidated statement of financial position. The Group considers the recoverable amounts of these prepaid taxes by assessing the evidence, including related taxation law and the conformity of the Group's tax management, tax objection, and tax appeals. However, recoverable amounts of prepaid taxes depend on the tax investigation and decision by the related tax bureau and/or tax court.

Additionally, various taxes of Indonesian subsidiaries are still in the process of tax audit by the DGT for the fiscal years of 2021, 2022, and 2023. The Group's management believes that the tax audit, objection, appeal, lawsuit, and judicial review results will not have a material impact on the consolidated financial information.

31.5 Significant litigation during the year

On 19 April 2022, an Indonesian subsidiary was sued for the breach of Cooperation Agreement with the Plaintiff dated 4 September 2004. The Plaintiff was claiming compensation for total losses amounting to Indonesian Rupiah 7.3 trillion or equivalent to US Dollar 484.75 million. On 13 December 2022, the District Court dismissed the Plaintiff's claim in its entirety. The Plaintiff then appealed to the High Court the District Court's verdict, which was again dismissed on 23 February 2023. Later on, the Plaintiff filed a cassation against the Hight Court's Decision to the Supreme Court. On 27 September 2023, the Supreme Court dismissed the cassation. On 15 May 2024, the Plaintiff submitted a petition for Judicial review through the District Court, and the Indonesian subsidiary submitted its Counter Memorandum. Later on, the Panel of Judges of the Supreme Court rejected the Plaintiff's petition for the judicial review on 2 October 2024. The case was finally concluded and closed.

32 Event occurring after the reporting date

On 18 February 2025, the Company additionally invested in Banpu Minerals Co., Ltd., a subsidiary, in proportion to the original investment of Baht 8,692 million or equivalent to US Dollar 258 million. The Company fully paid for this investment.



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