BANPU

Banpu Public Company Limited and Subsidiaries

Management's Discussion and Analysis

For the 3rd Quarter 2022

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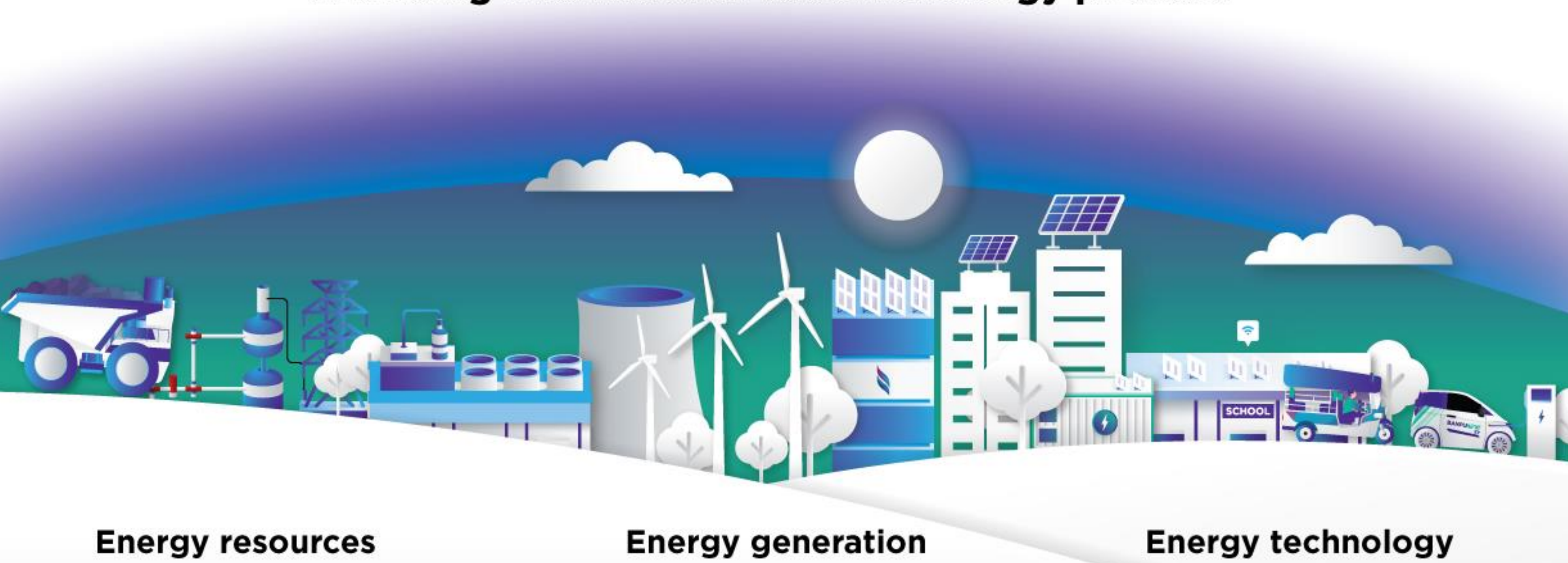
THSI
THAILAND SUSTAINABILITY INVESTMENT 2022

"A leading international versatile energy provider"

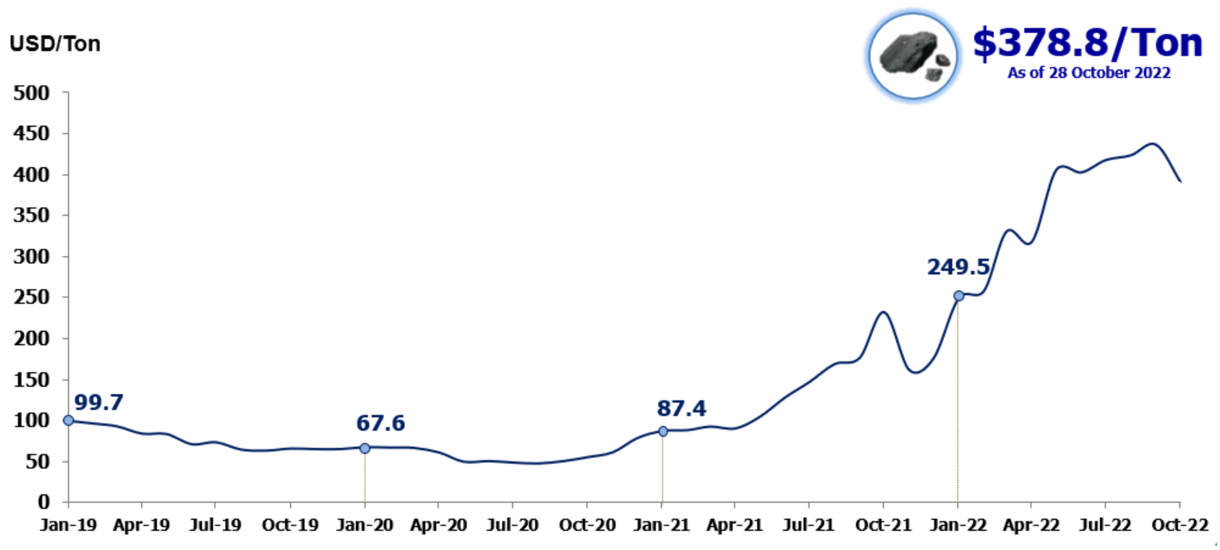


Energy resources **Energy generation** **Energy technology**

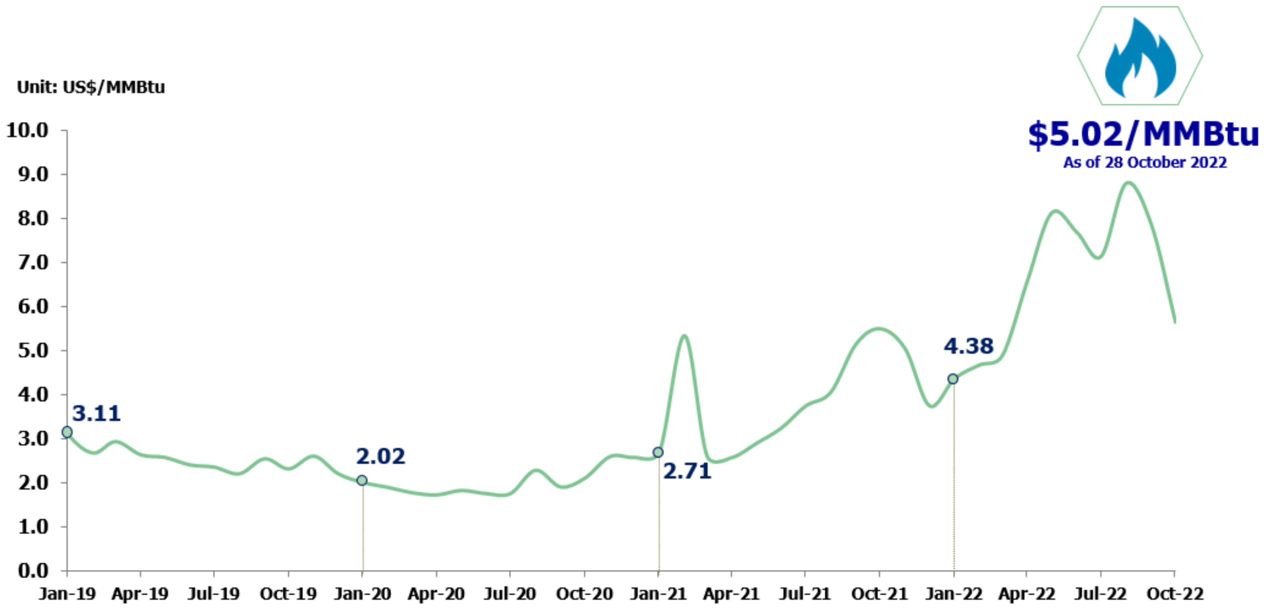
1. Energy Commodities Price Index

The market thermal coal and natural gas price since January 2019 as per below graphs that illustrate the coal and gas price indexes in the past periods.

Coal Price Index: The Newcastle Export Index (NEX) for January 2019 – October 2022



Average Henry Hub Natural Gas Price for January 2019 – October 2022



2. Management Discussion and Analysis

Banpu continue deliver sustainable growth with reported net profit of USD 487 million in 3Q2022, increase by 31% compared to previous quarter. This reflects the company's ability to create value through its 3 core businesses focus on operational excellence through agility and flexibility in production and sales improvement which enable the opportunity to increase its sale revenue during the record high commodity prices for both coal and natural gas. The average selling price (ASP) of coal for 191.05 USD/ton increase by 22% QoQ and the average local price of US Natural gas for 7.61 USD/Mcf increase by 15% QoQ. The company also continue implementation of operational cost control, resulting in profit improvement with ability to deliver consistent cash flow. Moreover, with the strong financial position enable the company to continue its growth strategy in accelerating its portfolio transformation to greener & smarter business and expand into high growth country.

The report EBITDA of USD 1,350 million, 42% improve from previous quarter which consists of Coal business reported EBITDA of USD 902 million (up by 43% QoQ), Gas business reported EBITDA of USD 377 million (up by 43% QoQ), Power business reported EBITDA of USD 74 million (up by 28% QoQ), and Energy Technology business reported EBITDA of USD (-4) million.

The **Energy resources** business deliver outstanding performance from an improvement in operational efficiency and the ability to capture higher selling prices for both coal & gas businesses.

Coal businesses reported strong earnings, driven by higher selling price and the increase in sales volume. The group ASP improved to USD 191.05/ ton, up by 22% compared to previous quarter which reported ASP of USD 156.66/ton. The total coal sales volume reported at 8.68 million tons up by 10% compared to previous quarter. This result in an average gross margin from coal business up to 62%.

Indonesia coal business reported improvement in average selling price at 210.97 USD/ton, up by 4% from 203.33 USD/ton in previous quarter. The sales volume of 5.67 million tons, significantly increased by 47% QoQ, as a result of its operational flexibility to continue deliver strong production volume despite challenging weather caused by higher rainfall. The cost of sale was 62.40 USD/ton. This result in an improvement in average gross margin from coal Indonesia up to 70%.

Australia coal business also reported strong performance, driven by significant improvement in ASP of AUD 249.14/ton, supported by the strong export price that reach to average of AUD 569.86/ton. While, the sales volume was 2.28 million tons, 18% lower compared to previous quarter, as Mandalong mine production was impacted by an Aboriginal cave step-around and challenging COVID-19 workers absenteeism. The cost of sale therefore increases to AUD 142.18/ton. However, it still able to report strong gross profit margin of 43%.

China coal business continue to report outstanding operational performance as the Chinese domestic coal price remain high, so it delivers share of profit of USD 57.03 million, up by 14% compared to previous quarter.

This quarter, **Gas business** started to recognize the revenue from its newly acquired shale gas business in North Texas for the first time, so the total production volume increase to 78.09 billion Cubic Feet (Bcf).

up by 31% from previous quarter. The average local price was 7.61 USD/Mcf, increased by 15% compared to 6.64 USD/Mcf in the previous quarter, driven by strong domestic demand from all sectors as a result of higher temperatures caused by La Niña impact. However, the domestic natural gas price started to stabilize as the gas production continued to rise, provides a storage cushion domestically for the upcoming winter.

The **Energy generation business** reported outstanding performance, mainly come from its Gas-fired power plant in the US “Temple I” in Texas driven by a strong demand during summer, so it reported the net profit of USD 76.89 million. While the major IPPs which are HPC power plant continue reported strong operational result with an improvement in EAF reached 95%, generate an equity income of USD 38.5 million. BLCP also reported an improvement in its operation with EAF reached 100%, however with the impact from FX translation, it reported an equity income of USD 0.35 million. Nakoso power plant in Japan reported profit sharing of USD 0.07 million, as a result of its planned maintenance during the quarter. For the performance of CHPs plants in China experienced its seasonality, so it reported net loss of USD 3.9 million, from lower demand during summer and the pressure from high Chinese domestic coal cost for an average of RMB 1,185/ton. On the other hand, Shanxi Lu Guang (SLG) power plant in China reported an improvement in its power sold compared to previous quarter and as a result of the execution of long-term coal supply contract, SLG can purchased coal supply at lower cost of average RMB 765/ton, so its operational performance improved from previous quarter with reported in net loss of only USD 0.03 million.

The renewable business portfolio mostly reported strong operational performance starting from the 2 Solar farm in Australia reported net profit of AUD 0.6 million, Solar business in China reported net profit of RMB 18 million, Solar business in Japan reported TK dividend distribution of JPY 532 million. The solar farm in Vietnam reported decline in its capacity factor due to unfavorable weather condition, so it generated net profit of USD 0.2 million while El Wind Mui Dinh wind farm also experience lower capacity factor, so it reported net loss of USD 1.5 million.

For **Energy Technology** business continues expanding its business through the development of various products and services. In this quarter, the solar rooftop business increases its capacity by penetrating to China market through the synergy within Banpu’s ecosystem as Zhengding CHPs was selected by Zhengding government to developed 58 MW solar rooftops under the “whole-county rooftop solar PV” policy with the potential to increase up to 167 MW by 2023. For E-mobility business, Muvmi, the Electric Tuk-Tuks (E-tuktuks), has expand its services covering 12 areas with total of 251 E-tuktuks under operation and 115 E-tuktuks under registration process, while Evolt, the leading EV charging company, has been awarded to install 94 chargers at 25 Central Department stores. The company also continue expand its energy management business by Banpu Next has entered into Share Subscription Agreement (SSA) for 25% interest in Altotech Global Co.,Ltd, the Internet of Things (IoT) platform developer that will support the energy management and optimization business and also signed subscription agreement for total amount of Euro 15 million in Eurazeo smart city Fund II, a leading global private equity company in which the investment strategy aligning with Energy Technology business that focus on new energy, smart mobility, and industrial technology to support the future growing of new pattern of energy consumption.

3. Group Performance Analysis

The analysis and explanation of Banpu Group performance for the 3rd quarter ended 30 September 2022 and 2021 as follows:

Consolidated Statement of Income for the 3rd quarter ended 30 September 2022 and 2021

Consolidated financial performance (Unit: Million USD)	3Q2022	3Q2021	Change	
			Amount	%
Sales and service income	2,397	1,161	1,236	106%
Cost of sales and services	(964)	(619)	(345)	56%
Gross profit	1,433	542	**891**	**164%**
Selling expenses	(54)	(52)	(2)	4%
Administrative expenses	(119)	(86)	(33)	38%
Royalty fee	(208)	(87)	(121)	139%
Share of profit from joint ventures and associates	92	64	28	44%
Other income (expenses)	(156)	(121)	(35)	29%
Finance cost	(75)	(46)	(29)	63%
Profit before income taxes	913	214	**699**	**327%**
Income taxes	(258)	(61)	(197)	323%
Profit for the period	655	153	**502**	**328%**
Owners of the parent	**487**	**106**	381	360%
Non-controlling interests	**168**	**47**	121	257%
Earnings per share (Unit : USD)	0.072	0.021	0.051	243%
Diluted earnings per share (Unit : USD)	0.057	0.021	0.036	171%

Banpu group performance for 3Q22 reported net profit at $487 million, increased by $381 million or 360% compared to 3Q21.This was mainly due to an increase in coal and natural gas market price that supported overall group performance. Moreover, this quarter is the first period to consolidate a newly acquired shale gas business in North Texas, and also including new power plants invested during 4Q2021 such as Temple I gas-fired power plant in USA and wind power plant in Vietnam.

The Group performanace for 3Q2022 were describe as details follows:

Sales and cost of sales

(Unit: Million USD)	Revenue 3Q2022	Revenue 3Q2021	Revenue Inc.(Dec.)	Cost of Sales 3Q2022	Cost of Sales 3Q2021	Cost of Sales Inc.(Dec.)
Coal Business	1,659	870	91%	632	453	40%
Natural Gas Business	573	231	148%	194	109	78%
Power & Steam Business	149	39	282%	127	39	226%
Others	16	21	-24%	11	18	-39%
Total	**2,397**	**1,161**	**106%**	**964**	**619**	**56%**

Sales

Sales reported at $2,397 million (equivalent to THB 87,274 million), increased by $1,236 million compared to 3Q21, that derived from an increase from coal businesses $789 million, natural gas business $342 million, power and steam business and others $105 million. Details were described as follows:

1. Sales from coal business of $1,659 million or 69% of total revenue separated by source of coal as below:
    - Indonesia coal mines of $1,197 million
    - Australia coal mines of $389 million
    - Coal trading business of $73 million
2. Sales from natural gas business in USA of $573 million or 24% of total revenue.
3. Sales from power and steam of $149 million or 6% of total revenue derived from Combined Heat and Power (CHP) plants and solar power plants in China, solar power plant in Australia, wind power plant in Vietnam and gas-fired power plant in USA.
4. Others of $16 million was mainly from energy trading business in Japan.

1. Coal Business

Coal Business		3Q2022	3Q2021	Inc.(Dec.)
Sales Volume	Million Tonnes	8.68	8.74	-1%
Average selling price	$/Tonne	191.05	99.57	92%
Average Cost of sales	$/Tonne	72.76	51.89	40%

Coal sales of $1,659 million, increased by $789 million or 91%, was a result of an increase in average selling price by $91.48 per tonne or 92%, while a decrease in sales volume by 0.06 million tonnes, and an increase in cost of sales by $20.87 per tonne or 40% compared to 3Q21 as following details:

Indonesia Mines		3Q2022	3Q2021	Inc.(Dec.)
Sales Volume	Million Tonnes	5.67	5.82	-3%
Average selling price	$/Tonne	210.97	112.66	87%
Average Cost of sales	$/Tonne	62.40	45.94	36%

Coal Business in Indonesia

- **Sales volume**

  Coal sales volume was 5.67 million tonnes, decreased by 0.15 million tonnes or 3% compared to 3Q21.

- **Average selling price**

  Average selling price per tonne was $210.97, increased by $98.31 or 87% compared to 3Q21, in accordance with an increase of global coal market price.

- **Average cost of sales**

  Average cost of sales per tonne was $62.40, increased by $16.46 or 36% compared to 3Q21, due to an impact from an increase in global fuel market price, higher overburden expenditure, higher coal cost purchased from other sources. However, the group has focused on cost management to cope with a volatility in global coal market price, while still maintain coal quality, including quality development to meet customer demand and retain in the long run. Moreover, the group emphasized on more efficiency in fuel used for production that led to a decrease in fuel consumption rate for production. This included a favor outcome from cost reduction program that implemented across the group.

Australia Mines		3Q2022	3Q2021	Inc.(Dec.)
Sales Volume	Million Tonnes	2.28	2.49	-8%
Average selling price	A$/Tonne	249.14	102.83	142%
Average Cost of sales	A$/Tonne	142.18	88.07	61%

Coal business in Australia

- **Sales volume**

  Coal sales volume was 2.28 million tonnes, decreased by 0.21 million tonnes or 8% compared to 3Q21 from a decrease in production from Mandalong, Airly and Clarence mines.

- **Average selling price**

  Average selling price per tonne was A$249.14, increased by A$ 146.31 or 142% compared to 3Q21 as the following details:

	Sales Volume (Unit: Million Tonnes)			Avg. Price/Tonne (A$/Tonne)		
Australia Mines	3Q2022	3Q2021	Inc.(Dec.)	3Q2022	3Q2021	Inc.(Dec.)
Domestic	1.57	1.72	-9%	102.69	75.45	36%
Export	0.71	0.77	-8%	569.86	156.96	263%
Total	**2.28**	**2.49**	**-8%**			

- **Average selling price of domestic and export sales**

  Average domestic selling price per tonne was A$102.69, increased by A$27.24. This caused by an increase in domestic sales price from higher quality coal. The average export selling price per ton was A$569.86, increased by A$412.90 per tonne from higher market price compared to 3Q21. This included a depreciation of AUD currency against USD currency, that impacted to export sales conversion. The average AUD/USD in this quarter was 0.6824 (3Q21: 0.7348).

- **Average cost of sales**

  Average cost of sales per tonne was A$142.18, increased by A$54.11. This was because an increase in amortization of deferred longwall changeover cost and deferred development cost, affected from encountering geological challenges in Mandalong and Springvale mines since the past period. This was included an increase in coal purchase price from other sources compared to 3Q21, resulted to higher average cost of sales.

2. Natural Gas Business

Natural Gas Business		3Q2022	3Q2021	Inc.(Dec.)
Sales Volume	Bcf **	78.09	61.96	26%
Average Local Price	$/Mcf	7.61	3.86	97%
Average selling price	$/Mcf	7.27	3.68	98%
Average Cost of Gathering, processing & tra	$/Mcf	1.03	0.96	7%
Average Cost*	$/Mcf	1.77	0.98	81%

* Avg Cost excluded Cost of Gathering, processing & transportation

** Bcf - Billion Cubic Feet

Natural Gas business in USA

Sales from natural gas business in 3Q22 reported at $573 million, increased by $342 million or 148% compared to 3Q21.Details were as follows:

- **Sales Volume**

  Natural gas sale volume was 78.09 billion cubic feet, increased by 16.13 billion cubic feet or 26% compared to 3Q21. This was mainly due to sales volume from its newly acquired shale gas business in North Texas for the first time.

- **Average Local Price**

  Refer to higher Henry Hub index price compared to prior year, the average local selling price per Mcf. in this quarter was $7.61, increased by $3.75 per Mcf or 97% compared to 3Q21. Henry Hub natural gas price and West Texas Intermediate (WTI) price was become higher from an increase in domestic demand of oil and natural gas while the supply became constrained as gas producers carefully monitored on their investment budget. This included consequential affects from banning imports and sale of oil and natural gas from Russia that caused high level of LNGs export sales volume compared to historical data.

- **Average cost of Gathering, processing & transportation**

  Average cost of Gathering, processing & transportation per Mcf was $1.03, increased by $0.07 or 7% compared to 3Q21. This was an impact from higher inflation that caused service providers increased their service charges for gathering processing & transportation. However, the group has also continuously focused on manage this cost to cope with the volatility of market price.

- **Average Cost of Sale**

  Average cost of sales (excluding gathering, processing & transportation cost) per Mcf was $1.77, increased by $0.79 or 81% compared to 3Q21. This was an increase in production tax that directly correlated to revenue, and a higher inflation that affected to an increase in cost of services and materials.

3. Power Business

Sales from Power and Steam of $149 million or 6% of total revenue was from sales from CHP plant $30 million, solar power plant in China of $8 million, solar power plant in Australia of $2 million, wind power plant in Vietnam of $3 million and gas-fired power plant in USA of $106 million. The power plants in Australia, Vietnam, and USA were acquired by the group in 2021.

Details of sales from CHP plants, solar power plants in China and gas -fired power plant in USA were described as follows:

Power Business		Combined Heat & Power Plants (CHP)			Solar Power Plants			Gas-fired power plant		
		3Q2022	3Q2021	Inc.(Dec.)	3Q2022	3Q2021	Inc.(Dec.)	3Q2022	3Q2021	Inc.(Dec.)
Power sold Volume	GWh	146.91	176.78	-17%	62.77	57.40	9%	1,315.35	-	100%
Steam Volume	Million Tonnes	0.80	1.09	-27%	-	-	-	-	-	-
Average PowerTariff	Unit/kWh	0.43	0.37	16%	0.83	0.83	0%	94.35	-	100%
Average Steam Price	RMB/Tonne	173.37	128.82	35%	-	-	-	-	-	-

Combined Heat and Power (CHP) plants in China

Sales from power, steam, and others from 3 CHP plants in China of $30 million, decreased by $2 million or 5% compared to 3Q21, was mainly from decreasing in sales volume of electricity and steam as detail below:

- **Sales Volume**

  Sales volume of 146.91 GWh, decreased by 29.87 GWh or 17% compared to 3Q21 was a result from decreasing in steam production for industrial section.

  Steam sales of 0.08 million tonnes, decreased by 0.29 million tonnes or 27%, mainly was from Luannan CHP plant due to a decrease in demand from industrial customers.

- **Average Selling Price**

  Average power tariff was RMB 0.43 per kWh, increased by 16% compared to 3Q21. This was because Luannan CHP plant and Zhengding CHP plant were entered into Power Trading Market resulting in higher average tariff that aligned with the market price.

Average steam price per tonne was RMB 173.37, increased by 35% from 3Q21. This was because a part of steam price was adjusted aligned with an increase in coal price and some was adjusted due to new purchase and sales agreements.

- **Cost of Sale**

Cost of sale was $34 million, decreased by $2 million from a decrease in power and steam production.

Solar power plants in China

Sales from solar power plants in China reported at $8 million, increased by $0.1 million or 2% compared to 3Q21.Details of sales volume, average power tariff and cos of sales were as follows:

- **Sales Volume**

Sales volume of 62.77 GWh., increased by 5.37 GWh compared to 3Q21 from an increase in production volume caused by favorable weather conditions.

- **Average Power Tariff**

Average power tariff was RMB 0.83, same as 3Q21

- **Cost of Sale**

Cost of sale was slightly decrease compared to 3Q21.

Gas- fired power plant (Temple I) in USA

Sales from gas -fired power plant (Temple I) reported at $106 million, that was invested since 4Q21. Details were as belows:

- **Sales Volume**

Sales volume was 1,315.35 GWh, that was considerably high. This was because this period was in summertime that electricity demand was generally at its highest level of the year.

- **Average Power Tariff**

Average power tariff was $94.35 per kWh.

- **Cost of Sale**

Cost of sale was $86 million, mainly from cost of natural gas.

Administrative expense

Administrative expenses reported $119 million, increased by $33 million or 38% was mainly from administrative expense resulting from business expansion in USA and from the power plants that were acquired by the group in 2021.

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Royalty fees

Royalty fees reported at $208 million, increased by $121 million or 35%. The fee comprised of royalty fees from Indonesia mines $183 million, increased by $108 million and royalty fees from Australia mines that was $25 million, increased by $13 million compared to 3Q21 that was a result of an increase in coal price versus 3Q21.

Profit sharing (Unit : Million USD)	3Q2022	3Q2021	Inc.(Dec.) Amount	%
BLCP	0	(2)	2	-123%
Hongsa & Phufai Mining	39	22	17	77%
Shanxi Luguang	0	(7)	7	n/a
Coal business in China	57	50	7	14%
Holding Company of Solar Power in Japan and others	(4)	1	(5)	-500%
Total	**92**	**64**	**28**	**44%**

Share of profit from joint ventures and associates

Profit sharing from joint ventures and associates reported at $92 million, increased by $28 million or 44% compared to 3Q21 mainly due to details described as below:

1) Recognition of profit sharing from Hongsa power plant and PhuFai mining in Laos of $39 million, increased by $17 million from 3Q21. This was from an increase in gain on foreign exchange rate translation of $1 million and from operating performance of $16 million from efficiency in operation that continuously generated stable electricity.

2) Recognition of profit sharing from BLCP of $0.35 million, increased by $2 million. This was mainly due to an increase in operating performance by $ 8.89 million; net with deferred tax asset recognition and unrealized loss on exchange rate translation increased by $8.54million.

3) Recognition of profit sharing from SLG power plant of $0.03 million, increased from better performance compared to 3Q21. This was because the plant entered into a long-term coal supply contract with favorable price, that lower coal cost significantly.

4) Recognition of shares of profit from coal business in China of $57 million, increased by $7 million. This was a result of higher sales price aligned with coal market price.

Other expense

Other expense of $156 million comprised of:

1) Net gain on foreign exchange rate of $79 million was mainly from realized gain on foreign exchange rate of $28 million from THB loan repayment during the period and unrealized gain on foreign

exchange rate translation of $51 million from conversion of THB loan at the end of period. This was result of a depreciation of THB currency against USD currency compared to the prior quarter. Average exchange rate of THB/USD as of 30 September 2022 was THB 37.9067 (30 June 2022: THB 35.2970)

2) Net loss from financial derivatives of $248 million comprised of:
   - Realized loss from financial derivatives of $307 million derived from coal swap contracts of $43 million, natural gas swap contracts of $272 million, foreign exchange rate forward contracts was $8 million, whereas gain from interest rate swap contracts of $2 million, also electricity call option from Temple I gas-fired power plant of $14 million.
   - Unrealized gain on fair value of financial derivatives at the end of the period of $59 million was gain from electricity call option from Temple I Gas-fired in USA of $54 million, natural gas swap contract of $5 million, and interest rate swap of $0.3 million.

3) Management fee income and others of $16 million was from:
   - Interest income of $4 million.
   - Management fee charged to related parties and joint ventures of $1 million.
   - Dividend income of $3 million, was mainly from profit sharing from solar power business in Japan under TK (TOKUMEI KUMIAI) agreement.
   - Others of $ 8 million. Those are steam connection fee income from new residential steam customers from CHP plants in China, sales of ashes, slag and scraps from mines and power plants, insurance claims, warehouse management fee income, tax redemption receipts and others.

Corporate income tax

Corporate income tax of $258 million, increased by $197 million was mainly from:

1) An increase in corporate income tax of $78 million, aligned with higher operating profits compared to prior year.
2) An increase in withholding tax of $1 million from dividend receives during the period.
3) An increase in deferred tax expense of $118 million was due to an increase of deferred tax liability, primary from a different in foreign exchange rate conversion between accounting basis and tax basis resulting from a depreciation of THB currency.

4. Statements of Consolidated Financial Position

Statements of Consolidated Financial Position as of 30 September 2022 in comparison with the Statements of Consolidated Financial Position as of 31 December 2021.

Financial Position (Unit: Million USD)			Inc.(Dec.)	
	30-Sep-22	31-Dec-21	Amount	%
Assets	12,617	10,946	1,671	15%
Liabilities	8,715	7,843	872	11%
Equity	3,903	3,103	800	26%

4.1 Total assets of $12,617 million, increased by $1,671 million compared to total assets as of 31 December 2021 with details described as below:

Financial Position (Unit: Million USD)	Assets		Inc.(Dec.)	
	30-Sep-22	31-Dec-21	Amount	%
Cash and Cash equivalent	1,940	1,184	756	64%
Investment in debt instruments measured at fair value through profit or loss	0	16	(16)	-98%
Trade accounts receivable and note receivables, net	791	473	318	67%
Inventory net	193	158	35	22%
Current portion of dividend receivables from related parties	63	24	39	163%
Non-current assets held-for-sale	-	172	(172)	-100%
Financial derivative assets due in one year	19	21	(2)	-10%
Other current assets	553	508	45	9%
Total Current Assets	3,559	2,556	1,003	39%
Dividend receivables from related parties	3	7	(4)	-57%
Investments in joint ventures and associates accounted for using the equity method	1,602	1,645	(43)	-3%
Investment in debt instruments measured at fair value through profit or loss	151	-	151	100%
Investment in equity instrument measured at fair value through profit or loss	6	8	(2)	-25%
Investments in equity instruments measured at fair value through other comprehensive income	148	164	(16)	-10%
Property, plant and equipment, net	4,205	3,416	789	23%
Deferred exploration/stripping costs, net	809	889	(80)	-9%
Mining property rights, net	1,159	1,276	(117)	-9%
Goodwill	412	432	(20)	-5%
Right of use assets	85	66	19	29%
Financial derivative assets	39	64	(25)	-39%
Other non- current assets	439	423	16	4%
Total Non-Current Assets	9,058	8,390	668	8%
Total Assets	12,617	10,946	1,671	15%

- Cash and cash equivalents of $1,940 million, increased by $756 million. (As explanation in no.5 Consolidated Statement of Cash Flows).
- Investment in debt instrument measured at fair value through profit or loss of $0.3 million, decreased by $16 million was from additions of $46 million, net with redemptions of $61 million, and decrease from effects of foreign exchange rate translation at the end of period and others of $1 million.

- Current portion and non-current portion of dividend receivable from related parties of $63 million and $3 million, respectively, were dividend receivable from joint ventures who operates power business in Thailand and joint ventures who operates CHP plant business in China, which total increased by $35 million. This was a net result of:
    1) An increase from additional declared dividend of $113 million.
    2) A decrease from received dividend of $66 million.
    3) A decrease from foreign exchange rate translation at the end of periods and others of $12 million.
- No balance of non-current assets held for sales $172 million in this quarter because the sales of investment in a joint venture of the group was completed during the first quarter of this year.
- Investment in joint ventures and associates of $1,602 million, decreased by $43 million or 3% was from:
    1) An increase from recognition of profit sharing from joint ventures and associates by $236 million.
    2) An increase from investment additions of $17 million.
    3) A decrease from dividend recognition during the period of $113 million.
    4) A decrease from the effects of foreign exchange rate translation at end of the period and others by $183 million.
- Investment in debt instrument measured at fair value through profit or loss of $151 million was mainly from investment in US healthcare investment fund during the year.
- Investment in equity instrument measured at fair value through other comprehensive income (FVOCI) of $148 million, decreased by $16 million. This was due to:
    1) An additional investment in solar power business in Japan of $12 million.
    2) An increase from the impact of fair value adjustment of $5 million.
    3) A decrease from the effects of foreign exchange rate translation at the end of the period and others of $33 million.
- Property plant and equipment of $4,205 million, increased by $789 million derived from:
    1) An increase from additions of machine and equipment of coal business, natural gas business and power business total of $217 million.
    2) An increase from acquisition of natural gas business in USA and solar power plant in Vietnam total of $956 million.
    3) An increase from fair value adjustment of contingent liability from asset acquisition of $30 million.
    4) An increase from asset reclassification of $8 million.
    5) A decrease from sales and write-off of $4 million.
    6) A decrease from depreciation charges for the period of $272 million.
    7) A decrease from the effects of foreign exchange rate translation at end of the period and others of $146 million.

- Right of use assets of $85 million increased by $19 million, or 29%, was from additions of $55 million, offset with write-off of $1 million and depreciation of $30 million, and from the effects of foreign exchange rate translation at the end of period of $5 million.

- Current portion and non-current portion of financial derivative assets, net of $19 million and $39 million, respectively, or total of $58 million This was a result from fair value adjustment at the end of period, which comprised of interest rate swap of $17 million, electricity swaption of $28 million, electricity forward contracts of $11 million and natural gas swap of $2 million.

- Other non-current assets of $439 million, increased by $16 million. This was due to an increase in vat receivable of $73 million, right to operate of power plant business from business acquisition of solar power plant in Vietnam of $ 8 million, whereas a decrease in deferred income tax assets in Indonesia of $18 million, prepaid income tax in Indonesia of $27 million, deposit of $3 million, reclassification of asset under development to be fixed assets and others of $17 million.

4.2 Total liabilities of $8,715 million, increased by $872 million compared to total liabilities as of 31 December 2021 with movement details as described below:

Financial Position (Unit: Million USD)	Liabilities		Inc.(Dec.)	
	30-Sep-22	31-Dec-21	Amount	%
Short-term loans from financial institutions	841	1,174	(333)	-28%
Trade accounts payable	81	99	(18)	-18%
Current portion of long-term borrowings, net	735	517	218	42%
Current portion of debenture, net	269	120	149	124%
Accrued overburden and coal transportation costs	96	77	19	25%
Financial derivative liabilities due in one year	276	128	148	116%
Other current liabilities	985	793	192	24%
Total current liabilities	3,283	2,908	375	13%
Long-term loans from other company	2,272	2,270	2	0%
Debentures, net	2,167	1,911	256	13%
Financial derivative liabilities, net	67	53	14	26%
Provision for decommisioning and reserve for environment reclamation	325	340	(15)	-4%
Other liabilities	601	361	240	66%
Total non-current liabilities	5,432	4,935	497	10%
Total liabilities	8,715	7,843	872	11%

- Short-term loans from financial institutions of $841 million, decreased by $333 million or 28%, was from addition of $1,283 million, repayment of $1,550 million, and a decrease from the effects of foreign exchange rate translation at the end of the period of $66 million.

- Current portions of long- term loans of $735 million, increased by $218 million or 42%. This was a net result from a reclassification from non-current portion of $655 million, repayment of $381 million, deferred finance charge of $3 million, and the effects of foreign exchange rate translation at the end of period of $59 million.

- Current portions of debenture of $269 million, increased by $149 million or 124% was from an increase from reclassification from non-current part of $255 million, offset with redemption of $89 million and the effects of foreign exchange rate translation at the end of period of $17 million.

- Accrued overburden and coal transportation expenses of $96 million, increased by $19 million or 25% was mainly from mining operations of subsidiaries in Indonesia.

- Long- term loans of $2,272 million, increased by $2 million or 0.09%, was a net result of:
    1) An increase from additional loan during the period of $677 million.
    2) An increase from business acquisition of $22 million.
    3) A decrease from reclassification to current portion of $655 million.
    4) An increase from deferred finance charge and its amortization of $1 million
    5) A decrease from the effects of foreign exchange translation at the end of the period of $43 million, was mainly from a depreciation of THB currency against USD currency that affected to THB currency loan. Average exchange rate of THB/USD as of 30 September 2022 was THB 37.9067 (31 Dec 2021: THB 33.4199). Also, a decrease was from a depreciation of AUD currency against USD currency at the end of period. Average exchange rate of AUD/USD as of 30 September was 0.6493 (31 Dec 2021: 0.7260).

- Debenture of $2,167 million, increased by $256 million or 13%. There were new additions of $774 million, reclassification to current portion of $255 million, and decrease from deferred finance charge of $1 million and the effects of foreign exchange rate translation at the end of the period of $262 million from a depreciation of THB currency against USD currency, impacted to THB currency debenture.

- Current portion and non-current portion of derivative liabilities reported at $276 million and $67 million, respectively, total of $343 million. This was changes in fair value of financial derivatives at the end of period, that consisted of cross currency swap and interest rate swap contracts of $62 million, interest rate swap contracts of $2 million, fuel swap contracts of $1 million, natural gas swap contracts of $265 million, and electricity swaption and electricity call option of $13 million.

4.3 Shareholders' equity of $3,903 million increased by $800 million, was mainly due to:

Financial Position (Unit: Million USD)	Equity		Inc.(Dec.)	
	30-Sep-22	31-Dec-21	Amount	%
Equity attributable to owners of the parent	2,938	2,372	566	24%
Non-controlling interests	965	731	234	32%
Total equity	3,903	3,103	800	26%

- An increase of $1,170 million from net profits for nine months period.
- An increase of $19 million from reserve for share-based compensation to employees.
- An increase of $1 million from fair value reserves for financial assets measured at fair value to other comprehensive income, cash flows hedge reserves and net investment hedge.
- A decrease of $17 million from fair value of put options over non-controlling interests.
- A decrease of $509 million from the effects of foreign exchange rate translation of subsidiaries' financial statements and others.
- An increase of $305 million from non-controlling interest.
- An increase of $63 million from disposal of treasury shares of a subsidiary.
- A decrease of $232 million from dividend payment.

4.4 Net debt-to-equity ratio as of 30 September 2022 reported at 0.88 times (31 December 2021: 1.31 times).

5. Statement of Consolidated Cash Flows

Statement of consolidated cash flows for the nine months period ended 30 September 2022 presented an increase of net cash flow by $755 million (included the effect from unrealized loss on exchange rate translation at the end of period of $85 million). The details of consolidated cash flows activities were as follows:

Statement of Consolidated Cash Flows (Unit: Million USD)	**Amount**
Net Cash flows from operating activities	1,135
Net Cash flows used in investing activities	(813)
Net Cash flows from finaning activities	518
Net increase in cash and cash equivalents	**840**
Exchange gain on cash and cash equivalents	(85)
Cash and cash equivalents at the beginning of the period	1,184
Cash and cash equivalents at end of the period	**1,939**

5.1 Net cash inflow from operating activities of $1,135 million; with major operating items as follows:

- Collections from coal sales of $4,672 million.
- Payments to contractors and suppliers of $2,668 million.
- Interest payments of $178 million.
- Payments of corporate income tax of $205 million.
- Receipts from tax refund of $30 million.
- Royalty fee payments of $448 million.
- Other payments of $68 million.

5.2 Net cash used in investing activities of $813 million; with major items as follows:

- Payments for machines, equipment, and project in progress of $232 million.
- Payment for business acquisition of $648 million.
- Payments for financial assets measured at fair value through profit and loss of $139 million.
- Payments for financial assets measured at fair value through other comprehensive income of $12 million.
- Payments for deferred exploration and development expenditure of $142 million.

- Payment for placement of restricted cash of $54 million.
- Receipts from dividend from joint ventures and other investments of $72 million.
- Receipts from sales of investment in joint venture of $331 million.
- Receipts from interest income and others of $11 million.

5.3 Net cash inflow from financing activities of $518 million; comprised of

- Receipts from short term and long - term loans from financial institutions and debentures of $2,734 million.
- Repayments of short term and long - term loans from financial institutions, debentures, and lease liabilities of $2,049 million.
- Receipts from disposal of treasury shares of a subsidiary of $64 million.
- Payment for dividend of $232 million.
- Receipts from increase in share capital of a subsidiary from non-controlling interest of $1 million.