



QUALITY MEGAWATTS

FOR SUSTAINABLE VALUE

Management's Discussion and Analysis for the 1st Quarter 2023

Banpu Power Public Company Limited and Subsidiaries



1. Management Discussion and Analysis

In 2023, the world is experiencing the El Niño weather phenomenon following an unusual three-year period dominated by La Niña. This shift brings significant implications, such as increased droughts in some regions and a higher global average temperature, resulting in warmer weather patterns. These changes serve as a compelling reminder of the escalating global warming concerns that have intensified in recent years. Banpu Power has recognized the urgency of addressing climate change and pays attention to this pressing issue. We have established the Environmental, Social, and Governance (ESG) committee to actively engage with society and promote environmental sustainability. We prioritize investments in thermal power plants with high efficiency and low emissions (HELE) and actively explore opportunities in renewable energy. Additionally, we integrate new technologies and innovations into our existing power plant portfolio to enable us to enhance efficiency and effectively limit carbon emissions.

In the first Quarter of 2023, Banpu Power reported a net profit of THB 2,114 million, which includes an FX translation loss of THB 66 million. The company recorded an EBITDA of THB 2,302 million, primarily attributable to the excellent operational performance of the HPC power plant. The efficient operation of our power plants has ensured the uninterrupted and reliable production and distribution of electricity. Furthermore, an associate contributed to the company's profitability through a gain from the revaluation of its investment.

Consolidated revenue was reported at THB 3,450 million, reflecting a decrease of THB 411 million, which represents an 11% decline compared to the same quarter last year. The three CHPs represented the primary contribution to the total. The three CHPs accounted for THB 2,233 million, representing a decrease of THB 335 million or 13% compared to the same quarter last year. This decline was influenced by reduced steam and power sold caused by milder weather conditions. Despite facing consistently high average coal costs per ton, the three CHPs endeavored to optimize its operational mode, resulting in a positive gross profit of THB 73 million. Furthermore, the Temple I gas-fired power plant generated revenue of THB 1,218 million, with a significant increase in power sold to customers this quarter reaching 1,069 GWh, a rise of 42% compared to the same quarter last year. This increase was a result of effective plant management and a low heat rate level, which contributed to the plant's favorable merit order. However, due to the mild weather conditions in Texas, there was a decline in the electricity price per MWh, which subsequently resulted in a THB 76 million decrease in electricity revenue from the Temple I gas-fired power plant compared to the same quarter last year.

The Company achieved a total profit sharing of THB 2,456 million from its joint ventures and associates, with the majority coming from an associate THB 1,283 million which included the revaluation of its investment. Additionally, the HPC power plants made a significant contribution of THB 1,110 million. Notably, the HPC power plants reported a high equivalent availability factor (EAF) of 96% for the quarter, as there were no planned maintenance activities. The BLCP power plant recorded a share profit of THB 113 million. This quarter,

its Unit 2 underwent a 26-day shutdown for maintenance as scheduled. The SLG power plant in China reported a share profit of THB 20 million. The Nakoso power plant recorded a share loss of THB 70 million as it underwent maintenance aimed at enhancing the long-term reliability and efficiency of the plant.

Banpu Power is committed to the sustainable growth of our power generation business as an integral part of our Greener & Smarter strategy. To achieve this, we are implementing a "Triple E" Approach. 1) Ecosystem: We prioritize delivering quality megawatts through a balanced portfolio of thermal power, renewable power, and energy technology businesses. 2) Excellence: We strive for operational excellence by maintaining the reliability and Equivalent Availability Factor (EAF) of our plants to generate cash flow and capture profit in the growing and high-demand market. 3) ESG: Our operations are guided by a strong commitment to sustainability, with a focus on the environment, society, and governance. With this comprehensive approach, we are dedicated to achieving our planned target of 5,300 megawatts by 2025.

2. Group Performance Analysis

The analysis and explanation performance for the period ended 31 March 2023 and 2022:

Consolidated Statement of Income for the 1st quarter ended 31 March 2023 and 2022:

Consolidated financial performance (Unit: Million Baht)	1Q2023	1Q2022	Change	
			Amount	%
Sales	3,450	3,861	(411)	-11%
Cost of sales	(3,581)	(3,609)	28	-1%
Gross profit (loss)	(131)	252	(383)	-152%
Selling & Administrative expenses	(463)	(308)	(155)	50%
Share of profit from an associate and joint ventures	2,456	3,232	(776)	-24%
Other Income (Expense)	322	(634)	956	151%
Other financial costs	(278)	(166)	(112)	67%
Profit before income taxes	1,907	2,375	(469)	-20%
Income taxes	29	99	(70)	-71%
Profit for the period	1,935	2,474	(539)	-22%
Owners of the company	2,114	2,918	(804)	-28%
Non-controlling interests	(179)	(445)	265	-60%
Basic earnings per share (unit : Baht)	0.694	0.958	(0.264)	-28%

The group reported 1Q2023 net profit at THB 2,114 million, decreased by THB 804 million or 28% compared to 1Q2022. This was mainly from a decrease in profit sharing from an associate that was no gain on sales of an investment as reported during 1Q2022 even though the associate recognized gain on remeasurement of an investment in battery business. Additionally, the warmer climate caused a decrease in revenue from CHP plant in China and from Temple I gas -fired power plant in USA. However, the group has realized gain on derivatives from electricity rate call options and natural gas swaps, profit sharing recognition from HPC power plant that operate efficiently, and higher sales from SLG power plant that increased in both volume and tariff in this quarter due to starting power trading in power market and entering into a long-term coal supply contract at favorable price, resulting to profit in this quarter.

Details of the group operating performance for 1Q2023 were described as followings:

Sales, Cost of sales and Gross profit

Sales reported at THB 3,450 million, decreased by THB 411 million or 11% compared to 1Q2022. This was mainly from a decrease in power and steam sales from CHP plants in China of THB 335 million and from electricity sales from Temple I gas-fired power plant in USA of THB 76 million. Details were described as followings:

Items	Power Sold (GWh)		Steam & Others Sold (Million Tonnes)		Average Power tariff (RMB/KWh)		Average Steam & others price (RMB/Tonne)	
	1Q2023	1Q2022	1Q2023	1Q2022	1Q2023	1Q2022	1Q2023	1Q2022
100 % Basis								
Zhending CHP	111.42	127.39	0.68	0.77	0.39	0.39	126.19	108.88
Luannan CHP	198.08	219.62	1.11	1.14	0.39	0.41	116.58	107.18
Zouping CHP	54.30	108.54	0.45	0.61	0.39	0.45	169.06	158.95
Total CHP Power Plant	363.80	455.55	2.24	2.53	0.39	0.41	130.10	120.23
	(GWh)				(USD/MWh)			
Temple I Power Plants	1,068.96	754.46	-	-	31.16	46.02	-	-

Combined Heat and Power (CHP) plants in China: Decrease THB 335 million

A decrease of sales from CHP plants compared to 1Q2022 was derived from:

1. A decrease of THB 59 million from steam sales and others, resulting from the warmer climate that cause a decrease in sales volume of 0.29 million tonnes, while average price of steam sales per tonne increased by RMB 9.87 that an average sale price per tonne in 1Q2023 was 130.10 RMB (1Q2022: 120.23 RMB).
2. A decrease of THB 233 million from power sales. This was a resulting of warmer climate that caused a decrease in sales volume 91.75 GWh and a decrease in power sales tariff of 0.02 RMB, which power sales tariff in 1Q2023 was 0.39 RMB (1Q2022: 0.41 RMB).
3. The effects of foreign exchange rate translation of THB 43 million due to an appreciation of THB currency against RMB currency compared to 1Q2022. This caused a lesser revenue in THB currency when converting from revenue in RMB currency. Average exchange rate of RMB/THB in 1Q2023 was THB 4.9615 (1Q2022: THB 5.2094).

Temple I Gas-Fired Power Plant in USA: Decrease THB 76 million

Temple I gas-fired power plant business reported higher sales volume of 315 GWh or 42% compared to 1Q2022. This was a result from high efficiency in lowering heat rate that favor merit order ranking. However, the warmer climate caused a decrease in sales price per MWh by \$14.86. Average sales price in this quarter was \$31.16 (Q12022: \$46.02). The net result was a decrease in sales from Temple I Gas-fired power plant.

Cost of sales:
Decrease 1%

Cost of sales reported THB 3,581 million, decreased by THB 28 million compared to 1Q2022 was derived from:

1. CHP Plants in China that cost of sales decreased by THB 225 million from:
 - A decrease in coal cost THB 188 million was from a decrease in coal used of 0.06 million tonnes. The coal used in this quarter of 0.30 million tonnes (1Q2022 :0.36 million tonnes)
 - The effects from an appreciation of THB currency to foreign exchange rate translation of THB 37 million. This resulted in lesser cost of sales in THB currency when converting from cost of sales in RMB currency. Average exchange rate of RMB/THB in 1Q2023 was THB 4.9615 (1Q2022: THB 5.2094).
2. Temple I gas-fired power plant in USA that cost of sales increased by THB 197 million. Although the cost of natural gas was decrease, but when netting with higher natural gas used caused by higher power sales volume and cost of power purchase from market, the cost of sales was higher THB 166 million. This included an impact from a depreciation of THB currency against USD currency of THB 31 million. This caused a higher cost of sales in THB currency when converting from USD currency. Average exchange rate of USD/THB in 1Q2023 was THB 33.9122 (1Q2022: THB 33.0529)

Gross profit:
Decrease 152%

Gross profit was THB (131) million, or decreased by THB 383 million compared to 1Q2022 was from:

1. A decrease in operating performance from CHP plants in China due to a decrease in power and steam sales volume THB 110 million compared to 1Q2022.
2. A decrease in operating performance from Temple I gas-fired power plant in USA THB 273 million caused by a decrease in sales price per MWh compared to 1Q2022.

Selling and Administrative expenses: Increase 50%

Administrative expenses of THB 463 million, increased by THB 155 million compared to 1Q2022. This was mainly from administrative expense from Temple I gas-fired power plant for business expansion to power retail market in USA.

Items	Profit (loss) sharing		Increase/(Decrease)	
	1Q2023	1Q2022	Amount	%
(Unit: Million Baht)				
BLCP	113	(83)	196	236%
HPC & PFMC	1,110	642	468	73%
SLG	20	(254)	273	108%
Holding Company for Nakoso power plant	(70)	238	(308)	-129%
Banpu Next	1,283	2,688	(1,405)	-52%
Total	2,456	3,232	(776)	-24%

Share of profit from joint ventures and associates: Recognition of profit sharing from joint ventures and an associate was decreased by THB 776 million compared to 1Q2022 was a net result of:

Decrease 24%

1. A decrease in profit sharing recognition from investment in renewable power and energy technology business of THB 1,405 million because in 1Q2022 there was a recognition of gain on sales of investment of THB 2,850 million, while in 1Q2023 there was a gain on remeasurement of an investment in battery business of THB 1,336 million. Additionally, there was gain on the foreign exchange rate from USD currency loan resulting from an appreciation of THB currency at period end.
2. A decrease in profit sharing recognition from Nakoso power plant in Japan of THB 308 million from power plant shut down to maintenance in order to improve efficiency and stability in the long run.
3. An increase in profit sharing recognition from BLCP of THB 196 million. Mainly was an increase in operating profit of THB 176 million, a decrease in deferred tax and unrealized gain on foreign exchange rate translation of totaling THB 20 million.
4. An increase in profit sharing recognition from HPC power plant and PFMC of THB 468 million caused by an increase in operating performance of THB 458 million and gain on exchange rate of THB 10 million.
5. An increase in profit sharing recognition from SLG power plant of THB 273 million was from better operating performance from higher sales volume and from entering into a coal supply contract at favorable price that lower its coal cost significantly.

Other income

Other income of THB 322 million was comprised of:

1. Net gain on financial derivatives of THB 252 million was from unrealized gain on fair value financial derivatives THB 25 million and realized gain on financial derivatives THB 227 million.
2. Interest income of THB 65 million.
3. Management fee income of THB 47 million, mainly was management fees charged to related companies and joint ventures.

4. Pipeline connecting fee income charged to new steam customers of CHP plants in China of THB 6 million.
5. Net loss on foreign exchange rate of THB 66 million was from unrealized loss on exchange rate from USD currency loans at the end of the period caused by an appreciation of THB currency against USD currency compared to the prior year. Average exchange rate of USD/THB for 1Q2023 was THB 33.9122 (31 Dec 2022: THB 34.5624)
6. Other income of THB 18 million.

**Interest expenses
And finance cost:
Increase 67%**

Interest expenses and finance cost of THB 278 million, increased by THB 112 million compared to 1Q2022, primarily was from loan additions and debenture issuance during 2Q2022.

Income tax: Decrease 71%

Income tax expenses of THB 29 million, decreased by THB 70 million compared to 1Q2022. This comprised of:

1. A decrease of recognition in deferred income tax asset of THB 95 million that was from a decrease in tax loss from Temple I gas-fired power plant.
2. An increase in corporate income tax expense of THB 25 million, mostly from higher operating profit from CHP power plant business in China.

Net profit for the 1st quarter ended 31 March 2023 reported at THB 2,114 million, decreased by THB 804 million compared to 1Q2022.

Basic Earnings per Share reported at THB 0.694 (1Q2022: THB 0.958)

3. Statement of Consolidated Financial Position

Statement of Consolidated Financial Position as of 31 March 2023 in comparison with Statements of Consolidated Financial Position as of 31 December 2022

Items (Unit: Million Baht)	Financial Position		Increase/(Decrease)	
	31-Mar-23	31-Dec-22	Amount	%
Assets	79,683	77,665	2,018	3%
Liabilities	25,580	24,873	707	3%
Equity	54,103	52,792	1,311	2%

3.1 Total assets of THB 79,683 million, increased by THB 2,018 million or 3% compared to the 31 December 2022, with mainly described as follows:

Financial Position (Unit: Million Baht)	Assets		Increase/(Decrease)	
	31-Mar-23	31-Dec-22	Amount	%
Cash and cash equivalents	6,562	4,055	2,507	62%
Financial assets measured at fair value	9	58	(49)	-84%
Trade accounts receivable, net	1,448	1,754	(306)	-17%
Fuel and Spare parts & supplies, net	734	1,101	(367)	-33%
Current portion of dividend receivables from related parties	64	50	14	28%
Other current assets	4,487	4,652	(165)	-4%
Total current assets	13,303	11,670	1,633	14%
Dividend receivables from related parties	-	114	(114)	-100%
Investments in an associate and joint ventures	41,866	40,513	1,354	3%
Property, plant and equipment, net	22,487	22,876	(389)	-2%
Right of use assets, net	560	567	(7)	-1%
Other non current assets	1,466	1,926	(460)	-24%
Total non current assets	66,380	65,995	385	1%
Total assets	79,683	77,665	2,018	3%

- Cash and cash equivalents of THB 6,562 million, increased by THB 2,507 million or 62% (Explanation in no. 4 Statement of Consolidated Cash Flows).
- Financial assets measured at fair value of THB 9 million, decreased by THB 49 million or 84% was from an addition of THB 94 million; net with redemption of THB 143 million.
- Account receivable of THB 1,448 million decreased by THB 306 million or 17%. This was from Temple I gas-fired power plant in USA of THB 220 million as a result of a decrease in power price compared to last year, from CHP plant in China of THB 82 million, and an effect from foreign exchange conversion of THB 4 million.
- Fuel and Spare parts, net of THB 734 million, decreased by THB 367 million or 33%. This was due to a decrease from CHP plant in China of THB 335 million, Temple I gas-fired power plant in USA of THB 25 million, and effect from foreign exchange conversion of THB 7 million.
- Other current assets of THB 4,487 million, decreased by THB 165 million or 4% was mainly from:
 1. A decrease in short-term loan to related parties of THB 142 million. This was a net result of cash received THB 126 million from settlement and unrealized loss on foreign exchange conversion of THB 16 million.
 2. A decrease in financial derivative assets of THB 43 million, from financial derivatives of Temple I Gas- fired power plant.

3. An increase in accrued interest income from related parties of THB 15 million. This was a net result of a recognition of interest income during the year of THB 59 million, cash receives THB 40 million from settlement and unrealized loss on foreign exchange rate translation of THB 4 million.
 4. An increase from others of THB 5 million.
- Current and non-current portions of dividend receivables from related party totaling THB 64 million, decrease by 100 million from dividend receivables from a domestic power plant joint venture.

Dividend receivables from related parties (Unit: Million Baht)	Financial Position		Increase/(Decrease)	
	31-Mar-23	31-Dec-22	Amount	%
Current portion of dividend receivables from related parties	64	50	14	28%
Dividend receivables from related parties	-	114	(114)	-100%
Total	64	164	(100)	-61%

- Investment in joint ventures and associates of THB 41,866 million, increased by THB 1,354 million or 3%. This was a recognition of shares of profits of THB 2,456 million, other comprehensive loss of THB 269 million, offset with unrealized loss on foreign exchange rate translation at the end of period of THB 295 million, and dividend declaration during the period of THB 538 million.
- Net property plant and equipment of THB 22,487 million, decreased by THB 389 million or 2%. This was from additions of machinery and equipment of CHP plants THB 90 million net with write-off of THB 3 million and depreciation charges THB 291 million and unrealized loss on foreign exchange rate translation at the end of period of THB 185 million.
- Right-of-used assets of THB 560 million, decreased by THB 7 million or 1%, was the amortization THB 8 million and unrealized gain on foreign exchange rate translation at the end of period 1 million.
- Other non-current assets of THB 1,466 million, decreased by THB 460 million or 24% was mainly from:
 1. A decrease in loan to related parties of THB 389 million resulting from cash receives from loan settlement of THB 385 million and unrealized loss on foreign exchange rate translation at the end of period of THB 4 million.
 2. A decrease in refundable deposit of THB 71 million, mainly from Temple I gas-fired power plant in USA.

3.2 Total liabilities of THB 25,580 million, increased by THB 707 million or 3% compared to total liabilities as of 31 December 2022 with details mainly described as follows:

Financial Position (Unit: Million Baht)	Liabilities		Increase/(Decrease)	
	31-Mar-23	31-Dec-22	Amount	%
Short-term loans from financial institutions	2,438	242	2,196	909%
Trade accounts payable	377	220	157	72%
Current portion of long-term loans from financial institutions	1,198	1,231	(33)	-3%
Current portion of lease liabilities	11	13	(2)	-14%
Other current liabilities	6,328	7,680	(1,352)	-18%
Total current liabilities	10,353	9,385	967	10%
Long-term loans from financial institutions, net	9,638	9,860	(222)	-2%
Debenture, net	5,492	5,492	0	0%
Lease liabilities	3	4	(1)	-30%
Other non current liabilities	94	131	(37)	-28%
Total non-current liabilities	15,227	15,488	(260)	-2%
Total liabilities	25,580	24,873	707	3%

- Short-term loans from financial institutions of THB 2,438 million, increased by THB 2,196 million or 909 % was from a net result of additional loans THB 2,370 million and repayment THB 173 million. Also, there was unrealized gain on foreign exchange rate translation at the end of period of THB 1 million on RMB currency loan, resulting from an appreciation of THB currency against RMB currency. Average exchange rate of RMB/THB as of 31 Mar 2023 was THB 4.9615 (31 Dec 2022: THB 4.9664).
- Current portion of long-term loans from financial institutions of THB 1,198 million, decreased by THB 33 million or 3%. This was a net result of reclassification from non-current portion THB 198 million (including net front end fee), repayment THB 230 million and from unrealized gain on foreign exchange rate translation at the end of period of THB 1 million.
- Other current liabilities of THB 6,328 million, decrease by THB 1,352 million or 18% was mainly from:
 1. A decrease in advance received from steam residential customers CHP plants in China THB 234 million.
 2. A decrease in account payable related party THB 329 million.
 3. A decrease in derivative liabilities of Temple I Gas – fired power plant THB 72 million.
 4. A decrease in current portion of long-term loan from related party THB 59 million due to unrealized gain on foreign exchange rate translation at the end of period.
 5. A decrease in accrued expense others THB 773 million from payment during the period.
 6. An increase in payable from purchase of asset CHP plant 6 million.
 7. An increase in accrued interest expense from related party THB 109 million.

- Long-term loans from financial institutions of THB 9,638 million, decrease by THB 222 million or 2%, was a net result of reclassification to current portion THB 198 million and unrealized gain on foreign exchange rate translation at the end of period THB 24 million on USD loan, as a result of an appreciation of THB currency against USD currency. Average exchange rate of USD/THB as at 31 Mar 2023 was THB 33.9122 (31 Dec 2022: THB 34.5624)

3.3 Shareholders' equity of THB 54,103 million, an increase of THB 1,311 million or 2% compared to shareholders' equity as of 31 December 2022 was due to:

Financial Position (Unit: Million Baht)	Equity		+ / (-)	
	31-Mar-23	31-Dec-22	Amount	%
Owners of the parent	50,014	48,481	1,533	3%
Non-controlling interests	4,089	4,310	(222)	-5%
Total equity	54,103	52,792	1,311	2%

- An increase of THB 2,114 million from 1Q2023 net profit.
- A decrease of THB 242 million from cashflows hedge reserves of associate and joint venture.
- A decrease of THB 25 million from the change in fair value of hedged financial instruments.
- A decrease of THB 312 million from foreign exchange translation of subsidiaries and joint ventures' financial statements.
- A decrease of THB 222 million from non-controlling interests.
- A decrease in remeasurement of employment benefit of THB 2 million.

Net debt to equity ratio as of 31 March 2023 from consolidated financial positions was 0.22 times (31 December 2022: 0.24 time)

4. Statements of Consolidated Cash Flows

Statement of consolidated cash flows for 1st quarter ended 31 March 2023 reported an increase of net cash flows from 31 December 2022 total of THB 2,507 million (included exchange rate translation loss of THB 5 million). The consolidated cash flows were as follows:

Cash flow (Unit : Million Baht)	Consolidated
Net cash used in operating activities	(575)
Net cash receipts from investing activities	1,125
Net cash receipts from financing activities	1,962
Net increase in cash and cash equivalents	2,512
Exchange differences on cash and cash equivalents	(5)
Cash and cash equivalents at beginning of the period	4,055
Cash and cash equivalents at end of the period	6,562

4.1 Net cash outflows from operating activities of THB 575 million comprised of:

- Collection from sales of power and steam THB 1,557 million.
- Payment to suppliers and contractors THB 2,052 million.
- Payment of interest expense THB 78 million.
- Payment of corporate income tax THB 2 million.

4.2 Net cash inflows from investing activities of THB 1,125 million comprised of:

- Receipts of dividends from joint ventures THB 638 million.
- Receipts from interest income THB 46 million.
- Receipts from investment in debt instruments THB 143 million.
- Receipts from short-term and long-term loan to related party THB 509 million.
- Payments for machines, equipment, and project in progress THB 85 million.
- Payments for restricted deposit THB 32 million.
- Payments for investment in debt instruments THB 94 million.

4.3 Net cash inflows from financing activities of THB 1,962 million comprised of:

- Receipts from short-term and long-term loans from financial institutions THB 2,369 million.
- Repayments of short-term and long-term loans from financial institutions THB 407 million.