

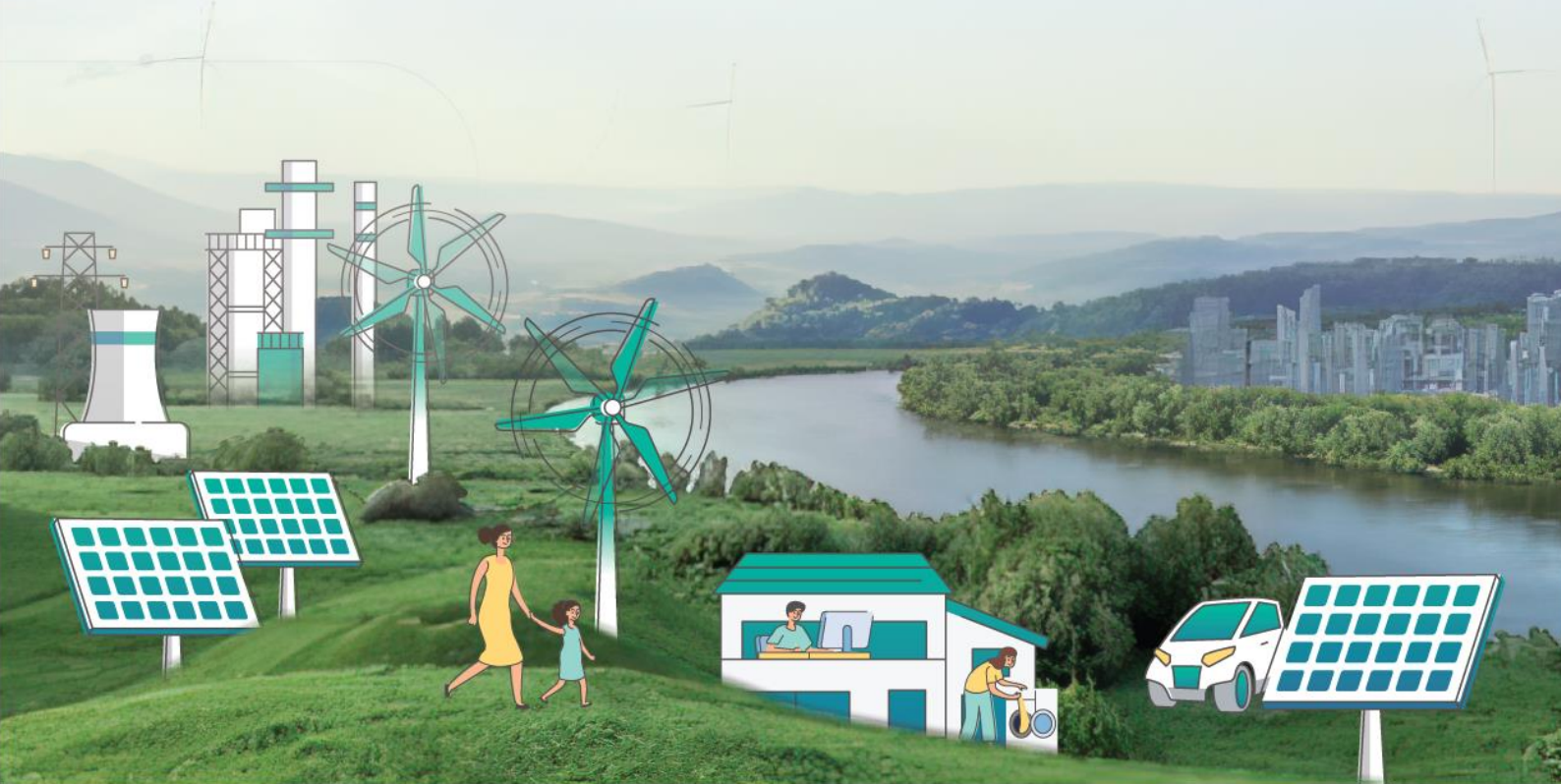


QUALITY MEGAWATTS

FOR SUSTAINABLE VALUE

Management's Discussion and Analysis for the Year Ended 2023

Banpu Power Public Company Limited and Subsidiaries



1. Management Discussion and Analysis

Banpu Power continues to accelerate its portfolio transformation especially through new investment in countries with growth of electricity demand. In July 2023, the Company invested in Temple II Gas-fired power plant, located adjacent to Temple I Gas-fired power plant in the state of Texas. The acquisition of Temple II marks a significant success in expanding our power business in the United States at optimal timing, contributing strong performance and generating robust cash flow. The Company is committed to ensuring energy stability by maintaining the availability and reliability of all our power plants in order to generate and distribute electricity to communities in a stable and consistent manner.

The Company achieved a net profit of THB 5,319 million in 2023. Excluding gain from revaluation of investment and unrealized loss on financial derivatives, net profit increased by THB 2,039 million, or an increase of 74% from net profit excluding gain on sales of investment and unrealized gain on financial derivatives in 2022. The company's EBITDA¹ of THB 12,262 million increased by THB 3,981 million or 43% from the previous year, mainly resulted from the excellent performance of gas-fired power plant business in the United States, the acquisition of Temple II, improved performance of the CHPs in China, continual profit generating from SLG, and higher profit sharing for BLCP. due to efficient operation with operations outside of contracted availability hours (CAH).

The Company reported consolidated revenue of THB 30,443 million, of which THB 23,988 million came from the gas-fired power plant in USA represents an increase of 36% compared to previous year. For three CHPs in China, they contributed revenue of THB 6,455 million, a decrease of 7% compared to previous year due to lower electricity sold. The Company reported gross profit of THB 10,557 million, increased by 338% from the previous year, and reported a gross profit margin of 35%, compared with 10% of previous year. These improvements were driven by higher gross profit margin of gas-fired power plant in USA, led by surging electricity demand driven by heatwave crisis during the third quarter, and a higher gross profit margin of CHPs in China benefited from lower coal price.

The total profit sharing was reported at THB 5,009 million, mainly from the HPC power plants which contributed to THB 3,023 million of share profit. The BLCP power plant reported a share profit of THB 1,057 million. The HPC and BLCP power plants had high EAF at 85% and 88%, respectively, as a result of their ability to conduct operation efficiently. Moreover, the BLCP power plant operated an additional 861 hours outside of contracted availability hours (CAH) as BLCP fulfilled electricity dispatch ahead of schedule according to contracted hours.

¹ Note: EBITDA included realized gain / (loss) on financial derivative.

The SLG power plant in China reported a share profit of THB 122 million, contributed by higher electricity sold and a coal supply contract at favorable price. The Nakoso power plant reported a loss sharing of THB 150 million, due to plant maintenance shutdowns to improve efficiency and stability in the long run. There was a share of profit from investments in renewable energy and energy technology businesses, totaling THB 957 million. decreased by THB 1,145 million compared with previous year, due to no gain on sales of investment as previous year, despite the gain from revaluation of investment in 2023.

Banpu Power continues to enhance business operation efficiency and push forward in fostering energy growth with quality megawatts as an integral part of our Greener & Smarter strategy for sustainable growth. Our objective is to expand our power business portfolio by leveraging high efficiency, low emissions technologies (HELE), along with renewable energy, and fostering the growth of energy technology businesses that support clean energy. Our goal is to achieve a production capacity of 5,300 megawatts by 2025 and deliver sustainable returns and value to all of our stakeholders.

2. Group Performance Analysis

The analysis and explanation performance for the year ended 31 December 2023 and 2022:
Consolidated Statement of Income for the year ended 31 December 2023 and 2022:

Consolidated financial performance (Unit: Million Baht)	Y2023	Y2022	Change	
			Amount	%
Sales	30,443	24,501	5,942	24%
Cost of sales	(19,886)	(22,090)	2,204	10%
Gross profit	10,557	2,411	8,146	338%
Selling & Administrative expenses	(2,254)	(1,887)	(367)	-19%
Share of profit from an associate and joint ventures	5,009	6,350	(1,341)	-21%
Other Income (Expense)	(4,418)	217	(4,635)	-2137%
Other financial costs	(2,054)	(897)	(1,157)	-129%
Profit before income taxes	6,840	6,194	646	10%
Income taxes	(402)	(44)	(358)	805%
Profit for the year	6,438	6,150	288	5%
Owners of the company	5,319	5,739	(420)	-7%
Non-controlling interests	1,119	411	708	172%
Basic earnings per share (unit : Baht)	1.745	1.883	(0.138)	-7%

The group reported 2023 net profit at THB 5,319 million, including unrealized loss on financial derivatives THB 807 million based on equity, and gain on fair value remeasurement of investment in battery business THB 1,336 million. In 2022, the company had unrealized gain on financial derivatives THB 91 million based on equity, and gain on sales of investment THB 2,897 million. In case excluding these items, the group reported higher net profit compared to prior year, which primarily from a recognition of operating profit from Temple II gas-fired powerplant, and an increase in gross profit margin. This was a result of higher electricity demand driven by heat wave impacts across Texas during 3Q2023 and better operating performance from CHP power plant due to a lower coal cost compared to prior year. SLG power plant reported profits continually from higher sales volume and entering a long-term coal supply contract at favorable price. This included higher recognition of profit sharing from BLCP that operated efficiently. However, there was a decrease in profit sharing recognition from HPC power plant that was consequential impact from the plan and unplan maintenance shutdown, a decrease in profit sharing from Nakoso power plant due to maintenance shutdown to improve efficiency and stability of the power plant in the long run, and an increase in finance costs supported business expansion in USA.

Details of the group operating performance for 2023 were described as followings:

Sales, Cost of sales and Gross profit

Sales reported at THB 30,443 million, increased by THB 5,942 million or 24% compared to 2022, resulting from an increase in electricity sales from a gas-fired power plant in USA of THB 6,404 million. Whereas sales from power and steam sales from CHP power plants in China decreased by THB 462 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)	
	Y2023	Y2022	Y2023	Y2022	Y2023	Y2022	Y2023	Y2022
100 % Basis								
Zhengding CHP	279.28	285.08	1.42	1.46	0.42	0.41	144.72	97.73
Luannan CHP	484.38	463.54	3.34	2.83	0.40	0.40	125.32	111.77
Zouping CHP	226.28	340.80	1.63	1.79	0.40	0.45	172.23	193.82
Total CHP Power Plant	989.95	1,089.42	6.39	6.08	0.41	0.42	141.61	132.59
	(GWh)				(USD/MWh)			
Gas-Fired Power Plant	5,415.74	3,810.30	-	-	69.65	74.71	-	-

Combined Heat and Power (CHP) plants in China: decrease THB 462 million

A decrease of sales from CHP power plants compared to 2022 was derived from:

1. A decrease of THB 275 million from power sales. This was a result of a decrease in demand from industrial customers from Zhouping CHP plant that caused a decrease in sales volume of 99.47 GWh and in sales price of 0.01 RMB. Power sales tariff was 0.41 RMB (2022: 0.42 RMB).
2. An increase of THB 484 million from steam sales and others, resulting from an increase in demand from industrial customers from Luannan CHP, resulting to an increase in steam sales of 0.31 million tonnes and average price of steam sales and others per tonne increased by RMB 9.02. Average sale price per tonne in 2023 was 141.61 RMB (2022: 132.59 RMB).
3. The effects of foreign exchange rate translation of THB 671 million due to an appreciation of THB currency against RMB currency compared to 2022, which caused a lesser revenue in THB currency when converting from revenue in RMB currency. Average exchange rate of RMB/THB in 2023 was THB 4.9165 (2022: THB 5.2108).

Temple I Gas-Fired Power Plant in USA: Increase THB 6,404 million

Sales from gas-fired power plant business reported higher, mainly derived from the acquisition of Temple II gas-fired power plant, resulting an increase in sales volume 1,605.45 GWh or 42% while a decrease in sales price \$5.06 per MWh compared to previous year, one reason from a decrease in natural gas price. Average sales price in 2023 was \$69.65 (2022: \$74.71).

**Cost of sales:
Decrease 10%**

Cost of sales reported THB 19,886 million, decreased by THB 2,204 million compared to 2022 was derived from:

1. CHP Plants in China that cost of sales decreased by THB 1,183 million from:
 - A decrease in coal cost THB 970 million due to a decrease in average coal cost per tonne by RMB 149. Average coal cost per tonne was RMB 1,035 (2022: RMB 1,184).
 - The effects from an appreciation of THB currency to foreign exchange rate translation of THB 213 million, resulting to lesser cost of sales in THB currency when converting from cost of sales in RMB currency. Average exchange rate of RMB/THB in 2023 was THB 4.9165 (2022: THB 5.2108).
2. Gas-fired power plant in USA that cost of sales decreased by THB 1,021 million was a result from a decrease in average cost of natural gas by \$4.08 per cubic feet. Average cost of sales in 2023 was \$2.58 per cubic feet (2022: \$6.67 per cubic feet). The effects from an appreciation of THB currency against USD currency resulting a decrease in cost of sales in THB currency when converting from USD currency. Average exchange rate of USD/THB in 2023 was THB 34.8022 (2022: THB 35.0614)

**Gross profit:
Increase 338%**

Gross profit was THB 10,557 million, increased by THB 8,146 million compared to 2022 derived from:

1. An increase in operating performance from gas-fired power plants in USA of THB 7,425 million. This was due to an increase in sales volume compared to 2022, resulting from the acquisition of Temple II gas-fired power plant in USA, and from an increase in gross profit margin due to higher demand arising from significantly higher temperature caused by heatwave crisis during 3Q2023.
2. An increase in operating performance from CHP plants in China of THB 721 million from higher steam sales volume and a decrease in coal cost compared to 2022.

Selling and Administrative expenses: Increase 19%

Administrative expenses of THB 2,254 million increased by THB 367 million compared to 2022. This was mainly from administrative expense from Temple II gas-fired power plant and expenses for business expansion to power retail business in USA.

Items	Profit (loss) sharing		Increase/(Decrease)	
	(Unit: Million Baht)		Amount	%
	Y2023	Y2022		
BLCP	1,057	580	477	82%
HPC & PFMC	3,023	3,691	(668)	-18%
SLG	122	(290)	412	142%
Holding Company for Nakoso power plant	(150)	267	(417)	-156%
Banpu Next	957	2,102	(1,145)	54%
Total	5,009	6,350	(1,341)	-21%

Share of profit from joint ventures and associates: decrease 21%

Recognition of profit sharing from joint ventures and an associate was decreased by THB 1,341 million compared to 2022 was a net result of:

1. A decrease in profit sharing recognition from HPC power plant and PFMC of THB 668 million. This was a decrease in operating performance of THB 375 million, resulting from the plan and unplan maintenance shutdown, also from a decrease in gain on exchange rate of THB 293 million.
2. A decrease in profit sharing recognition from Nakoso power plant in Japan of THB 417 million. This was a result of the shutdown of power plant for maintenance to improve efficiency and stability in the long run.
3. A decrease in profit sharing recognition from investment in renewable power and energy technology business of THB 1,145 million. This was because in the previous year the group recognized a gain from sales of investment of THB 2,850 million, whereas in this year there was gain on fair value remeasurement for investment in battery business of THB 1,336 million. Moreover, there was a lesser impact from foreign exchange rate conversion compared to 2022.
4. An increase in profit sharing recognition from BLCP of THB 477 million, which was mainly an increase in operating performance of THB 309 million, a decrease in deferred tax expense, and loss on foreign exchange rate translation, totaling THB 168 million.
5. An increase in profit sharing recognition from SLG power plant of THB 412 million resulting from better operating performance due to higher sales volume and entering a coal supply contract at favorable price, led to substantially decrease in coal cost.

Other income (expense)

Other expense of THB 4,418 million was comprised of:

1. Net loss on financial derivatives THB 5,091 million that was realized loss on fair value of financial derivatives of THB 3,478 million and unrealized loss on fair value of financial derivatives of THB 1,613 million.
2. Interest income of THB 246 million.
3. Management fee income of THB 185 million, primary was management fees charged to related companies and joint ventures.
4. Net loss on foreign exchange rate of THB 36 million was mainly from unrealized loss on exchange rate from conversion of USD currency loan from related party at the end of the period, caused by a depreciation of RMB currency against USD currency compared to 2022. Average exchange rate of USD/RMB for 2023 was RMB 7.0796 (2022: RMB 6.7296).
5. Other income of THB 278 million comprised of:
 - Pipeline connecting fee income charged to new steam customers of CHP plants in China of THB 65 million.
 - Ash and slag sales from CHP plants in China of THB 13 million.
 - Subsidy income from Chinese government for electricity production of THB 90 million.
 - Subsidy income from Chinese government to support carbon emission reduction policy of THB 73 million.
 - Other income of THB 37 million.

Interest expenses and finance cost: Increase 129%

Interest expenses and finance cost of THB 2,054 million, increased by THB 1,157 million compared to 2022, primarily was from interest of loan for business expansion in USA.

Income tax: Increase 805%

Income tax expenses of THB 402 million, increased by THB 358 million compared to 2022. This comprised of:

1. An increase of recognition in deferred income tax expense of THB 262 million, was from a decrease in deferred tax assets from tax loss utilization from CHP plant in China.
2. An increase of income tax of THB 96 million, mostly from an increase of operating profit from gas-fired power plant in USA.

Net profit for the year ended 31 December 2023 reported at THB 5,319 million, decreased by THB 420 million compared to previous year.

Basic Earnings Per Share reported at THB 1.745 (2022: THB 1.883)

3. Statement of Consolidated Financial Position

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

Items (Unit: Million Baht)	Financial Position		Increase/(Decrease)	
	31-Dec-23	31-Dec-22	Amount	%
Assets	98,903	77,665	21,238	27%
Liabilities	44,226	24,873	19,353	78%
Equity	54,677	52,792	1,885	4%

3.1 Total assets of THB 98,903 million, increased by THB 21,238 million or 27% compared to 31 December 2022, with mainly described as follows:

Financial Position (Unit: Million Baht)	Assets		Increase/(Decrease)	
	31-Dec-23	31-Dec-22	Amount	%
Cash and cash equivalents	9,352	4,055	5,297	131%
Financial assets measured at fair value	276	58	218	378%
Trade accounts receivable, net	2,086	1,754	332	19%
Fuel and Spare parts & supplies, net	1,274	1,101	173	16%
Current portion of dividend receivables from related parties	-	50	(50)	-100%
Other current assets	855	4,652	(3,797)	-82%
Total current assets	13,843	11,670	2,173	19%
Dividend receivables from related parties	-	114	(114)	-100%
Investments in an associate and joint ventures	45,809	40,513	5,296	13%
Property, plant and equipment, net	37,450	22,876	14,574	64%
Right of use assets, net	545	567	(22)	-4%
Other non current assets	1,256	1,925	(669)	-35%
Total non current assets	85,060	65,995	19,065	29%
Total assets	98,903	77,665	21,238	27%

- Cash and cash equivalents of THB 9,352 million, increased by THB 5,297 million or 131% (Explanation in no. 4 Statement of Consolidated Cash Flows).
- Financial assets measured at fair value of THB 276 million, increased by THB 218 million or 378 % was from an addition during the year of THB 1,344 million; net with redemption of THB 1,120 million, and an impact from foreign exchange conversion of THB 6 million.

- Account receivable of THB 2,086 million increased by THB 332 million or 19%. This was an increase from gas-fired power plant in USA of THB 580 million due to the acquisition of Temple II gas-fired power plant during the year, while a decrease from CHP plant in China of THB 161 million due to a decrease of sales volume compared to the previous year, and effect from foreign exchange conversion of THB 87 million.
- Fuel and Spare parts, net of THB 1,274 million, increased by THB 173 million or 16%. This was an increase from gas-fired power plant of THB 367 million, CHP plant in China of THB 35 million, and effect from loss on foreign exchange conversion of THB 229 million.
- Other current assets of THB 855 million, decreased by THB 3,797 million or 82% was mainly from:
 1. A decrease in short-term loans to related parties of THB 1,890 million. This was a net result of cash received THB 1,912 million from settlement and unrealized gain on foreign exchange conversion of THB 22 million.
 2. A decrease from the current portion of long-term loan to related parties of THB 1,581 million. This was a result of reclassification from non-current THB 160 million and cash receives THB 1,741 million from settlement.
 3. A decrease in accrued interest income from related parties of THB 424 million. This was a net result of a recognition of interest income during the period of THB 139 million, cash receives THB 547 million from settlement, and unrealized loss on exchange rate of THB 16 million.
 4. An increase in accrued income and other receivable of THB 98 million.
- Current and non-current portions of dividend receivables from related party totaling decrease of THB 164 million, from dividend receivables from a domestic power plant joint venture.

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

- Investment in joint ventures and associates of THB 45,809 million, increased by THB 5,296 million or 13%. This was from additions of THB 1,918 million, new investment in a joint venture, BKV-BPP Cotton Cove in USA of THB 316 million, shares of profits recognition of THB 5,009 million and other comprehensive gain of THB 27 million, offset with unrealized loss on foreign exchange rate translation at the end of period of THB 897 million, and dividend recognition during the period of THB 1,077 million.
- Net property plant and equipment of THB 37,450 million increased by THB 14,574 million or 64%. This was mainly from the acquisition of Temple II gas fired power plant of THB 15,795 million, additions of machinery and equipment of CHP plants THB 986 million net

with disposals of THB 263 million and depreciation charges THB 1,548 million and unrealized loss on foreign exchange rate translation at the end of period of THB 396 million.

- Right-of-use assets of THB 545 million, decreased by THB 22 million or 4%, was the additions of THB 26 million, net with amortization THB 30 million and unrealized loss on foreign exchange rate translation at the end of period 18 million.
- Other non-current assets of THB 1,256 million, decreased by THB 669 million or 35% was mainly from:
 1. A decrease in long term loan to related parties of THB 588 million resulting from additions of THB 55 million, reclassification to current portion of THB 160 million, received from loan settlement of THB 478 million and unrealized loss on foreign exchange rate translation at the end of period of THB 5 million.
 2. A decrease in deferred tax assets of THB 101 million from tax loss utilization of CHP plants in China.
 3. An increase in other assets of THB 20 million.

3.2 Total liabilities of THB 44,226 million, increased by THB 19,353 million or 78% compared to 31 December 2022 with details mainly described as follows:

Financial Position (Unit: Million Baht)	Liabilities		Increase/(Decrease)	
	31-Dec-23	31-Dec-22	Amount	%
Short-term loans from financial institutions	2,394	242	2,152	891%
Trade accounts payable	212	220	(8)	-3%
Current portion of long-term loans from financial institutions	1,659	1,231	428	35%
Current portion of lease liabilities	9	13	(4)	-30%
Other current liabilities	5,614	7,680	(2,066)	-27%
Total current liabilities	9,888	9,386	502	5%
Long-term loans from financial institutions, net	25,125	9,860	15,265	155%
Debenture, net	5,493	5,492	1	0%
Lease liabilities	21	4	17	382%
Other non current liabilities	3,699	131	3,568	2714%
Total non-current liabilities	34,338	15,487	18,851	122%
Total liabilities	44,226	24,873	19,353	78%

- Short-term loans from financial institutions of THB 2,394 million, increased by THB 2,152 million or 891 % was from a net result of additional loans THB 5,057 million and repayment THB 2,890 million. Also, there was an unrealized gain on foreign exchange rate translation at the end of the period of THB 15 million on RMB currency loan, resulting from an appreciation of THB currency against RMB currency. Average exchange rate of RMB/THB as of 31 Dec 2023 was THB 4.8071 (31 Dec 2022: THB 4.9664).
- Current portion of long-term loans from financial institutions of THB 1,659 million, increased by THB 428 million or 35%. This was a net result of reclassification from non-current portion THB 3,499 million (including net front end fee), repayment THB 3,069 million and from unrealized gain on foreign exchange rate translation at the end of period of THB 2 million.
- Other current liabilities of THB 5,614 million, decrease by THB 2,066 million or 27% was mainly from:
 1. A decrease in current portion of long-term loan from related party THB 4,386 million from additions of THB 276 million, repayment of THB 1,051 million, reclassification to non-current part of THB 3,593 million and unrealized gain on foreign exchange rate translation at the end of period of THB 18 million.
 2. A decrease in accounts payable of related party THB 236 million.
 3. An increase in financial derivative liabilities of Gas – fired power plant THB 2,495 million.
 4. An increase in accrued expense THB 61 million.
- Long-term loans from financial institutions of THB 25,125 million, increase by THB 15,265 million or 155%. This was a result of reclassification to current portion THB 3,499 million, additions of THB 19,651 million mainly to support business expansion in USA, repayment of THB 408 million, and unrealized gain on foreign exchange rate translation at the end of period THB 479 million on USD loan that resulting from an appreciation of THB currency against USD currency. Average exchange rate of USD/THB as of 31 Dec 2023 was THB 34.2233 (31 Dec 2022: THB 34.5624).
- Other liability of THB 3,699 million, increased by THB 3,568 million or 2724%. This was mainly from reclassification from current portion of long-term loan from related party THB 3,593 million.

3.3 Shareholders' equity of THB 54,677 million, an increase of THB 1,885 million or 4% compared to shareholders' equity as of 31 December 2022 was due to:

Financial Position (Unit: Million Baht)	Equity		+/(-)	
	31-Dec-23	31-Dec-22	Amount	%
Owners of the parent	50,185	48,481	1,704	4%
Non-controlling interests	4,492	4,311	181	4%
Total equity	54,677	52,792	1,885	4%

- An increase of THB 5,319 million from net profits for 2023.
- An increase of THB 181 million from non-controlling interests.
- An increase of THB 399 million from the change in fair value of hedged financial instruments.
- A decrease of THB 1,118 million from foreign exchange translation of subsidiaries and joint ventures financial statements.
- A decrease of THB 762 million from cashflows hedge reserves of associate and joint venture.
- A decrease of THB 2,133 million from dividend paid.
- A decrease of THB 1 million from remeasurement of employment benefit.

Net debt to equity ratio as of 31 December 2023 from consolidated financial positions was 0.44 times (31 December 2022: 0.24 time)

4. Statements of Consolidated Cash Flows

Statement of consolidated cash flows for the year ended 31 December 2023 reported an increase of net cash flows from 31 December 2022 total of THB 5,297 million (included exchange rate translation loss of THB 78). The consolidated cash flows were as follows:

Cash flow (Unit : Million Baht)	Consolidated
Net cash receipt from operating activities	3,754
Net cash used in investing activities	(13,426)
Net cash receipt from financing activities	15,048
Net increase in cash and cash equivalents	5,375
Exchange differences on cash and cash equivalents	(78)
Cash and cash equivalents at beginning of the year	4,055
Cash and cash equivalents at end of the year	9,352

4.1 Net cash inflows from operating activities of THB 3,754 million comprised of:

- Collection from sales of power and steam THB 11,708 million.
- Payment to suppliers and contractors THB 5,779 million.
- Payment of interest expense THB 2,061 million.
- Payment of corporate income tax THB 114 million.

4.2 Net cash outflows from investing activities of THB 13,426 million comprised of:

- Receipts of dividends from joint ventures THB 1,242 million.
- Receipts from interest income THB 653 million.
- Receipts from investment in debt instruments THB 1,120 million.
- Receipts from loan to related party THB 4,131 million.
- Payment for acquisition of Temple II gas fired power plant in USA THB 15,930 million.
- Payments for machines, equipment, and project in progress THB 1,010 million.
- Payment for investment in associates THB 1,918 million.
- Payment for investment in a joint venture, BKV-BPP Cotton Cove in USA THB 316 million.
- Payment for loan to related party THB 55 million.
- Payments for investment in debt instruments THB 1,343 million.

4.3 Net cash inflows from financing activities of THB 15,408 million comprised of:

- Receipts from short-term and long-term loans from financial institutions THB 24,702 million.
- Receipts from long term loan from related party THB 275 million.
- Repayments of short-term and long-term loans from financial institutions THB 6,367 million.
- Repayments of long-term loan to related party of 1,051 million.
- Repayment of lease liabilities THB 13 million.
- Payment for dividend of THB 2,133 million.
- Payment for non-controlling interest of THB 365 million.