



Banpu Public Company Limited and Subsidiaries

Management's Discussion and Analysis

2022

MSCI
ESG RATINGS

CCC	B	BB	BBB	A	AA	AAA
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Energy resources

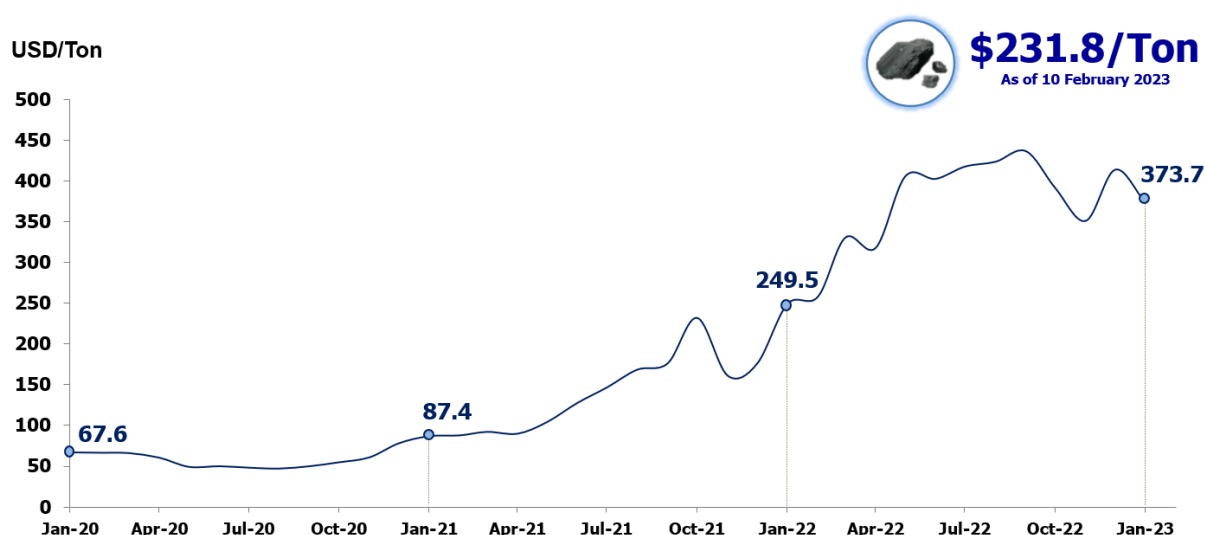
Energy generation

Energy technology

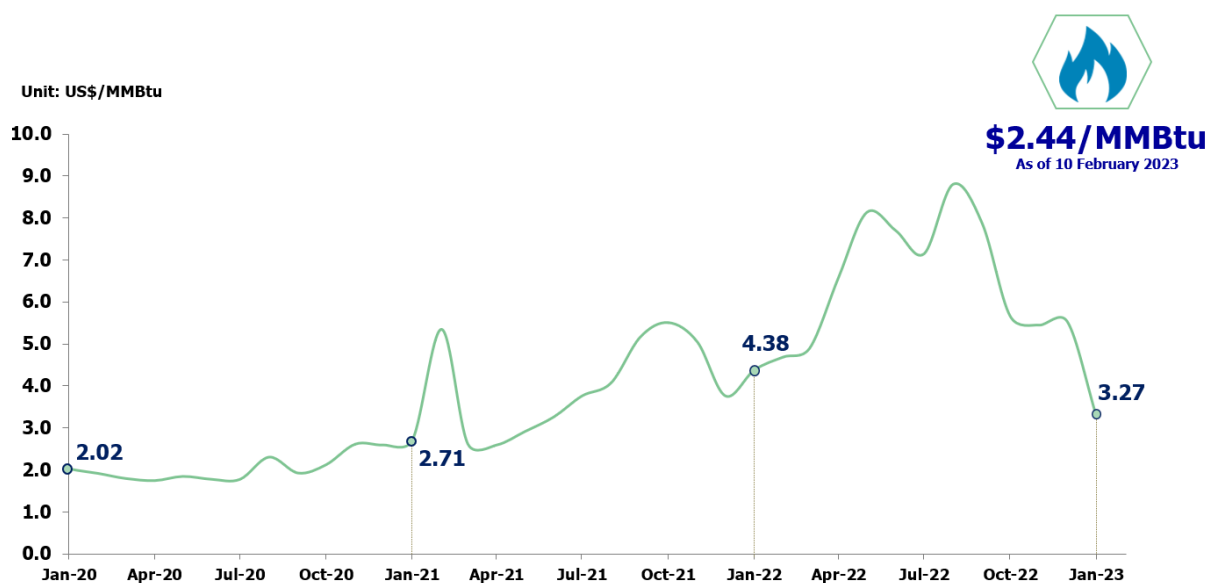
1. Energy Commodities Price Index

The market thermal coal and natural gas price since January 2020 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 2020 – February 2023



Average Henry Hub Natural Gas Price for January 2020 – February 2023



2. Management Discussion and Analysis

Banpu achieved strong FY 2022 operational results with reported net profit of USD 1,162 million, significant increase of more than triple compared to previous year. The major contribution comes from the record high commodity prices for both coal and natural gas, result in an average selling price (ASP) of coal for 167.66 USD/ton, increase nearly double compare to previous year, and the average local price of US Natural gas for 5.72 USD/Mcf, increase by 58% compare to previous year, coupled with the company's ability to maintain operational resiliency with high flexibility, allowing all business units to create value by capturing upside opportunity during high commodity price to continue generate strong and consistent cash flow. The reported net profit already included several strategic transactions during the year which are gain from divestment of shareholding in Sunseap Group Pte. Ltd. of USD 179 million, gain from investment in North Texas Shale or XTO gas asset in the US of USD 171 million and also the impact of provision on Altai Nuurs project in Mongolia of USD 375 million as a result of the public transportation infrastructures that is necessary for the project developing and commercial operating did not progress as planned. The company decided to set a provision for prudent reporting in FY 2022.

The company continue to report strong operational cash flow by achieving group EBITDA of USD 3,916 million, 120% improve from previous year, consists of Coal business reported EBITDA of USD 2,654 million (up by 127% YoY), Gas business reported EBITDA of USD 1,052 million (up by 107% YoY), Power business reported EBITDA of USD 231 million (up by 120 % YoY), and Energy Technology business reported EBITDA of USD -22 million.

The Energy resources business reported strong revenue and cash flow generation as a result of operational efficiency improvement and production plan flexibility to capture the upside during high commodity prices for both coal and natural gas business.

Coal businesses reported outstanding performance, driven by higher selling prices which improved by nearly doubled compared to previous year. The group ASP improved to USD 167.66/ton, up by 84% compared to previous year which reported ASP of USD 91.17/ton. The total coal sales volume was 30.95 million tons, slightly declined by 3% compared to previous year. The average gross profit margin from coal business therefore increased to 57%.

Indonesia coal business reported improvement in average selling price at 192.69 USD/ton, up by 85% from 104.16 USD/ton in previous year. The sales volume of 18.93 million tons slightly decreased by 6% compared to previous year, mainly due to the impact from challenging weather conditions caused by higher-than-expected rainfall. However, with the cost of sale at 64.90 USD/ton, the average gross profit margin improved to 66%.

Australia coal business reported significant improvement in ASP of AUD 213.06/ton, supported by the strong export price that reach average of AUD 444.96/ton, though the sales volume was 8.55 million tons, decreased by 13% compared to previous year from the challenging geology at Mandalong mine, so the longwall changeover took longer time than expected. So, the cost of sales increases to AUD 131.56/ton, but still report strong gross profit margin of 38%.

China coal business continue to report strong share of profit of USD 229.73 million, improve nearly double compared to previous year. The continued strong Chinese domestic coal price driven by strong demand from the reopening of the country to boost up the economy support the earning performance.

Gas business in the US started to recognize the earnings from its newly acquired North Texas Shale or XTO gas asset, so the total production volume increase to 280.05 billion Cubic Feet (Bcf). Up by 14% from previous year. The average local price was 5.72 USD/Mcf, increased by 58% compared to 3.61 USD/Mcf in the previous year, and report gross profit margin at 61% driven by strong domestic demand from all sectors and surge in natural gas export to support demand from European countries that cutoff the natural gas import from Russia due to the ongoing tension between Russia and Ukraine so, throughout the year the domestic natural gas inventory remain weak, result in high domestic natural gas price. However, during end of the year, most of US natural gas producers continued to raise their productions to improve the storage level while the winter was not as cold as expected, so the domestic natural gas price started to stabilize down.

The Energy generation business reported outstanding performance with consistent share of profit, as a result of the ability to maintain plants efficiency for smooth electricity generation in all power plant assets. Temple I, the US gas-fired power plant reported good performance from the continued strong power demand during the year, with net profit of USD 15.24 million. HPC power plant generates share of profit of USD 105.03 million, with strong annual EAF reached 86%, BLCP also reported an improvement in its operation with share of profit of USD 16.22 million, with consistent strong annual EAF of 93%. Nakoso power plant in Japan reported profit sharing of USD 8.11 million. For the performance of CHPs plants in China reported net loss of USD 29.45 million, mainly from the pressure of high Chinese domestic coal cost for an average of RMB 1,184/ton, an increase of 26% compared to previous year. On the other hand, Shanxi Lu Guang (SLG) power plant in China reported an improvement in its power sold and with the government supportive policy to encourage power plant entering long-term coal supply contract with domestic coal producers, SLG can purchased coal at lower cost of average RMB 902/ton, so its operational performance improved from previous year though still reported net loss of USD 8.87 million.

The renewable business consists of Solar farms in China and Japan continue to report consistent strong operational performance. Solar farms in China reported net profit of RMB 47 million, Solar farms in Japan reported TK dividend distribution of JPY 1,245 million. However, with the challenging weather conditions caused by La Niña impact, some area of our operations experienced with declining capacity factor which

are solar farm and wind farm in Vietnam, reported net loss of USD 1.8 million and the 2 solar farms in Australia reported net loss of AUD 8.2 million

For Energy Technology business continues expanding its business through smart and sustainable energy solutions, serving various requirements of all customer segments in respond to the megatrend of low-carbon society, by expanding its products and services in various attractive geographies and collaboration with leading companies and business partners to enhance the potential of the company's clean energy businesses. In 2022, the company has expanded its solar roof business in Thailand, China and Indonesia achieving committed capacity up to 205 MW. The company also continues growing Energy Storage systems or ESS business which cover the production and sales of Battery by increase its shareholding in Durapower Holding Pte. Ltd. to 65.10%, also the JV partnership among Banpu Next (30%) Durapower (30%) and Cherdchai motors (40%), to set up lithium-Ion battery plant in Thailand, expected to started the operation in 2023. For Smart City and Energy Management business, the company has secured new clients in various industries with a total number of 20 projects. For E-mobility business, the company expanding its fleet management coverage, having ride sharing through Muvmi for 2,500 service points, Car sharing through Haup car for 1,500 sharing stations, the charging stations under Evolt of 300 stations and EV customer services through Beyond Green Co., Ltd for 20 service centers. The company continues to pursue its commitment in expanding clean energy business to achieve its growth targets in all business within 2025 as planned.

3. Group Performance Analysis

The analysis and explanation of Banpu Group performance for the year ended 31 December 2022 and 2021 as follows:

Consolidated Statement of Income for the year ended 31 December 2022 and 2021

Consolidated financial performance (Unit: Million USD)	2022	2021	Change	
			Amount	%
Sales and service income	7,693	4,124	3,569	87%
Cost of sales and services	(3,616)	(2,393)	(1,223)	51%
Gross profit	4,077	1,731	2,346	136%
Selling expenses	(229)	(171)	(58)	34%
Administrative expenses	(451)	(304)	(147)	48%
Royalty fee	(592)	(294)	(298)	101%
Share of profit from joint ventures and associates	339	227	112	49%
Impairment loss on assets	(375)	-	(375)	100%
Other income (expenses)	(360)	(315)	(45)	14%
Finance cost	(265)	(184)	(81)	44%
Profit before income taxes	2,144	690	1,454	211%
Income taxes	(521)	(198)	(323)	163%
Profit for the year	1,623	492	1,131	230%
Owners of the parent	1,162	304	858	282%
Non-controlling interests	461	189	272	144%
Earnings per share (Unit : USD)	0.162	0.049	0.113	231%
Diluted earnings per share (Unit : USD)	0.148	0.046	0.102	222%

Banpu group performance for 2022 reported net profit at \$1,162 million, increased by \$858 million or 282% compared to 2021. This was mainly from an increase in coal and natural gas market price that supported overall group performance. Moreover, 2022 was the first year that the group consolidated a newly acquired shale gas business in North Texas, including new power plants invested during 4Q2021, comprising of Temple I gas-fired power plant in USA and wind power plant in Vietnam. During the year, the group also recognized profit from sales of investment in a joint venture and bargain purchase gain from business acquisition in USA, including profit sharing from coal business in China. However, during the year, the group considered to provide a provision for the impairment loss of one coal mine under development in Mongolia because the public transportation infrastructure that is necessary for project developing and commercial operating did not progress as planned. The Group decided to set a provision for impairment of \$375 million for such mine.

The Group performance for 2022 were describe as details follows:

Sales and cost of sales

(Unit: Million USD)	Revenue			Cost of Sales		
	2022	2021	Inc.(Dec.)	2022	2021	Inc.(Dec.)
Coal Business	5,190	2,909	78%	2,242	1,658	35%
Natural Gas Business	1,658	890	86%	639	411	55%
Power & Steam Business	746	244	206%	659	229	188%
Others	99	81	22%	76	95	-20%
Total	7,693	4,124	87%	3,616	2,393	51%

Sales

Sales reported at \$7,693 million (equivalent to THB 272,270 million), increased by \$3,569 million compared to 2021, that derived from an increase from coal businesses \$2,281 million, natural gas business \$768 million, power and steam business and others \$520 million. Details were described as follows:

1. Sales from coal business of \$5,190 million or 67% of total revenue separated by source of coal as below:
 - Indonesia coal mines of \$3,650 million
 - Australia coal mines of \$1,253 million
 - Coal trading business of \$287 million
2. Sales from natural gas business in USA of \$1,658 million or 22% of total revenue.
3. Sales from power and steam of \$746 million or 10% 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 \$99 million was mainly from energy trading business in Japan.

1. Coal Business

Coal Business		2022	2021	Inc.(Dec.)
Sales Volume	Million Tonnes	30.95	31.91	-3%
Average selling price	\$/Tonne	167.66	91.17	84%
Average Cost of sales	\$/Tonne	72.42	51.97	39%

Coal sales of \$5,190 million, increased by \$2,281 million or 78%, was a result of an increase in average selling price by \$76.49 per tonne or 84%, while a decrease in sales volume by 0.96 million tonnes, and an increase in cost of sales by \$20.45 per tonne or 39% compared to 2021 as following details:

Indonesia Mines		2022	2021	Inc.(Dec.)
Sales Volume	Million Tonnes	18.93	20.07	-6%
Average selling price	\$/Tonne	192.69	104.16	85%
Average Cost of sales	\$/Tonne	64.90	44.91	45%

Coal Business in Indonesia

- **Sales volume**

Coal sales volume was 18.93 million tonnes, decreased by 1.14 million tonnes or 6% compared to 2021.

- **Average selling price**

Average selling price per tonne was \$192.69, increased by \$88.53 or 85% compared to 2021, in accordance with an increase of global coal market price.

- **Average cost of sales**

Average cost of sales per tonne was \$64.90, increased by \$19.99 or 45% compared to 2021, due to an impact from sharply increase in global fuel market price that average price of diesel per liter was \$0.92 (2021: \$0.50), higher overburden expenditure, including 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 This included a favor outcome from cost reduction program that implemented across the group.

Australia Mines		2022	2021	Inc.(Dec.)
Sales Volume	Million Tonnes	8.55	9.82	-13%
Average selling price	A\$/Tonne	213.06	98.90	115%
Average Cost of sales	A\$/Tonne	131.56	91.90	43%

Coal business in Australia

- Sales volume**

Coal sales volume was 8.55 million tonnes, decreased by 1.27 million tonnes or 13% compared to 2021 from a decrease in production from Mandalong, Airly and Clarence mines.

- Average selling price**

Average selling price per tonne was A\$213.06, increased by A\$ 114.16 or 115% compared to 2021 as the following details:

Australia Mines	Sales Volume (Unit: Million Tonnes)			Avg. Price/Tonne (A\$/Tonne)		
	2022	2021	Inc.(Dec.)	2022	2021	Inc.(Dec.)
Domestic	5.53	6.45	-14%	86.41	75.22	15%
Export	3.02	3.37	-10%	444.96	122.82	262%
Total	8.55	9.82	-13%			

- Average selling price of domestic and export sales**

Average domestic selling price per tonne was A\$86.41, increased by A\$11.19. This caused by an increase in domestic sales price and from higher quality of coal. The average export selling price per ton was A\$444.96, increased by A\$322.14 per tonne from higher market price compared to 2021. This included a depreciation of AUD currency against USD currency, that impacted to export sales conversion. The average AUD/USD in this quarter was 0.6941 (2021: 0.7516).

- Average cost of sales**

Average cost of sales per tonne was A\$131.56, increased by A\$39.66. This was because an increase in amortization of deferred longwall changeover cost and higher 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 2021 while decrease in production volume, resulted to higher average cost of sales.

2. Natural Gas Business

Natural Gas Business		2022	2021	Inc.(Dec.)
Sales Volume	Bcf **	280.05	246.22	14%
Average Local Price	\$/Mcf	5.72	3.61	58%
Average selling price	\$/Mcf	5.52	3.38	63%
Average Cost of Gathering, processing & transp	\$/Mcf	1.00	0.88	14%
Average Cost*	\$/Mcf	1.54	0.92	67%

* Avg Cost excluded Cost of Gathering, processing & transportation

** Bcf - Billion Cubic Feet

Natural Gas business in USA

Sales from natural gas business in 2022 reported at \$1,658 million, increased by \$768 million or 86% compared to 2021. Details were as follows:

- **Sales Volume**

Natural gas sale volume was 280.05 billion cubic feet, increased by 33.83 billion cubic feet or 14% compared to 2021. This was mainly due to sales volume from shale gas business in North Texas newly acquired during 3Q2022.

- **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 \$5.72, increased by \$2.11 per Mcf or 58% compared to 2021. 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 \$1.00, increased by \$0.12 or 14% compared to 2021. 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 \$1.54, increased by \$0.62 or 67% compared to 2021. This was an increase in production tax that directly correlated to revenue, also a higher inflation that affected to an increase in cost of services and materials.

3. Power Business

Sales from Power and Steam of \$746 million or 10% of total revenue was from sales from CHP plant \$200 million, solar power plant in China of \$28 million, solar power plant in Australia of \$10 million, wind power plant in Vietnam of \$9 million and gas-fired power plant in USA of \$499 million. The power plants in Australia, Vietnam, and USA were acquired by the group during 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		
		2022	2021	Inc.(Dec.)	2022	2021	Inc.(Dec.)	2022	2021	Inc.(Dec.)
Power sold Volume	GWh	1,089.42	1,179.07	-8%	227.35	222.89	2%	3,810.30	417.23	100%
Steam Volume	Million Tonnes	6.08	6.33	-4%	-	-	-	-	-	-
Average PowerTariff	Unit/kWh	0.42	0.37	14%	0.81	0.83	-2%	74.71	-	100%
Average Steam Price	RMB/Tonne	132.27	124.29	6%	-	-	-	-	-	-

Combined Heat and Power (CHP) plants in China

Sales from power, steam, and others from 3 CHP plants in China of \$200 million, increased by \$9 million or 5% compared to 2021, was mainly from increasing in selling price of electricity and steam as detail below:

• Sales Volume

Sales volume of 1,089.42 GWh, decreased by 89.65 GWh or 8% compared to 2021 was a result from decreasing in steam production for industrial sector.

Steam sales of 6.08 million tonnes, decreased by 0.25 million tonnes or 4%, mainly was from Luannan CHP plant due to a decrease in demand from industrial customers.

• Average Selling Price

Average power tariff was RMB 0.42 per kWh, increased by 14% compared to 2021. 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 132.27, increased by 6% from 2021. 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 \$209 million, increased by \$19 million from higher coal cost, main fuel. Average coal cost per ton was 1,184 RMB (2021: 942 RMB), increased by 242 RMB or 26 % compared to last year.

Solar power plants in China

Sales from solar power plants in China reported at \$27.53 million, decreased by \$1 million or 4% compared to 2021. Details of sales volume, average power tariff and cos of sales were as follows:

- **Sales Volume**

Sales volume of 227.35 GWh., increased by 4.46 GWh compared to 2021 from an increase in production volume caused by favorable weather conditions.

- **Average Power Tariff**

Average power tariff was RMB 0.81, decreased from 2021. This was because 10 % of production volume was trade in power trading market under government regulations that price was below old contract price.

- **Cost of Sale**

Cost of sale was \$10 million, decreased by \$0.8 million compared to 2022.

Gas- fired power plant (Temple I) in USA

Sales from gas -fired power plant (Temple I) reported at \$498.97 million, that was invested since 4Q21. Details were as follows:

- **Sales Volume**

Sales volume was 3,810.30 GWh.

- **Average Power Tariff**

Average power tariff was \$74.71 per kWh.

- **Cost of Sale**

Cost of sale was \$238.49 million, mainly from cost of natural gas.

Administrative expense

Administrative expenses reported \$417 million, increased by \$113 million or 37% was mainly from administrative expense resulting from business expansion in USA and from the power plants that were acquired by the group in 2021.

Royalty fees

Royalty fees reported at \$592 million, increased by \$298 million or 101%. The fee comprised of royalty fees from Indonesia mines \$514 million, increased by \$266 million and royalty fees from Australia mines that was \$78 million, increased by \$32 million compared to 2021 that was a result of an increase in coal price versus 2021.

Profit sharing (Unit : Million USD)	2022	2021	Inc.(Dec.)	
			Amount	%
BLCP	16	7	9	129%
Hongsa & Phufai Mining	105	113	(8)	-7%
Shanxi Luguang	(9)	(16)	7	-44%
Coal business in China	229	130	99	76%
Holding Company of Solar Power in Japan and others	(2)	(7)	5	-71%
Total	339	227	112	49%

Share of profit from joint ventures and associates

Profit sharing from joint ventures and associates reported at \$339 million, increased by \$112 million or 49% compared to 2021 mainly due to details described as below:

- 1) Recognition of profit sharing from Hongsa power plant and PhuFai mining in Laos of \$105 million, decreased by \$8 million from 2021. This was from loss on foreign exchange rate translation of \$16 million, while operating performance was increase \$8 million from more efficiency in operation that continuously generated stable electricity.
- 2) Recognition of profit sharing from BLCP of \$16 million, increased by \$9 million. This was mainly due to a decrease in deferred tax liability recognition and unrealized loss on exchange rate translation by \$11 million, net with a decrease in operating profit of \$2 million.
- 3) Recognition of loss sharing from SLG power plant of \$9 million or decrease in loss sharing \$7 million compared to 2021. The better performance was due the plant has 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 \$229 million. This was a result of higher sales price aligned with coal market price.

Impairment loss on asset

Impairment loss on assets of \$375 million was a provision for the impairment loss of one coal mine under development (Altai Nuurs) in Mongolia because the public transportation infrastructure that is necessary for project developing and commercial operating did not progress as planned. This comprised of provision for impairment on mining property rights of \$314 million and deferred exploration and development expenditure of \$61 million.

Other expense

Other expense of \$360 million comprised of:

- 1) Net gain on foreign exchange rate of \$5 million was mainly from realized gain on foreign exchange rate of \$51 million from THB loan repayment during the period and unrealized loss on foreign exchange rate translation of \$46 million from conversion of USD loan at the end of the year. This was a result of a depreciation of THB currency against USD currency compared to the prior year. Average exchange rate of USD/THB as of 31 Dec 2022 was THB 34.5624 (31 Dec 2021: THB 33.4199). This was also from a depreciation of IDR currency against USD currency. Average exchange rate of USD/IDR as of 31 Dec 2022 was 14,853 IDR (31 Dec 2021: 14,258 IDR)
- 2) Net loss from financial derivatives of \$816 million comprised of:
 - Realized loss from financial derivatives of \$780 million derived from coal swap contracts of \$134 million, natural gas swap contracts of \$601 million, cross currency swap and interest rate swap of \$4 million, fuel swap of \$1 million, foreign exchange rate forward contract \$16 million, electricity call option from Temple I gas-fired power plant of \$27 million, while, realized gain on interest rate swap of \$3 million.
 - Unrealized loss on fair value remeasurement of financial derivatives at the end of the year of \$36 million was from natural gas swap contract of \$26 million and electricity swaption of \$23 million, while, there was unrealized gain on electricity call option from Temple I gas-fired in USA of \$3 million, interest rate swap of \$9 million and foreign exchange rate forward contracts of \$1 million.
- 3) Management fee income and others of \$451 million was from:
 - Interest income of \$18 million.
 - Management fee charged to related parties and joint ventures of \$1 million.
 - Dividend income of \$8 million, was mainly from profit sharing from solar power business in Japan under TK (TOKUMEI KUMIAI) agreement.

- Gain on sales of investment in a joint venture of \$179 million.
- Others of \$ 74 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.

Income tax

Income tax of \$521 million, increased by \$323 million was mainly from:

- 1) An increase in corporate income tax of \$180 million, aligned with higher operating profits compared to prior year.
- 2) An increase in withholding tax of \$32 million from dividend receives during the period.
- 3) An increase in deferred tax expense of \$111 million was from an increase in 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, also from recognition of deferred tax liability from a newly acquired shale gas business in North Texas during 2022.

4. Statements of Consolidated Financial Position

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

Financial Position (Unit: Million USD)	31-Dec-22	31-Dec-21	Inc.(Dec.)	
			Amount	%
Assets	12,638	10,946	1,692	15%
Liabilities	8,229	7,843	386	5%
Equity	4,409	3,103	1,306	42%

4.1 Total assets of \$12,638 million, increased by \$1,692 million compared to total assets as of 31 December 2021 with details described as below:

Financial Position (Unit: Million USD)	Assets		Inc.(Dec.)	
	31-Dec-22	31-Dec-21	Amount	%
Cash and Cash equivalent	2,154	1,184	970	82%
Investment in debt instruments measured at fair value through profit or loss	12	16	(4)	-25%
Financial assets measured at fair value at amortised cost	-	-	-	100%
Trade accounts receivable and note receivables, net	668	473	195	41%
Inventory net	196	158	38	24%
Current portion of dividend receivables from related parties	28	24	4	17%
Non-current assets held-for-sale	-	172	(172)	-100%
Financial derivative assets due in one year	14	21	(7)	-33%
Other current assets	614	508	106	21%
Total Current Assets	3,686	2,556	1,130	44%
Dividend receivables from related parties	3	7	(4)	-57%
Investments in joint ventures and associates accounted for using the equity method	1,784	1,645	139	8%
Investment in debt instruments measured at fair value through profit or loss	178	-	178	100%
Investment in equity instrument measured at fair value through profit or loss	7	8	(1)	-13%
Investments in equity instruments measured at fair value through other comprehensive income	159	164	(5)	-3%
Property, plant and equipment, net	4,190	3,416	774	23%
Deferred exploration/stripping costs, net	740	889	(149)	-17%
Mining property rights, net	876	1,276	(400)	-31%
Goodwill	394	432	(38)	-9%
Right of use assets	77	66	11	17%
Financial derivative assets	51	64	(13)	-20%
Other non- current assets	493	423	70	17%
Total Non-Current Assets	8,952	8,390	562	7%
Total Assets	12,638	10,946	1,692	15%

- Cash and cash equivalents of \$2,154 million, increased by \$970 million. (As explanation in no.5 Consolidated Statement of Cash Flows).
- Investment in debt instrument measured at fair value through profit or loss of \$12 million, decreased by \$4 million, comprising of additions of \$63 million, net with redemptions of \$66 million, and decrease from effects of foreign exchange rate translation at the end of the year ,and others of \$1 million.
- Current portion and non-current portion of dividend receivable from related parties of \$28 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 decreased by \$0.23 million. This was a net result of:
 - 1) An increase from additional declared dividend of \$116 million.
 - 2) A decrease from received dividend of \$114 million.
 - 3) A decrease from foreign exchange rate translation at the end of periods and others of \$2 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 in 1Q2022.

- Investment in joint ventures and associates of \$1,784 million, increased by \$139 million or 8% was from:
 - 1) An increase from recognition of profit sharing from joint ventures and associates by \$339 million.
 - 2) An increase from investment additions of \$17 million.
 - 3) An increase from recognition of other comprehensive income from investment in joint ventures and associates of \$29 million.
 - 4) A decrease from dividend recognition during the period of \$116 million.
 - 5) A decrease from the effects of foreign exchange rate translation at end of the period and others by \$101 million.
- Investment in debt instrument measured at fair value through profit or loss of \$178 million was primary from investment in US healthcare investment fund and Smart City Fund II in Europe during the year totalling \$166 million and increase from fair value remeasurement of investment at the end of the year of \$12 million.
- Investment in equity instrument measured at fair value through other comprehensive income (FVOCI) of \$159 million, decreased by \$5 million. This was due to:
 - 1) An additional investment in solar power business in Japan of \$13 million.
 - 2) An increase from the impact of fair value remeasurement of \$4 million.
 - 3) A decrease from the effects of foreign exchange rate translation at the end of the year and others of \$22 million.
- Property plant and equipment of \$4,190 million, increased by \$774 million derived from:
 - 1) An increase from additions of machine and equipment of coal business, natural gas business and power business total of \$300 million.
 - 2) An increase from acquisition of natural gas business in USA and solar power plant in Vietnam total of \$955 million.
 - 3) An increase from fair value remeasurement of contingent liability from asset acquisition of \$5 million.
 - 4) An increase from asset reclassification of \$8 million.
 - 5) A decrease from sales and write-off of \$7 million.
 - 6) A decrease from depreciation charges for the year of \$372 million.
 - 7) A decrease from the effects of foreign exchange rate translation at end of the year of \$105 million.
- Right of use assets of \$876 million decreased by \$400 million, or 31%, resulting from write-off during the year of \$26 million, provision for impairment of \$314 million for assets of Altai Nuurs, a mine under development in Mongolia, and from the effects of foreign exchange rate translation at the end of the year of \$60 million.

- Current portion and non-current portion of financial derivative assets, net of \$14 million and \$51 million, respectively, or total of \$65 million. This was a result from fair value remeasurement at the end of the year, which comprised of interest rate swap of \$17 million, electricity swaption of \$37 million, electricity forward contracts of \$1 million, foreign exchange rate forward contract of \$4 million, coal swap of \$2 million and natural gas swap of \$5 million.
- Other non-current assets of \$493 million, increased by \$70 million. This was due to an increase in vat receivable of \$103 million, right to operate of power plant business from business acquisition of solar power plant in Vietnam of \$6 million, whereas a decrease in prepaid income tax in Indonesia of \$25 million, deposit of \$1 million, deferred income tax assets in Indonesia of \$12 million, and reclassification of asset under development to be fixed assets and others of \$1 million.

4.2 Total liabilities of \$8,229 million, increased by \$386 million compared to total liabilities as of 31 December 2021 with movement details as described below:

Financial Position (Unit: Million USD)	Liabilities		Inc.(Dec.)	
	31-Dec-22	31-Dec-21	Amount	%
Short-term loans from financial institutions	451	1,174	(723)	-62%
Trade accounts payable	123	99	24	24%
Current portion of long-term borrowings, net	667	517	150	29%
Current portion of debenture, net	251	120	131	109%
Accrued overburden and coal transportation costs	113	77	36	47%
Financial derivative liabilities due in one year	66	128	(62)	-48%
Other current liabilities	1,112	793	319	40%
Total current liabilities	2,783	2,908	(125)	-4%
Long-term loans from other company	2,262	2,270	(8)	0%
Debentures, net	2,372	1,911	461	24%
Financial derivative liabilities, net	4	53	(49)	-92%
Provision for decommissioning and reserve for environment reclamation	263	340	(77)	-23%
Other liabilities	545	361	184	51%
Total non-current liabilities	5,446	4,935	511	10%
Total liabilities	8,229	7,843	386	5%

- Short-term loans from financial institutions of \$451 million, decreased by \$723 million or 62%, was from addition of \$1,599 million, repayment of \$2,296 million, and a decrease from the effects of foreign exchange rate translation at the end of the period of \$26 million.
- Current portions of long-term loans of \$667 million, increased by \$150 million or 29%. This was a net result from a reclassification from non-current portion of \$696 million, repayment of \$497 million, deferred finance charge of \$2 million, and the effects of foreign exchange rate translation at the end of period of \$51 million.

- Current portions of debenture of \$251 million, increased by \$131 million or 109% was from an increase from reclassification from non-current part of \$255 million, offset with redemption of \$115 million and the effects of foreign exchange rate translation at the end of the year of \$9 million.
- Accrued overburden and coal transportation expenses of \$113 million, increased by \$36 million or 47% was mainly from mining operations of subsidiaries in Indonesia.
- Other current liabilities of \$1,112 million increased by 319 million. This was primary from accrued interest expense of \$10 million, accrued income tax and withholding tax payable of \$131 million, accrued royalty expense of \$3 million, fixed asset purchase payable of \$18 million and others such as domestic market obligation \$31 million, accrued expense from derivative of \$12 million, contingent liabilities from a newly acquired shale gas business in North Texas during 2022 of \$22 million, and other accrued expense of \$92 million.
- Long- term loans of \$2,262 million, decreased by \$8 million or 0.35%, was a net result of:
 - 1) An increase from additional loan during the period of \$680 million.
 - 2) An increase from business acquisition of \$22 million.
 - 3) A decrease from reclassification to current portion of \$696 million.
 - 4) An increase from deferred finance charge and its amortization of \$4 million
 - 5) A decrease from the effects of foreign exchange translation at the end of the year of \$15 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 31 Dec 2022 was THB 34.5624 (31 Dec 2021: THB 33.4199). Also, a decrease was from a depreciation of AUD currency against USD currency at the end of the year. Average exchange rate of AUD/USD as of 31 Dec 2022 was 0.6764 (31 Dec 2021: 0.7260).
- Debenture of \$2,372 million, increased by \$461 million or 24%. This was from 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 year of 57 million due to a depreciation of THB currency against USD currency impacted to THB currency debenture.
- Current portion and non-current portion of derivative liabilities reported at \$66 million and \$4 million, respectively, total of \$70 million. This was changes in fair value of financial derivatives at the end of the year, that consisted of cross currency swap and interest rate swap of \$17 million, natural gas swap contracts of \$43 million, natural gas and natural gas liquid swap and option of \$7 million and electricity call option of \$2 million.

4.3 Shareholders' equity of \$4,409 million increased by \$1,306 million compared to shareholders' equity as of 31 December 2021, with movement details as described below:

Financial Position (Unit: Million USD)	Equity		Inc.(Dec.)	
	31-Dec-22	31-Dec-21	Amount	%
Equity attributable to owners of the parent	3,409	2,372	1,037	44%
Non-controlling interests	1,000	731	269	37%
Total equity	4,409	3,103	1,306	42%

- An increase of \$1,162 million from 2022 net profits.
- An increase of \$223 from additional paid-up share capital.
- An increase of \$25 million from reserve for share-based compensation to employees.
- An increase of \$81 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 \$341 million from the effects of foreign exchange rate translation of subsidiaries' financial statements and others.
- An increase of \$446 million from non-controlling interest.
- An increase of \$63 million from disposal of treasury shares of a subsidiary.
- A decrease of \$336 million from dividend payment.

4.4 Net debt-to-equity ratio as of 31 December 2022 reported at 0.74 times (31 December 2021: 1.31 times).

5. Statement of Consolidated Cash Flows

Statement of consolidated cash flows for the year ended 31 December 2022 presented an increase of net cash flow by \$970 million (included the effect from unrealized loss on exchange rate translation at the end of period of \$57 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	1,832
Net Cash flows used in investing activities	(861)
Net Cash flows from financing activities	56
Net increase in cash and cash equivalents	1,027
Exchange gain on cash and cash equivalents	(57)
Cash and cash equivalents at the beginning of the period	1,184
Cash and cash equivalents at end of the year	2,154

5.1 Net cash inflow from operating activities of \$1,832 million; with major operating items as follows:

- Collections from sales of \$6,685 million.
- Payments to contractors and suppliers of \$3,230 million.
- Interest payments of \$249 million.
- Payments of income tax of \$260 million.
- Receipts from tax refund of \$2 million.
- Royalty fee payments of \$637 million.
- Other payments of \$479 million.

5.2 Net cash used in investing activities of \$861 million; with major items as follows:

- Payments for machines, equipment, and project in progress of \$281 million.
- Payment for business acquisition of \$648 million.
- Payments for financial assets measured at fair value through profit and loss of \$163 million.
- Payments for financial assets measured at fair value through other comprehensive income of \$12 million.
- Payments for deferred exploration and development expenditure of \$213 million.

- Payment for placement of restricted cash of \$19 million.
- Payment for investment in joint ventures and associates of \$17 million.
- Receipts from dividend from joint ventures and other investments of \$115 million.
- Receipts from sales of investment in joint venture of \$348 million.
- Receipts from interest income and others of \$29 million.

5.3 Net cash inflow from financing activities of \$56 million; comprised of

- Receipts from short term and long - term loans from financial institutions and debentures of \$3,053 million.
- Repayments of short term and long - term loans from financial institutions, debentures, and lease liabilities of \$2,948 million.
- Receipts from disposal of treasury shares of a subsidiary of \$63 million.
- Receipts from additional paid-up share capital of \$223 million.
- Payment for dividend of \$336 million.
- Receipts from an increase in share capital of a subsidiary from non-controlling interest of \$1 million.

6. Coal Reserves

The quantity of sales and remaining of coal reserves for the year ended 31 December 2022:

Coal Mine (Unit: Million Tons)	Quantity of Coal Sales and Reserves			
	Coal reserves as of 31 Dec 2021	Reserves addition 2022	Sales volume Jan - Dec 2022	Coal reserves as of 31 Dec 2022
1. Indonesia				
1.1 Jorong	8.15		0.87	7.28
1.2 Indominco	30.32		6.78	23.54
1.3 Kitadin	0.44		0.32	0.12
1.4 Trubaindo	35.49		2.97	32.52
1.5 Bharinto	141.16		5.32	135.84
1.6 Graha Panca Karsa	-	21.50	-	21.50
1.7 NPR Project	77.40		-	77.40
2. Australia	260.69		8.07	252.62
3. China				
3.1 Gaohe	108.84		8.68	100.15
3.2 Hebi Zhongtai	13.75		0.82	12.93
Total	676.24	21.50	33.83	663.91

7. Natural Gas Reserves

The quantity of sales and remaining of natural gas reserves for the year ended 31 December 2022:

Quantity of Natural Gas Sales and Reserves	Natural Gas (Unit: Million Cubic Feet)
Natural Gas reserves as at 31 December 2021	4,186,761
1) Reserves addition from XTO acquisition	1,413,576
2) Adjustment on reserve estimation	465,001
3) Production and Sales 2022	(280,049)
Natural Gas reserves as at 31 December 2022	5,785,289

(Natural Gas Reserves from Marcellus and Barnett shales refer to Reserve Report 's Ryder Scott)