



Banpu Public Company Limited and Subsidiaries

Management's Discussion and Analysis For the Year Ended 2021

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Banpu has been recognized as a member of
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since 2014.

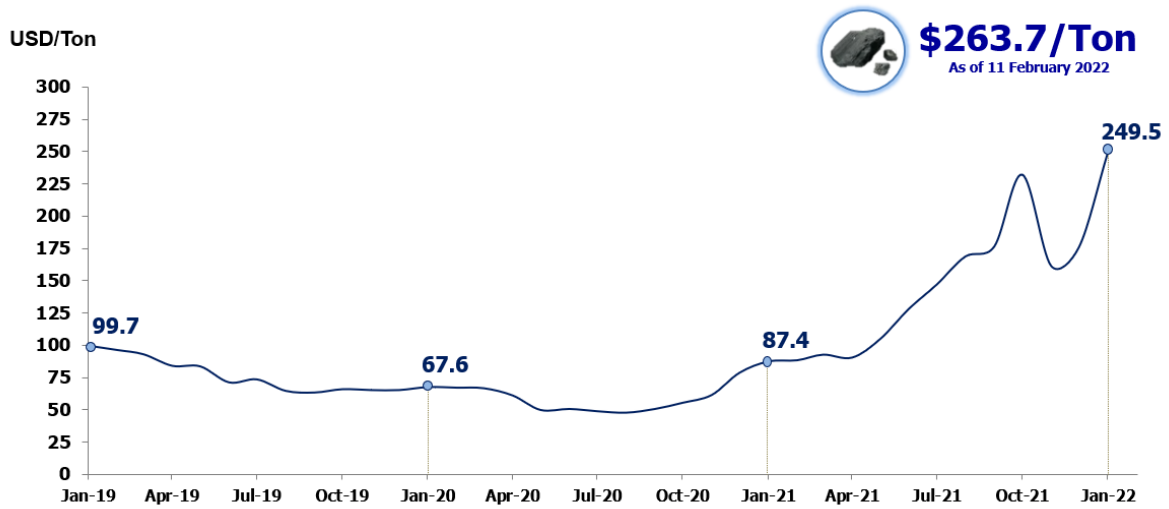
In 2020, Banpu Public Company Limited
received a rating of A (on a scale of AAA-CCC)
in the MSCI ESG Ratings assessment.



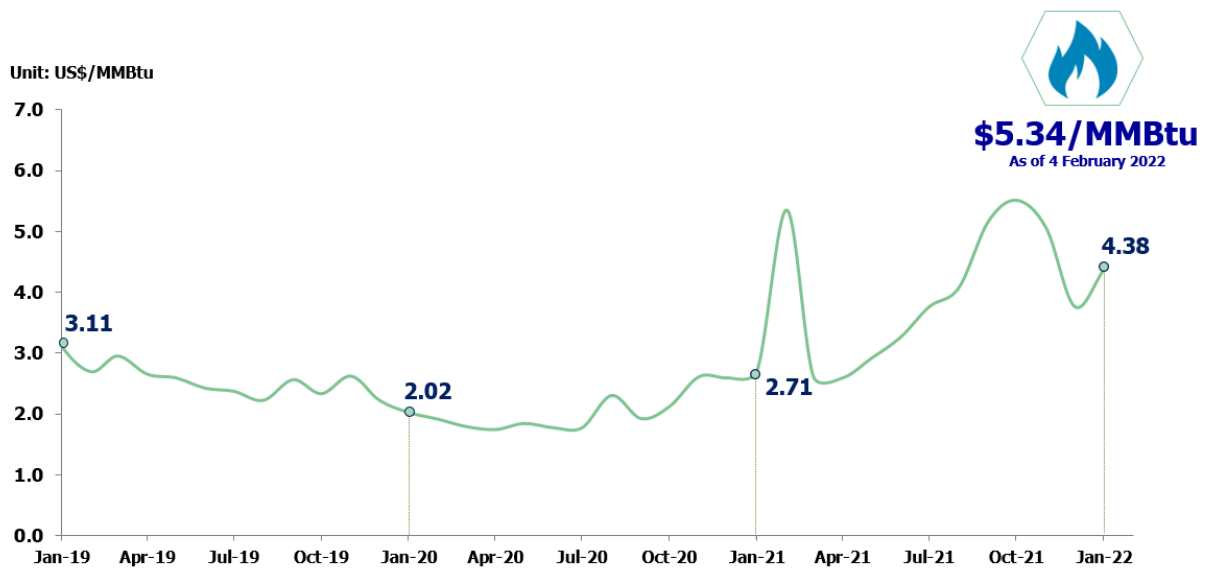
1. Energy Commodities Price Index

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

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



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



2. Management Discussion and Analysis

Banpu reported a turnaround performance of 2021 with net profit of USD 304 million which included the exchange rate translation gain of USD 74 million from the THB depreciation against USD. The 3 core businesses reported strong operational cash flow with EBITDA of USD 1,778 million significantly improved by 216% from previous year. EBITDA from coal of USD 1,169 million (+243YoY), EBITDA from gas was USD 508 million (+848%YoY) EBITDA from Power business of USD 109 million (-34%YoY) and EBITDA from Energy Technology of USD (-8) million. The performance improvement was mainly driven by the surge in Global energy prices during 2021 driven by the demand for natural gas and coal that has rebounded as the global economy recovered, led to an increase in demand for both electricity generation and industrial use. While supply of both coal and gas from major producing countries has faced with several constrains from adverse weather events and some was affected by policies, which has impacted to seaborne international trade. The commodity price therefore remains in high level.

The Energy Resources business reported strong operational result mainly from the improvement in average selling price. Indonesia coal business reported annual sales volume of 20.1 million tons, the average selling price (ASP) was 104.16 USD/ton, increased nearly double from ASP of 53.79 USD/ton in previous year. The cost of sale was at 44.91 USD/ton, Gross Profit Margin (GPM) was reported at 57%

Australia coal business reported annual sales volume of 9.82 million tons, 21% decreased from previous year as it experienced complex geology of Mandalong and Springvale mine, reflected in the cost of sale at 91.90 AUD/ton, However, the reported ASP was improved to 98.90 AUD/ton, increased by 22% from previous year. China coal reported outstanding performance with share of profit of USD 129.46 million, 5 times higher compared to previous year because of coal supply crisis in the country which brought up the Chinese domestic coal price remain high throughout the year.

Gas business reported an average annual local price of 3.61 USD/Mcf, increased by 94% compared to 1.86 USD/Mcf from previous year, driven by strong demand from the reopening of economic activities while Gas producers are not able to increase its productions fast enough because of the slowdown in developing new gas wells. It delivered the total production volume of 246.22 billion Cubic Feet (Bcf), the increase was from the full year result from Barnett shale.

The Energy generation business continues to deliver solid performance with consistent cash flow. HPC power plant reported an equity income of USD 113 million, increased by 9% from previous year due to the successful of improvement plan of unit 1 and unit 3 resulted in an Equivalent availability factor (EAF) of 85%, improved by 5% compared to previous year. BLCP reported profit sharing of USD 6.8 million with an impact from decreasing in availability payment under long-term PPA and deferred tax

expenses. CHPs plants in China reported net loss of USD 23 million, mainly due to the impact from high Chinese domestic coal cost at an average of RMB 942/ton compared to RMB 572/ton in the previous year, however several measures have been continually implemented to lessen such impact including the implementation of centralized coal procurement, the adjustment of power plant operational mode to protect the bottom line and the negotiation to increase the steam price to reflect the increase in coal cost. While Shanxi Lu Guang (SLG) power plant in China, both 2 units start dispatching electricity to the national transmission system and will continue to gradually improve its efficiency. SLG also experiences high domestic Chinese coal cost, so it reported loss sharing of USD 16 million. However, with the continue acceleration of portfolio transformation for growth, during the year there were 2 major investments in High Efficiency, Low Emission “HELE” power plants reported additional contribution to the group, consists of Nakoso power plant in Japan reported profit sharing of USD 6.40 million and Temple I Gas-fired in US reported its contribution for 2 months of USD 1.82 million.

For Renewable business including solar power plants in China and Japan reported consistent performance. Solar business in China reported revenue of USD 28.76 million, 8% increased from previous year. Solar business in Japan reported significant increase in TK dividend distribution of JPY 1,129 million. Moreover, the 2 solar farms consist of Kessenuma and Shirakawa with total generation capacity of 30 MW already achieved Commercial Operation Date (COD) as plan on 26th November 2021 and 16 January 2022 respectively. The 2 Solar farm in Australia reported revenue of USD 3.89 million while Vin Chau, wind project in Vietnam progress on its construction reaching 83% and expected to complete and start commissioning by 1Q2022.

For Energy Technology business, through Banpu NEXT, continues the development of products and services covering wide range of energy-related solutions including the 95% construction completion of 16 MW floating solar at Tribeca Enterprise, the launched of E-boat under E-mobility business with focus on using high quality & high safety standard battery and also the expansion into Energy Management solutions that covering wide ranges of services as an ‘all-in-one’ system for the smart use of clean energy. Also, the successful divestment of holding in Sunseap Group as part of the group strategy for portfolio rationalization. The proceeds from the transaction will be used to fund BANPU transition to invest in the clean energy business with a strong financial structure.

3. Group Performance Analysis

The analysis and explanation of Banpu Group performance for year ended 31 December 2021 and 2020 as follows:

Consolidated Statement of Income for the year ended 31 December 2021 and 2020

Consolidated financial performance (Unit: Million USD)	2021	2020	Change	
			Amount	%
Sales and service income	4,124	2,283	1,841	81%
Cost of sales and services	(2,393)	(1,822)	(571)	31%
Gross profit	1,731	461	1,270	275%
Selling expenses	(171)	(141)	(30)	21%
Administrative expenses	(304)	(224)	(80)	36%
Investment restructuring expense	-	(31)	31	100%
Royalty fee	(294)	(183)	(111)	61%
Share of profit from joint ventures and associates	227	135	92	68%
Other income (expenses)	(314)	154	(468)	304%
Finance cost	(184)	(179)	(5)	3%
Profit (Loss) before income taxes	691	(8)	699	8738%
Income taxes	(198)	(9)	(189)	2100%
Profit (Loss) for the year	493	(17)	510	3000%
Owners of the parent	304	(56)	360	643%
Non-controlling interests	189	39	150	385%
Earnings (Loss) per share (Unit : USD)	0.046	(0.012)	0.058	483%
Diluted earnings (losses) per share (Unit : USD)	0.046	(0.009)	0.055	611%

Banpu group performance for 2021 reported net profit at \$304 million. This was mainly due to an increase in coal and natural gas price that support overall group performance, also the recognition of gain on foreign exchange rate from a depreciation of THB currency against USD currency.

A rebound in the world's economies has been stronger than expected so far as the vaccination ratio are underway, more demand on energy while supplies are still constrained. These trends have supported commodity prices. However, the group has also continuously focused on cost management and production efficiency to cope with the uncertainty of the global economic and volatility of energy commodities price in the future.

Sales and cost of sales

(Unit: Million USD)	Revenue			Cost of Sales		
	2021	2020	Inc.(Dec.)	2021	2020	Inc.(Dec.)
Coal Business	2,909	1,878	55%	1,658	1,486	12%
Natural Gas Business	891	120	640%	411	107	286%
Power & Steam Business	244	196	24%	229	147	56%
Others	80	87	-9%	94	83	13%
Total	4,124	2,283	81%	2,393	1,822	31%

Sales

Sales reported at \$4,124 million (equivalent to THB 133,190 million), increased by \$1,841 million compared to 2020. An increase of sales \$1,031 million derived from coal businesses, \$ 771 million from natural gas business, and \$47 from power and steam business and others. Details were described as follows:

1. Sales from coal business of \$2,909 million or 71% of total revenue separated by source of coal as below:
 - Indonesia coal mines of \$2,090 million
 - Australia coal mines of \$728 million
 - Coal trading business of \$91 million
2. Sales from natural gas business in USA of \$891 million or 22% of total revenue.
3. Sales from power and steam of \$244 million or 6% of total revenue derived from Combined Heat and Power (CHP) plants and solar power plants in China, solar power plant in Australia and gas-fired power plant in USA.
4. Others of \$80 million. This was mainly from energy trading business in Japan.

1.Coal Business

Coal Business		2021	2020	Inc.(Dec.)
Sales Volume	Million Tonnes	31.91	34.67	-8%
Average selling price	\$/Tonne	91.17	54.19	68%
Average Cost of sales	\$/Tonne	51.97	43.33	20%

Coal sales of \$2,909 million, increased by \$1,031 million or 55% was a result of an increase in average selling price by \$36.98 per tonne or 68% and a decrease in sales volume by 2.76 million tonnes, whereas an increase in cost of sales by 20% compared to 2020 as following:

Indonesia Mines		2021	2020	Inc.(Dec.)
Sales Volume	Million Tonnes	20.07	21.19	-5%
Average selling price	\$/Tonne	104.16	53.79	94%
Average Cost of sales	\$/Tonne	44.91	37.76	19%

Coal Business in Indonesia

- **Sales volume**

Coal sales volume was 20.07 million tonnes, decreased by 1.12 million tonnes or 5% compared to 2020.

- **Average selling price**

Average selling price per tonne was \$104.16, increased by \$50.37 or 94% compared to 2020, in accordance with an increase of global coal market price.

- **Average cost of sales**

Average cost of sales per tonne was \$44.91, increased by \$7.15 or 19% compared to 2020, mainly due to higher global fuel market price. However, the group focus on cost management to cope with a volatility in global coal market price, while still maintain coal quality, including quality development to meet customer demand and retain in the long run. Moreover, the group emphasized on more efficiency in fuel used for production that led to a decrease in fuel consumption rate for production. This included a favor outcome from cost reduction program that implemented across the group.

Australia Mines		2021	2020	Inc.(Dec.)
Sales Volume	Million Tonnes	9.82	12.50	-21%
Average selling price	A\$/Tonne	98.90	81.14	22%
Average Cost of sales	A\$/Tonne	91.90	76.53	20%

Coal business in Australia

- **Sales volume**

Coal sales volume was 9.82 million tonnes, decreased by 2.68 million tonnes or 21% compared to 2020. This was an impact from encountering the difficulty in geology mining condition in Mandalong, Springvale, and Clarence mines.

- **Average selling price**

Average selling price per tonne was A\$98.90, increased by A\$ 17.76 or 22% compared to 2020 as the following:

Australia Mines	Sales Volume (Unit: Million Tonnes)			Avg. Price/Tonne (A\$/Tonne)		
	2021	2020	Inc.(Dec.)	2021	2020	Inc.(Dec.)
Domestic	6.45	9.10	-29%	75.22	78.66	-4%
Export	2.81	2.73	3%	139.34	86.32	61%
Total	9.26	11.83	-22%	98.90	81.14	22%

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

Average domestic selling price per tonne was A\$75.22, decreased by A\$3.44. This caused by a decrease in sales volume from lesser sales portion under high price contracts compared to 2020, whereas coal market price was higher with the average export selling price per ton A\$139.34, increased by A\$ 53.02 per tonne compared to 2020.

- **Average cost of sales**

Average cost of sales per tonne was A\$91.90, increased by A\$15.37. This was due to a decrease of coal production volume from Mandalong, Springvale and Clarence mines that encountered geological challenges resulted to a higher average cost of sales.

2. Natural Gas Business

Natural Gas Business		2021	2020	Inc.(Dec.)
Sales Volume	Bcf **	246.22	113.25	117%
Average Local Price	\$/Mcf	3.61	1.86	94%
Average selling price	\$/Mcf	3.38	1.03	228%
Average Cost of Gathering, processing & transportation	\$/Mcf	0.88	0.83	6%
Average Cost*	\$/Mcf	0.92	0.89	3%

* Avg Cost excluded Cost of Gathering, processing & transportation ** Bcf = Billion Cubic Feet.

Natural Gas business in USA

Sales from natural gas business in 2021 reported at \$891 million, increased by \$771 million compared to 2020. This was mainly from sales recognition from Barnett shale that group acquired this asset since 4Q20. Details were as follows:

- **Sales Volume**

Natural gas sale volume was 246.22 billion cubic feet, increased by 117% versus 2020. This was because the group started consolidating sales from Barnett shale since 4Q20. In 2021, sales volume from Barnett shale was 190 Bcf.

- **Average Local Price**

Refer to higher Henry Hub index price compared to prior year, the average local selling price per Mcf. in this year was \$3.61, increased by \$1.75 per Mcf or 94% compared to 2020. Henry Hub natural gas price was consistently high, together with the basis differential that was substantially reduced in both Marcellus shale and Barnett shale during 2021. This was a result of an increase in demand of natural gas after states reopening, the continuing growth of Natural Gas Liquids (NGLs) export sales which results in higher NGLs price, also the slower of supply compared to demand because gas production companies delayed investing in new wells.

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

Average cost of Gathering, processing & transportation per Mcf was \$0.88, increased by \$0.05 or 6% compared to 2020, was mainly from the cost from Barnett shale that was higher compared to Marcellus shale. This was due to Barnett shale typically produced both Natural Gas and Natural Gas Liquids (NGLs), led to an incremental cost related to natural gas and NGLs extraction process. However, the group 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 \$0.92, increased by \$0.03 or 3% compared to 2020 was from an increase in production volume in shales to maximize utilization.

3. Power Business

Sales from Power and Steam of \$244 million or 6% of total revenue was from sales from CHP plant \$191 million, solar power plant in China of \$29 million, solar power plant in Australia of \$4 million and gas-fired power plant in USA of \$20 million from asset acquisition in Nov 2021. Details were described as follows:

Power Business		Combined Heat & Power Plants (CHP)			Solar Power Plants		
		2021	2020	Inc.(Dec.)	2021	2020	Inc.(Dec.)
Power sold Volume	GWh	1,179.07	1,563.20	-25%	222.89	219.54	2%
Steam Volume	Million Tonnes	6.33	6.24	2%	-	-	-
Average PowerTariff	RMB/kWh	0.37	0.36	2%	0.83	0.83	0%
Average Steam Price	RMB/Tonne	124.29	96.02	29%	-	-	-

Combined Heat and Power (CHP) plants in China

Sales from power, steam, and others from 3 CHP plants in China of \$191 million, increased by \$21 million compared to 2020, was mainly from decreasing in sales volume of electricity and steam as detail below:

- **Sales Volume**

Sales volume of 1,179.07 GWh, decreased by 384.13 GWh compared to 2020. This was a result of optimizing operational mode to manage performance during high coal cost period.

Steam sales of 6.33 million tonnes, increased by 0.10 million tonnes, mainly from Luannan CHP plant from new steam industrial customers.

- **Average Selling Price**

Average power tariff was RMB 0.37 per kWh, quite stable compared to 2020.

Average steam price per tonne was RMB 124.29, increased by 29% from 2020. This was because a part of steam price was adjusted aligned with an increase in coal price and some was adjusted as new purchase and sales agreement.

- **Cost of Sale**

Cost of sale was \$190 million, increased by \$55 million. This was primarily from the higher coal cost, main fuel for power plants. The average coal cost per tonne in 2021 was RMB 942 (2020: RMB 572), increased by RMB 370 per tonne or 65% compared to 2020.

Solar power plants in China

Sales from solar power plants in China reported at \$29 million. An increase of \$2 million compared to 2020 was mainly from the effects of foreign exchange rate translation due to an appreciation of RMB currency against USD currency compared to 2020. This affected to higher revenue in USD currency when converting from revenue in RMB currency. Details of sales volume, average power tariff and cos of sales were as follows:

- **Sales Volume**

Sales volume of 222.89 GWh., increased by 3.35 GWh from higher production volume compared to 2020 due to favored weather conditions.

- **Average Power Tariff**

Average power tariff was RMB 0.83, same as 2020.

- **Cost of Sales**

Cost of sales for 2021 was remain unchanged.

Administrative expense

Administrative expenses reported \$304 million, increased by \$80 million or 36% was mainly from a result of a reversal of cost of asset acquisition in Barnett shale that was initially recorded as an expense, to be capitalized as assets during 2020 total of \$9 million. An increase of \$42 million in administration from Barnett shales, long-term employee benefits expense, professional & consulting fee related to business expansion in USA, including admin expense from gas-fired power plant in USA started since Nov 2021 of \$2 million. Additionally, an increase in administrative expense was from business acquisition costs and administrative expense related to solar power business expansion in Australia of \$12 million, expense for supportive and donations during covid-19 pandemic of \$15 million. However, the group also focused on cost reduction program to cope with a slowdown of global economic, that led to a decrease in consulting & professional fees and other admins, including domestic and overseas traveling expense.

Royalty fees

Royalty fees reported at \$294 million, increased by \$111 million or 61%. The royalty fees comprised of royalty fees from Indonesia mines \$248 million, increased by \$111 million due to an increase in coal price and royalty fees from Australia mines that was \$46 million that similar to 2020.

Profit sharing (Unit : Million USD)	2021	2020	Inc.(Dec.)
BLCP	7	17	-60%
Hongsa & Phufai Mining	113	103	9%
Shanxi Luguang	(16)	2	-777%
Coal business in China	129	23	462%
Holding Company of Solar Power in Japan and others	(6)	(11)	-45%
Total	227	135	68%

Share of profit from joint ventures and associates

Profit sharing from joint ventures and associates reported at \$227 million, increased by \$92 million or 68% compared to 2020 due to details described as below:

- 1) Recognition of profit sharing from Hongsa power plant and PhuFai mining in Laos of \$113 million, increased by \$10 million from 2020. This was mainly from gain on foreign exchange rate translation of \$18 million, whereas a decrease in operating performance of \$8 million as unit 1 and 3 underwent yearly plant maintenance.
- 2) Recognition of profit sharing from BLCP of \$7 million, or profit decreased by \$10 million. This was mainly due to a depreciation of THB currency against USD currency which includes a recognition of deferred tax expense of \$9 million, and a decrease in operating performance of \$1 million according to revenue structures under long term power purchase agreements.
- 3) Recognition of loss sharing from SLG power plant of \$16 million, increased in loss by \$18 million. The plant still in early stage of commercial operation to improve its reliability for dispatch to the national grid in China, the operating performance also impacted by the high domestic coal cost.
- 4) Recognition of shares of profit from coal business in China of \$129 million, increased by \$106 million. This was from higher sales price aligned with coal market price.

Other expense

Other expense of \$314 million comprised of:

- 1) Net gain on foreign exchange rate of \$74 million was mainly from unrealized gain on foreign exchange rate translation of THB loan at the end of the year. This was due to a depreciation of THB currency against USD currency compared to the prior year, then resulted to a decrease of loan in THB currency. Average exchange rate of USD/THB for 2021 was THB 31.9771 (2020: THB 31.2937) and the closing rate of USD/THB was 33.4199 (2020: 31.0371).

- 2) Net loss from financial derivatives of \$445 million comprised of:
- Realized loss from financial derivatives of \$462 million derived from coal swap contracts of \$204 million, natural gas swap contracts of \$245 million, interest rate swap contracts of \$15 million, foreign exchange rate forward contracts of \$9 million.

Whereas, realized gain on cross currency and interest rate swap contracts of \$ 5 million, and fuel swap contracts and others of \$8 million.

- Unrealized gain on fair value of financial derivatives at the end of the year of \$17 million was mainly from foreign exchange rate forward contracts of \$5 million, natural gas swap contract of \$6 millions and others of \$6 million.

- 3) Management fee income and others of \$57 million was from:

- Interest income of \$9 million.
- Dividend income of \$9 million, was mainly from profit sharing from solar power business in Japan under TK (TOKUMEI KUMIAI) agreement.
- Government subsidy and steam connection fee income of \$7 million from residential steam production.
- Sales of ashes, slag and scraps from mines, power plants and others such as insurance claims, warehouse management services, tax refund and others of \$32 million.

Corporate income tax

Corporate income tax of \$198 million, increased by \$189 million mainly from:

- 1) An increase in corporate income tax of \$162 million, aligned with higher operating profits compared to prior year.
- 2) An increase in withholding tax from dividend receipts during the year of \$10 million.
- 3) An increase in defer tax expense of \$26 million. This was due to a decrease of deferred tax assets mainly from different in foreign exchange rate conversion in accounting basis versus tax basis.

4. Statements of Consolidated Financial Position

Statements of Consolidated Financial Position as of 31 December 2021 in comparison with the Statements of Consolidated Financial Position as of 31 December 2020.

Financial Position (Unit: Million USD)	31-Dec-21	31-Dec-20	Inc.(Dec.)	
			Amount	%
Assets	10,946	9,377	1,569	17%
Liabilities	7,843	6,562	1,281	20%
Equity	3,103	2,815	288	10%

4.1 Total assets of \$10,946 million, increased by \$1,569 million compared to total assets as of 31 December 2020 with main details described as below:

Financial Position (Unit: Million USD)	Assets		Inc.(Dec.)	
	31-Dec-21	31-Dec-20	Amount	%
Cash and Cash equivalent	1,184	730	454	62%
Financial assets measured at fair value through profit or loss	16	11	5	100%
Trade accounts receivable and note receivables, net	473	249	224	90%
Current portion of dividend receivables from related parties	24	26	(2)	100%
Non-current assets held-for-sale	172	-	172	200%
Other current assets	687	559	128	23%
Total Current Assets	2,556	1,575	981	62%
Dividend receivables from related parties	7	10	(3)	-30%
Investments in associates and joint ventures	1,645	1,690	(45)	-3%
Financial assets measured at fair value through other comprehensive income	164	153	11	100%
Financial assets measured at fair value through profit & loss	8	-	8	100%
Property, plant and equipment, net	3,416	2,581	835	32%
Deferred exploration/stripping costs, net	889	1,016	(127)	-13%
Mining property rights, net	1,276	1,359	(83)	-6%
Goodwill	432	447	(15)	-3%
Right of use assets	66	72	(6)	100%
Other non-current assets	487	474	13	3%
Total Non-Current Assets	8,390	7,802	588	8%
Total Assets	10,946	9,377	1,569	17%

- Cash and cash equivalents of \$1,184 million, increased by \$454 million. (As explanation in no.5 Consolidated Statement of Cash Flows).
- Financial assets measured at fair value through profit or loss of \$16 million, increased by \$5 million was from redemptions of \$54 million during the year and additions of \$59 million.
- Current portion and non-current portion of dividend receivable from related parties of \$24 million and \$7 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 \$5 million. This was a net result of:
 1. A decrease from received dividend of \$72 million.
 2. An increase from additional declared dividend of \$70 million.
 3. A decrease from unrealized loss on foreign exchange rate translation at the end of the year of \$3 million.

- Non-current assets held for sales of \$172 million was reclassification from investment in joint ventures and associates since the held-for-sale criteria has been met and expect to sales within 12 months from the end of accounting period.
- Investment in joint ventures and associates of \$1,645 million, decreased by \$45 million or 3% was from:
 1. An increase from addition of investment in associates of \$97 million, was from an investment in Integrated Gasification Combined Cycle (IGCC) power plant business in Japan, and investment in electronic vehicle (EV) business and EV charging station business in Thailand.
 2. A decrease from reclassification to non-current assets available for sales of \$172 million.
 3. An increase from recognition of profit sharing from joint ventures and associates by \$227 million.
 4. A decrease from dividend recognition during the year of \$70 million.
 5. A decrease from the effects of foreign exchange rate translation at end of the year and others by \$127 million.
- Financial assets measured at fair value through other comprehensive income (FVOCI) \$164 million, increased by \$11 million. This was due to:
 1. An additional investment in car sharing services via application business and solar power business in Japan of \$45 million.
 2. A decrease from the impact of fair value adjustment of \$16 million.
 3. A decrease from the effects of foreign exchange rate translation at the end of the year and others of \$18 million.
- Property plant and equipment of \$3,416 million, increased by \$835 million derived from:
 1. An increase from additions of machine and equipment of coal business, natural gas business and power business total of \$466 million.
 2. An increase from acquisition of wind power plant business in Vietnam and solar power business in Australia total of \$649 million.
 3. An increase from reclassification of \$46 million.
 4. A decrease from write-off and disposal of \$17 million.
 5. A decrease from depreciation charges for the year of \$275 million.
 6. A decrease from the effects of foreign exchange rate translation at end of the year and others of \$34 million.
- Right of use assets of \$66 million decreased by \$6 million, or 8%. The decrease was from additions of \$27 million, solar power business acquisition in Australia of \$4 million offset with write-off of \$4 million and depreciation of \$33 million.
- Other non-current assets of \$487 million, increased by \$13 million. This was a result of solar power plant acquisition in Australia of \$ 10 million, an increase in purchase vat receivable of

\$66 million, an increase in right to operate power plant from acquisition of wind power plant business in Vietnam of \$8 million, an increase in restricted deposit at bank of \$12 million and others of \$18 million. Whereas, there was a reclassification of accrued subsidy income for solar power plant in China to be subsidy income receivable that the credit term become due within one year of \$57 million, also an increase in deferred income tax assets from business in Indonesia of \$34 million.

4.2 Total liabilities of \$7,843 million, increased by \$1,281 million compared to total liabilities as of 31 December 2020 with movement details as described below:

Financial Position (Unit: Million USD)	Liabilities		Inc.(Dec.)	
	31-Dec-21	31-Dec-20	Amount	%
Short-term loans from financial institutions	1,174	828	346	42%
Trade accounts payable	99	67	32	48%
Current portion of long-term borrowings, net	517	675	(158)	-23%
Current portion of debenture, net	120	133	(13)	-10%
Accrued overburden and coal transportation costs	77	60	17	28%
Financial derivative liabilities due in one year	128	21	107	510%
Other current liabilities	793	427	366	86%
Total current liabilities	2,908	2,211	697	32%
Long-term loans from other company	2,270	2,230	40	2%
Debentures, net	1,911	1,517	394	26%
Financial derivative liabilities, net	53	26	27	104%
Provision for decommissioning and reserve for environment reclamation	340	301	39	13%
Other liabilities	361	277	84	31%
Total non-current liabilities	4,935	4,351	584	13%
Total liabilities	7,843	6,562	1,281	20%

- Short-term loans from financial institutions of \$1,174 million, increased by \$346 million or 42%. This was from addition of \$1,767 million, repayment of \$1,369 million, and a decrease from the effects of foreign exchange rate translation at the end of the year of \$52 million.
- Current portions of long- term loans of \$517 million, decreased by \$158 million was from an increase from reclassification from non-current portion of \$502 million, solar power business acquisition in Australia of \$49 million, offset with repayment of \$692 million, deferred finance charge of \$2 million, and the effects of foreign exchange rate translation at the end of year of \$15 million.
- Current portions of debenture of \$120 million, decreased by \$13 million from reclassification from non-current portion of \$128 million, redemption of \$130 million and a decrease from the effects of foreign exchange rate translation at the end of the year of \$11 million.
- Accrued overburden and coal transportation expenses of \$77 million, increased by \$17 million or 28% was mainly from mining operations of subsidiaries in Indonesia.

- Long- term loans of \$2,270 million, decreased by \$40 million or 2 % was a net result of:
 1. An increase from additional loan during the year of \$862 million.
 2. An increase in solar power business in Australia of \$82 million.
 3. A decrease from reclassification to current portion of \$502 million.
 4. A decrease from early repayment of \$371 million
 5. A decrease from deferred finance charge of \$2 million
 6. A decrease from the effects of foreign exchange translation at the end of the year of \$29 million. Mainly was from the impact to THB currency loan due to a depreciation of THB currency against USD currency. Average exchange rate of THB/USD as of 31 Dec 2021 was \$33.4199 (31 Dec 2020: \$30.0371). Moreover, a decrease was from a depreciation of AUD currency against USD currency as of 31 Dec 2021. Average exchange rate of AUD/USD was \$0.7260 (31 Dec 2020: \$0.7630).

- Debenture of \$1,911 million, increased by \$394 million or 26%. There were new additions of \$680 million, reclassification to current portion of \$128 million, and a decrease from the effects of foreign exchange rate translation at the end of the year of \$158 million from a depreciation of THB currency against USD currency, impacted to THB currency debenture.

- Current portion and non-current portion of derivative liabilities reported at \$128 million and \$53 million, respectively, total of \$181 million. This was changes in fair value of financial derivatives at the end of the year, that consisted of cross currency swap contracts of \$20 million, interest rate swap contracts of \$17 million, natural gas swap contracts of \$115 million, and coal swap contracts of \$25 million, and electricity swap contracts \$4 million.

4.3 Shareholders' equity of \$3,103 million, an increase of \$288 million was mainly due to:

Financial Position (Unit: Million USD)	Equity		Inc.(Dec.)	
	31-Dec-21	31-Dec-20	Amount	%
Equity attributable to owners of the parent	2,372	2,076	296	14%
Non-controlling interests	731	739	(8)	-1%
Total equity	3,103	2,815	288	10%

- An increase of \$304 million from net profits for 2021.
- An increase of \$255 million from issued and paid-up share capital.
- An increase of \$19 million from reserve for share-based compensation to employees.
- An increase of \$2 million from fair value reserves for financial assets measured at fair value to other comprehensive income and cash flows hedge reserves.
- A decrease of \$121 million from redemption of subsidiary's share from non-controlling interest.
- A decrease of \$204 million from the effects of foreign exchange rate translation of subsidiaries' financial statements and others.
- An increase of \$151 million from non-controlling interest.
- A decrease of \$118 million from dividend paid.

4.4 Net debt-to-equity ratio as of 31 December 2021 reported at 1.31 times (31 December 2020: 1.47 times).

5. Statement of Consolidated Cash Flows

Statement of consolidated cash flows for the year ended 31 December 2021 presented an increase of net cash flow by \$454 million (included the effect from unrealized loss on exchange rate translation at the end of the year of \$22 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	809
Net Cash flows used in investing activities	(1,058)
Net Cash flows from financing activities	724
Net increase in cash and cash equivalents	475
Exchange loss on cash and cash equivalents	(21)
Cash and cash equivalents at the beginning of the period	730
Cash and cash equivalents at end of the year	1,184

5.1 Net cash inflow from operating activities of \$809 million; with major operating items as follows:

- Collections from coal sales of \$3,841 million.
- Payments to contractors and suppliers of \$2,366 million.
- Interest payments of \$179 million.
- Payments of corporate income tax of \$84 million.
- Receives from income tax refunds of \$38 million.
- Royalty fee payments of \$327 million.
- Other payments of \$114 million.

5.2 Net cash outflow from investing activities of \$1,058 million; with major items as follows:

- Payments for machines, equipment, project in progress and asset acquisition of \$281 million.
- Payments for addition of investment in power plant business in Japan, investment in wind power plant business in Vietnam and investment in electronic vehicle (EV) business, investment in EV charging station business, investment in solar power plant in Australia and investment in gas-fired power plant in USA total of \$576 million.
- Payments for deferred exploration and development expenditure of \$165 million.

- Payments for financial assets measured at fair value through profit and loss of \$11 million.
- Payments for financial assets measured at fair value through other comprehensive income of \$5 million.
- Payment for restricted cash of \$107 million.
- Receipts from dividend from joint ventures and other investment of \$63 million.
- Interest income and others of \$24 million.

5.3 Net cash inflow from financing activities of \$724 million; comprised of

- Receipts from short term and long - term loans from financial institutions and debentures of \$3,308 million.
- Repayments of short term and long - term loans from financial institutions, debentures, and lease liabilities of \$2,596 million.
- Payments for treasury shares of a subsidiary of \$3 million.
- Payment for redemption of subsidiary's shares from non-controlling interest of \$122 million.
- Payment for dividend of \$118 million.
- Receipts from issued share capital of \$255 million.

6. Coal Reserves

The quantity of sales and remaining of coal reserves for the year ended 31 December 2021:

Source (Unit: Million Tons)	Quantity of Coal Sales and Reserves		
	Reserves as of 31-Dec-20	Sales FY2021	Reserves as of 31-Dec-21
1. Indonesia			
1.1 Jorong	9.03	0.88	8.15
1.2 Indominco	37.76	7.44	30.32
1.3 Kitadin	1.78	1.34	0.44
1.4 Trubaindo	39.18	3.69	35.49
1.5 Bharinto	146.02	4.86	141.16
1.6 NPR Project	77.40	0.00	77.40
2. Australia	269.95	9.26	260.69
3. China			
3.1 Gaohe	117.43	8.59	108.84
3.2 Hebi Zhongtai	14.43	0.68	13.75
Total	712.98	36.74	676.24

7. Natural Gas Reserves

The quantity of sales and remaining of natural gas reserves for the year ended 31 December 2021:

Quantity of Natural Gas Sales and Reserves	Natural Gas (Unit: Million Cubic Feet)
Reserves as at 31 December 2020	3,556,566
1) Adjustment on reserve estimation	876,418
2) Sales 2021	(246,223)
Reserves as at 31 December 2021	4,186,761

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