

ESCALATING TOWARD

Greener & Smarter Energy Generation



Annual Report 2021
(Form 56-1 One Report)

Banpu Power Public Company Limited



ESCALATING TOWARD

Greener & Smarter Energy Generation



Banpu Power Public Company Limited (BPP),

a leading power-generating company with a balanced portfolio from both thermal power businesses and renewable power businesses across the Asia-Pacific region.



Driving the transition toward a greener and smarter energy generation

by leveraging Banpu ecosystem and propelling growth in energy technology through the investment in “Banpu NEXT” with an aim to harnesses business opportunities in power generation throughout the supply chain, from upstream to downstream, in response to future energy trends to achieve the target of 5,300 MWe by 2025.



In 2021, Banpu Power accelerated business transformation by investing in energy businesses **that deploy High Efficiency, Low Emissions (HELE) technologies and expanding the cleaner energy portfolio.** The Company’s investments include Beryl and Manildra solar power plants in Australia; Temple I CCGT power plant in the United States of America; Nakoso IGCC power plant in Japan; and Ha Tinh, Chu Ngoc¹ and Nhon Hai¹ solar power plants in Vietnam.

Escalating growth in energy generation business aligning with the principles of energy sustainability



Affordable



Reliable



Eco-Friendly

Thermal and Renewable Power Businesses



Equity-based power generation capacity

3,212 MWe

- Thermal capacity 2,860 MWe
- Renewable capacity 352 MW



Banpu Power has **38** power plants/projects.

36 are the operating power plants with 3,121 MWe equity-based power generation capacity.

Energy technology businesses operated by Banpu NEXT, a 50%-owned subsidiary of Banpu Power



Solar rooftop & floating solar power generation system **37 MW²** equity-based capacity



Energy storage system **1.0 GWh²** equity-based capacity



E-Mobility
Banpu NEXT e-Ferry
FOMM One EV car
MuvMi e-Tuk Tuk



Smart city development
20 Smart city projects under development



Being ready to improve and uplift operational efficiency, reaffirming Banpu Power’s position: “We ARE Power for the Sustainable World”, the Company drives business growth while prioritizing Environmental, Social, and Governance (ESG) principles. This is proven by the list of Thailand Sustainability Investment (THSI) on which Banpu Power has been included as sustainable stock for the fourth consecutive year and the Rising Star Sustainability Awards from the Stock Exchange of Thailand (SET).

Notes: ¹The transaction was complete in January 2022.

²The figures represent 100% capacity.

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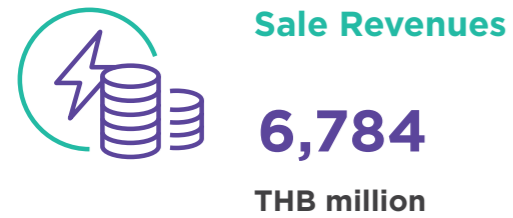
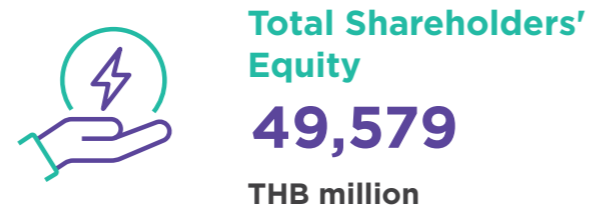
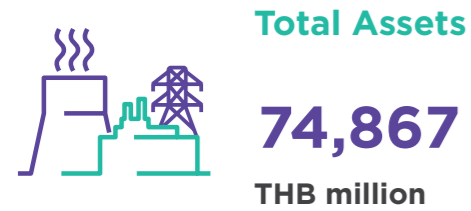
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Financial Highlights



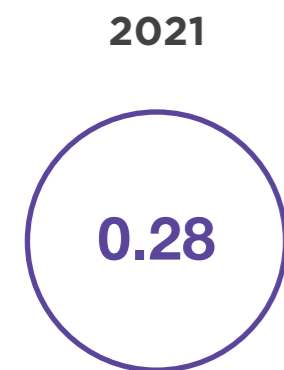
EBITDA



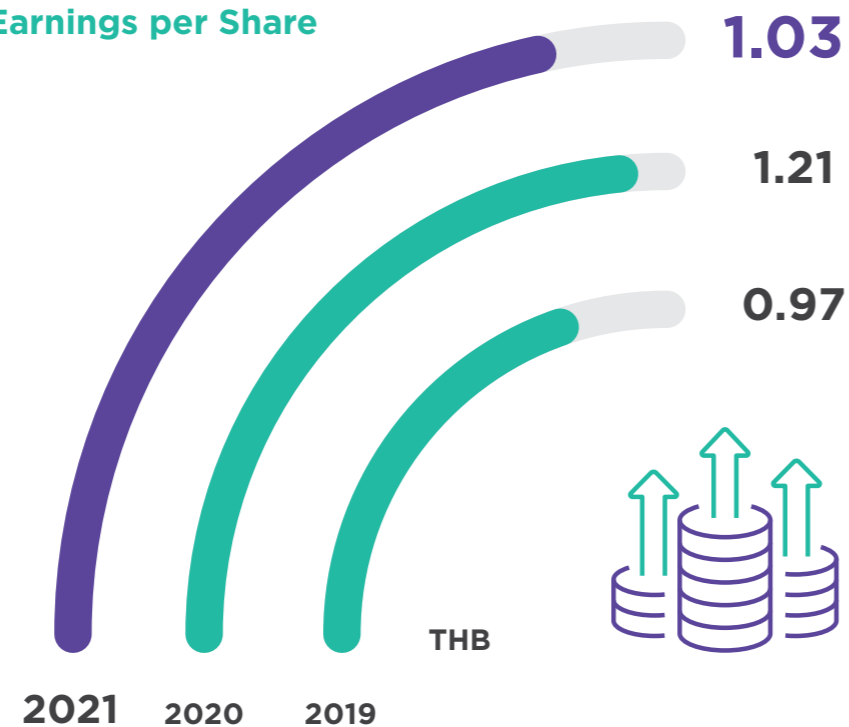
Profit Attributable to Owners of the Parent



Net Debt to Equity



Earnings per Share



		For the year ending 31-Dec-2021	For the year ending 31-Dec-2020	For the year ending 31-Dec-2019
Financial Position				
Total Assets	(THB million)	74,867	49,563	48,808
Total Liabilities	(THB million)	25,287	7,585	8,992
Total Shareholders' Equity	(THB million)	49,579	41,978	39,816
Issued and Paid-up share Capital	(THB million)	30,477	30,510	30,510
Operational Results				
Sale Revenues	(THB million)	6,784	5,506	5,687
Cost of Sales	(THB million)	(6,824)	(4,391)	(4,609)
Gross Profit	(THB million)	(40)	1,114	1,078
Administrative Expenses	(THB million)	(1,103)	(1,527)	(1,749)
Dividend Income from Other Company	(THB million)	-	-	20
Management Fee and Others	(THB million)	652	647	556
Interest Income	(THB million)	381	374	140
Net Gain (Loss) on Financial Instrument	(THB million)	241	4	141
Net Gain (Loss) on Exchange Rate	(THB million)	375	148	(222)
Interest Expenses	(THB million)	(246)	(236)	(276)
Other Financial Charges	(THB million)	(4)	(7)	(13)
Share of Profit from Joint Ventures	(THB million)	2,974	3,565	3,673
Profit Before Income Taxes	(THB million)	3,232	4,083	3,207
Income Taxes	(THB million)	(57)	(300)	(204)
Profit for the Year	(THB million)	3,174	3,783	3,003
Profit Attributable to Non-Controlling Interests	(THB million)	(47)	(81)	(34)
Profit Attributable to Owners of the Parent	(THB million)	3,127	3,702	2,969
EBITDA	(THB million)	3,301	5,230	4,802
Financial Ratios				
Gross Profit Margin	(Percent)	(1)	20	19
Net Profits to Total Revenues	(Percent)	46	67	52
Returns on Assets	(Percent)	4	7	6
Returns on Equity	(Percent)	6	9	7
Interest Coverage Ratio	(Times)	2	3	NA
Net Debt to Equity	(Times)	0.28	0.07	0.01
Data per Share				
Earnings per Share	(THB)	1.03	1.21	0.97
Book Value per Share	(THB)	16.27	13.76	13.27
Dividend per Share	(THB)	0.65*	0.65	0.65

* The Company announced a total dividend of THB 0.65 per share arising from its performance during the period from 1 January 2021 to 31 December 2021, of which THB 0.30 was paid on 21 September 2021. The remaining dividend of THB 0.35 per share for 2021 performance will be paid on 27 April 2022.

Remark: Financial figures are based on the consolidated financial statement.

Operating Results

	For the year ending		
	2021	2020	2019
Sales volume			
Power sold (GWh)			
Zhengding power plant	312.68	414.85	420.09
Luannan power plant	537.65	708.75	691.53
Zouping power plant	328.73	439.60	383.73
Temple I CCGT power plant	417.23	-	-
Solar China ¹	-	24.92	213.88
Total power sold (GWh)	1,596.30	1,588.12	1,709.23
Steam sold (Million tonnes)			
Zhengding power plant	0.60	0.77	0.92
Luannan power plant	3.10	2.22	1.72
Zouping power plant	1.75	2.34	1.93
Total steam sold (Million tonnes)	5.45	5.33	4.57
Revenue (THB Million)			
Revenue from power sold (THB Million)			
Zhengding power plant	530.68	643.19	618.55
Luannan power plant	918.07	1,090.27	1,040.64
Zouping power plant	698.01	836.00	740.35
Temple I CCGT power plant	672.52	-	-
Solar China ¹	-	89.24	754.97
Total revenue from power sold (THB Million)	2,819.28	2,658.70	3,154.51
Revenue from steam sold (THB Million)			
Zhengding power plant	358.42	369.34	435.57
Luannan power plant	1,683.21	940.07	731.53
Zouping power plant	1,465.47	975.52	838.37
Total revenue from steam sold (THB Million)	3,507.09	2,284.93	2,005.48
Other income (THB Million)	458.12	433.87	385.29
Revenue from energy trading in Japan (THB Million)¹	-	128.01	141.73
Total revenue (THB Million)	6,784.50	5,505.51	5,687.01

	For the year ending		
	2021	2020	2019
Equity income from joint ventures (THB Million)			
BLCP power plant	214.90	543.32	839.97
HPC power plant	3,611.71	3,222.61	2,822.27
Shanxi Lu Guang power plant	(541.54)	76.07	(4.06)
Nakoso IGCC power plant	210.43	-	-
Solar Japan	-	12.93	14.91
Renewable & energy technology business under Banpu NEXT Co., Ltd.	(521.02)	(289.56)	-
Total equity income (THB Million)	2,974.48	3,565.39	3,673.08
Gross profit margin (%)			
Zhengding power plant	(8)	16	12
Luannan power plant	1	25	15
Zouping power plant	3	18	10
Temple I CCGT power plant	(6)	-	-
Solar China ¹	-	47	62
Energy trading in Japan ¹	-	11	6
Total gross profit (%)	(1)	20	19

Remark: ¹As a result after the completion of business amalgamation of renewable and energy technology businesses to form Banpu NEXT in which BPP holds 50% ownership on 28 February 2020, BPP changed from consolidating performance of Solar China and energy trading in Japan as subsidiaries, to be taking profit sharing from Banpu NEXT as an associate, therefore, the performance in 2020 of Solar China operations and energy trading in Japan represented performance for the period of 1 January - 28 February 2020.



Board of Directors' Review

Dear Shareholders,

The year 2021 saw Banpu Power Public Company Limited strongly move toward becoming a leading power-generating company with a balanced portfolio from both thermal power and renewable power businesses across the Asia-Pacific region. Banpu Power has continued outstanding performance and earned recognitions despite challenges arising from the COVID-19 pandemic, travel restrictions, and energy price volatility. The Board of Directors has been fully aware of those issues and placed them as a top priority to maintain good corporate governance. We established principles for risk management and business continuity management as guidelines for the management to mitigate the potential impacts on the Company. These principles are also implemented as an operational framework for all countries where Banpu Power operates to ensure prudent management. Besides, we have worked closely with business alliances and local government agencies in every host country to improve the supervision of the Company's power generation and distribution to achieve effective management of both current and future changes and drive continuous growth toward sustainability.

Moreover, after the 26th United Nations Climate Change Conference (COP26) has set the target to achieve carbon neutrality and net zero emissions, countries worldwide are paying more attention. There have been approaches to reform the energy and power generation industry toward a low carbon society in the future. The Board of Directors places importance on those issues and encourages Banpu Power to prioritize business operations that pose positive environmental impact. Nevertheless, we continue to create growth according to the energy sustainability principle with a balanced portfolio from thermal power, renewable power, and energy technology businesses to successfully deliver affordable, reliable, and eco-friendly electricity.

Another critical factor contributing to the Company's successful expansion in the region and to achieve our targeted power generating capacity of 5,300 MWe is "Human Resources". We, therefore, recognize the importance of nominating and appointing knowledgeable and competent independent directors whose qualifications align with the Company's business direction. We also support capacity building for senior executives and employees so that they have the required knowledge and capability and stay abreast of global trends, enabling effective application for better performance and flexible adaptation to changing work environments. All of these enable Banpu Power to efficiently generate and distribute electricity to satisfy different energy demands of all sectors and strongly deliver business value.

To mobilize and accelerate growth according to Banpu Power's strategic plan, the Board of Directors prioritizes operations according to the sustainable development framework embracing Environmental, Social and Governance (ESG) principles in all of our business locations. This year, Banpu Power's received Rising Star Sustainability Awards for the first time and was selected to be a member of Thailand Sustainability Investment (THSI) for the fourth consecutive year, reaffirming our determination and success in driving growth according to ESG principles to create steady, satisfying returns for shareholders and all stakeholders. In addition, we promote the implementation of the Anti-Corruption Policy, Whistleblower Policy, and Whistleblower Protection, as well as adherence to good corporate governance principles. Because of these operations, Banpu Power has become a certified member of Thailand's Private Sector Collective Action Coalition Against Corruption (CAC) and earned Excellence CG Scoring on the Corporate Governance Report of Thai Listed Companies 2020 surveyed by the Thai Institute of Directors Association (IOD).

Development and achievements throughout 2021 well reflect our determination to become a leading power generation and distribution company in the Asia-Pacific region. This would not have been possible without the collaboration of the Board of Directors, the management, and employees in all countries as well as stakeholders' continued support and trust in Banpu Power. As the Board of Directors, we pledge to conduct and develop professional operations with honesty and business ethics to create sustainable value. We will adhere to business integrity and best practices to drive Banpu Power toward being a leading power generation and distribution company in the region and a major driving force of economic development in all countries where we operate.



Assoc. Prof. Dr. Naris Chaiyasoot
Chairman of the Board of Directors



Chief Executive Officer's Review

Dear Shareholders,

In 2021, Banpu Power Public Company Limited significantly expanded the power generation and distribution business and leveraged synergies across Banpu ecosystem to accelerate value creation and add capacity or “quality megawatts” to our portfolio. We have successfully acquired and launched commercial operations of ten new power plants, consisting of both thermal and renewable power plants in the countries with high growth potential and electricity demands. Despite the global challenges caused by the COVID-19 pandemic, Banpu Power successfully adapted to changes thanks to its agility, business continuity management (BCM), and strong teams of local experts in each location. All of these are key factors contributing to our smooth operations.

In the past year, TRIS Rating affirmed Banpu Power A+ credit rating, proving our financial strength, which reinforced transformation toward becoming a greener and smarter energy generation and achieving the capacity expansion target of 5,300 MWe with 800 MW from renewables by 2025 in line with Greener & Smarter strategy. The Company stressed maintaining a balanced portfolio between thermal power and renewable power generation. **Thermal power generation**, which deploys High Efficiency, Low Emissions (HELE) technologies, remains necessary for maintaining a stable and reliable electricity supply to the industrial sectors and consumers at affordable prices, especially in Southeast Asian countries. Meanwhile, **renewable power generation** is constantly growing, driven by support from local governments to address the environmental concern. We continue focusing on investment in power generation and distribution business in response to varying energy demands, policies, and energy development plans in different countries. We carefully consider and review our plan to ensure that we can generate appropriate returns for stakeholders while prioritizing environmental, social, and governance (ESG) principles to drive sustainable growth in every country where we operate. With a strong commitment and ESG performance, in 2021, Banpu Power was recognized among global companies in S&P Global Sustainability Yearbook. The Company was also listed on Thailand Sustainability Investment (THSI) Index for the fourth consecutive year and received Rising Star Sustainability Award from the Stock Exchange of Thailand, demonstrating our dedication and commitment on sustainable business conduct as well as our preparedness for future changes and challenges.



Dr. Kirana Limpaphayom
Chief Executive Officer

Summary of Operating Results 2021

In 2021, Banpu Power owned 38 power plants/projects with total equity-based power and steam capacity from operating power plants of 3,121 MWe and 91 MW from under-development projects. The Company continued delivering growth through the investment in operating assets which can generate immediate cashflow while building upon Banpu ecosystem through the acquisition of ten operating power plants, namely, Beryl and Manildra in Australia; Temple I CCGT in the United States of America; Nakoso IGCC power plant and Kesennuma, Nihonmatsu, and Shirakawa¹ solar farms in Japan; and Ha Tinh, Chu Ngoc² and Nhon Hai² solar farms in Vietnam. Another under-construction power plant project is Vinh Chau wind farm phase 1 with a capacity of 30 MW which is expected to achieve commercial operation date in 2022.

Apart from expanding the power generation capacity according to the plan mentioned above, Banpu Power focused on maintaining power plant efficiency to ensure stable operation and reliable electricity distribution to meet the needs of stakeholders and create steady returns for the Company. We also complied with energy policies and regulations in each location, particularly maintenance scheduling and operation mode adjustment as appropriate, to maintain operational capability amid uncertainties. Measures were implemented to control expenses, especially the increasing raw material costs last year. In addition, Banpu Power's employees at the headquarters office and local offices in every host country collaborated to study new markets the Company has invested in, such as the U.S. to ensure smooth operations and seek opportunities to expand investment for sustainable growth.

In 2021, Banpu Power reported net profit of THB 3,127 million and its Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) of THB 3,487 million. The revenue for 2021 was reported at THB 6,784 million, a 23% increase compared to the previous year. The performance was mainly from three Combined Heat and Power Plants (CHPs) in China for THB 6,112 million. Despite the challenge of high coal costs throughout the year, the Company has taken various measures to mitigate the impact by countermeasures such as implementing a centralized coal procurement system, negotiating with its counterparty to raise the steam selling price to reflect the higher coal cost, proactively optimizing the plant operation mode to protect the bottom line, and be able to provide electricity and steam to serve industrial customers and residential customers efficiently. Moreover, there was additional revenue of THB 673 million from Temple I CCGT in the U.S., which the Company started to recognize from November 2021 onwards.

The Company realized the share of profit from its joint ventures at THB 2,974 million. HPC power plant in Lao PDR reported THB 3,612 million, a 12% increase compared to the previous year with a high Equivalent Availability Factor (EAF) at 85% as a result of an effective maintenance plan. BLCP power plant in Thailand reported its share of profit of THB 215 million. Nakoso IGCC power plant in Japan, which started to recognize the profit since the second quarter, reported its share of profit of THB 210 million. Shanxi Lu Guang power plant in China had started its electricity generation dispatch, but a challenge of the high coal price resulted in its share of loss of THB 542 million. Meanwhile, renewable and energy technology businesses invested through Banpu NEXT reported a share of loss of THB 521 million, mainly from energy trading business which was affected by the market situation.

Strategies and Future Directions

Banpu Power is driving the transition toward a greener and smarter energy generation to achieve the generation capacity target of 5,300 MWe by 2025 through the three following strategies: **1. Leverage synergies across Banpu Ecosystem** to further expand energy generation business in countries where Banpu has operations, for instance, investment in natural gas-fired power plants in the United States and renewable power plants in Vietnam, China, Japan, and the United States; **2. Seek investment opportunities in Asia-Pacific countries with high economic growth and electricity demands** through investments in commercially-operational projects to generate immediate cash flow, focusing on the deployment of HELE technologies in thermal power business to deliver affordable, reliable, and eco-friendly electricity; and **3. Drive growth of renewable energy and energy technology businesses through investment in Banpu NEXT** to strengthen our power generation business while converging toward the future global energy trends. By the implementation of the three strategies, Banpu Power will be able to expand business opportunities according to Banpu group's Greener & Smarter strategy.

Banpu Power will continue to pursue balanced business growth and be committed to being a good corporate citizen in all locations we operate. Nevertheless, without your trust and support, we would not have advanced this far. Being aware of our mission and responsibilities, Banpu Power will strive to develop power generation and distribution business and propel the growth of the energy technology business in all host countries as well as countries with high-growth potential to deliver sustainable returns for all our stakeholders.

Notes: ¹Achieved commercial operation date in January 2022

²The transaction was complete in January 2022.

Business Operation and Performance



1. Banpu Power Group Structure and Business Operations

Policy and Business Overview

Banpu Power Public Company Limited, or Banpu Power (BPP), a leading power-generating company with a balanced portfolio from both thermal power business and renewable power business across the Asia-Pacific region, was established in 1996 as a subsidiary of Banpu Public Company Limited and was listed on the Stock Exchange of Thailand (SET) in 2016. Throughout the past 25 years, Banpu Power has been driving business growth and expanding power generation capacity according to the Greener & Smarter strategy by expertise in the power generation business and leveraging the synergies across Banpu Group. The Company continues to expand its knowledge base in the energy businesses, seek new investment opportunities, and add more value to the power generation businesses. It has innovated and studied new innovations to achieve power generation efficiency while deploying High Efficiency, Low Emissions (HELE) technologies that are safe and eco-friendly to sustainably be a leader in the power generation and distribution business in the Asia-Pacific region.

Since 2016, Banpu Power has planned to achieve the target of 5,300 MWe capacity by 2025. Pursuing its policy to generate the growth in its power generation and distribution businesses in response to the energy demand of each country, the Company capitalizes on Banpu's business ecosystem in the countries where it operates. Meanwhile, the Company seeks investment opportunities in fast-growing countries with high energy demands, focusing on investment in operating assets which can provide immediate cashflow to the Company. Banpu Power has also drives the growth in renewable energy and energy technology businesses through investment in Banpu NEXT. As of 31 December 2021, Banpu Power owns 38 power plants/projects. The Company's total equity-based power and steam committed capacity by power plants which have reached commercial operation amounted to 3,121 MWe, with an unrealized capacity of 91 MW from under development projects. In 2021, Banpu Power acquired 10 power plants which have achieved the Commercial Operation Date (COD), namely Beryl and Manildra in Australia; Temple I CCGT in the United States of America; Nakoso IGCC power plant and Kesenuma, Nihonmatsu, and Shirakawa¹ solar farms in Japan; and Ha Tinh, Chu Ngoc² and Nhon Hai² solar farms in Vietnam.

Banpu Power adheres to fairness and transparency in all business operations. Meanwhile, the Company aims to create sustainable value for all stakeholders in accordance with Environmental, Social and Governance (ESG) principles to strike a balance of all three dimensions - business growth, socio-economic development, and care for the community and the environment. Ultimately, Banpu Power also acts as a good corporate citizen in every country where it operates.

Notes: ¹Achieved commercial operation date in January 2022

²The transaction was complete in January 2022.



Vision



“ To be recognized as a pioneer Asian power company with a strong reputation for sustainable development, friendly community relations, and respect for the natural environment ”

Mission



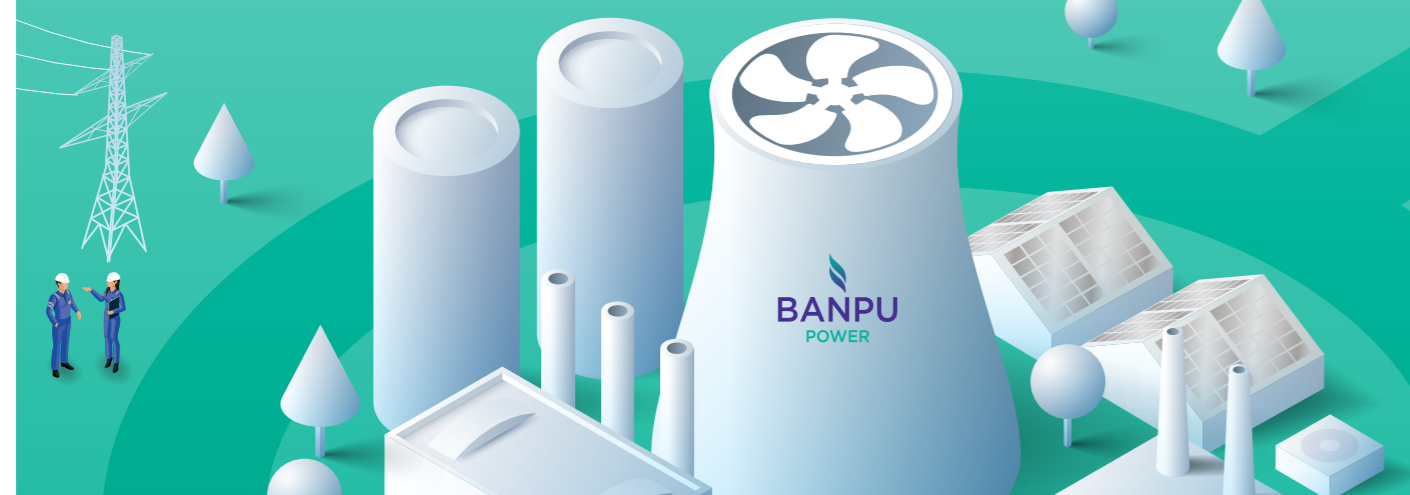
To develop, own, and operate both thermal and renewable power businesses using the most efficient technologies available for sustainable growth in pursuit of a position of leadership in Asia



To conduct all business in an ethically, socially, and environmentally responsible manner



To create sustainable value for shareholders, customers, business partners, employees, and communities while being a good corporate citizen in all countries of operations



Summary of Major Changes and Developments in the Past Year

2021

On 22 February 2021,

the Board of Directors Meeting approved the Company's dividend payment at a rate of THB 0.65 per share for the 2020 operating results during 1 January - 31 December 2020. Previously, an interim dividend had been paid out to shareholders at a rate of THB 0.30 per share on 23 September 2020. The remaining dividend for the 2020 operating profits was to be paid out to the shareholders at a rate of THB 0.35 per share. The dividend payment was appropriated from the corporate income tax-exempted profit, on which shareholders are not entitled to tax credits. The dividend was paid out on 28 April 2021.

On 31 March 2021,

Banpu Power Investment Co., Ltd. a subsidiary of Banpu Power, acquired 33.50% of ordinary shares in Nakoso IGCC Management Co., Ltd. (NIMCO) which owns 40% in the 543-MW Nakoso IGCC power plant in Fukushima Prefecture, Japan. The transaction value was JPY 8,631 million, equivalent to THB 2,445.19 million.

On 5 April 2021,

the Company decreased paid-up capital by writing off the repurchased shares and registered the amendment to paid-up capital with the Ministry of Commerce. After the amendment, Banpu Power has a total paid-up capital of THB 30,477,317,000 consisting of 3,047,731,700 ordinary shares at a par value of THB 10 per share.

On 27 August 2021,

the Board of Directors Meeting approved the interim dividend payment from accumulated profits and operating results for the six months ending 30 June 2021, at a rate of THB 0.30 per share for 3,047,731,700 shares, totalling THB 914.32 million. The interim dividend was paid on 21 September 2021.

On 26 August 2021,

Banpu Next Company Limited, a 50%-owned associated company of Banpu Power, acquired 30% stake in Beyond Green Company Limited (BYG) through the purchase of newly issued ordinary shares for the total amount of THB 300 million. BYG is an authorized distributor of Club Car's commercial utility electric vehicles, providing a wide range of services in Thailand, Lao PDR, and Cambodia. The services include EV sales, concession, and rental fleet, which are adjustable to suit the purposes of different businesses.

On 3 June 2021,

Banpu Energy Australia Pty Ltd (BEN), a wholly-owned subsidiary of Banpu Public Company Limited and Banpu Renewable Australia Pty Limited (BREA), a wholly-owned subsidiary of Banpu NEXT Co., Ltd., the Company's 50%-owned subsidiary, jointly established Banpu Energy Hold Trust, in which BEN holds 80% stake and BREA holds 20% stake. Banpu Energy Hold Trust acquired 100% of shares in two solar power plants in New South Wales, Australia, which have a total generation capacity of 166.8 MWdc, consisting of 110.9 MWdc from Beryl solar power plant and 55.9 MWdc from Manildra solar power plant. Beryl solar power plant achieved Commercial Operation Date (COD) in June 2019, while Manildra solar power plant achieved COD in December 2018. The total transaction value was AUD 97.5 million, equivalent to THB 2,332 million. (With 10% indirect ownership, Banpu Power invested AUD 9.75 million, equivalent to THB 233 million in this acquisition.)

On 3 November 2021,

BPIN Investment Co., Ltd. (BPINI), a subsidiary of Banpu NEXT Co., Ltd., the Company's 50%-owned subsidiary, entered into a sale and purchase agreement for the divestment of its 47.5% shares in Sunseap Group Pte. Ltd. (Sunseap), a company incorporated in Singapore. Under the SPA, BPINI's shares will be sold to EDP Renováveis SA (EDPR). The sale of BPINI's shares is part of a takeover transaction in which EDPR is acquiring a majority stake in Sunseap. The SPA stipulates a gross consideration payable to BPINI of SGD 489.8 million or approximately THB 12,154 million. The transaction is subject to certain conditions specified in the SPA, with completion expected within the first quarter of 2022.

On 10 August 2021,

BKV-BPP Power LLC, an associated company of Banpu Power. It is a joint venture between BPPUS (Banpu Power's 100% subsidiary) and BKV (Banpu's 96.3%-owned subsidiary), which held 50% shareholding equally. BKV-BPP Power LLC entered into a sale and purchase agreement to acquire 100% of shares in Temple Generation Intermediate Holdings II, LLC, which owns 100% stake in the 768-MW Temple I IGCC Power Plant in Texas, the United States of America. The transaction value was USD 430 million, equivalent to THB 14,147 million. (Banpu Power's investment based on its equity was USD 215 million, equivalent to THB 7,074 million.)

On 4 November 2021,

Banpu NEXT Co., Ltd., the Company's 50%-owned subsidiary, entered into a sale and purchase agreement for the acquisition of 100% stake in Engie Services (Thailand) Co., Ltd., a provider of energy management solutions, registered as a member of the Thai ESCO Association. The transaction value amounted to SGD 3.8 million or approximately THB 95 million. (Banpu Power's investment based on its ownership in Banpu NEXT amounted to SGD 1.9 million or approximately THB 47.5 million.)

On 26 November 2021,

Banpu Renewable Singapore Pte. Ltd. (BRS), a subsidiary of Banpu NEXT Co., Ltd., the Company's 50%-owned subsidiary, announced the commercial operation of the 20-MW Kesenuma solar power plant in Miyagi Prefecture, Japan. The solar power plant entered into a purchase and sale agreement with Tohoku Electric Power Co., Inc. with a Feed-in-Tariff (FiT) of 32 JPY/kWh for up to 19 years. The power plant can generate and supply electricity to 6,000 households.

On 25 Jan 2022,

BRE Singapore Pte. Ltd. (BRES), a subsidiary of Banpu NEXT Co., Ltd., which is a 50%-owned associate company of the Company, entered into a purchase and sale agreement for the acquisition of 100% of LCE Gia Lai Joint Stock Company, which owns the 15-MW Chu Ngoc solar power plant in Gia Lai Province and LCE Ninh Thuan Joint Stock Company, which owns the 35-MW Nhon Hai solar power plant in Ninh Thuan Province, Vietnam. The transaction value was USD 26.69 million or approximately THB 883 million. (Banpu Power's investment based on its equity in Banpu NEXT amounted to USD 13.35 million or approximately THB 442 million.) The transaction remains subject to certain conditions specified in the agreement and government approvals, with completion expected in the first quarter of 2022. Chu Ngoc and Nhon Hai solar power plant achieved commercial operation date on 4 June 2019 and 6 July 2020, respectively. Both are eligible for the Feed-in-Tariff (FiT) of US cents 9.35/kWh and will supply electricity through the national grid system under a power purchase agreement with Vietnam Electricity (EVN) for a period of 20 years.

On 1 December 2021,

BRE Singapore Pte. Ltd. (BRES), a subsidiary of Banpu NEXT Co., Ltd., the Company's 50%-owned subsidiary, entered into a sale and purchase agreement for the acquisition of 100% of Ha Tinh Solar Power Joint Stock Company, which owns the 50-MW Ha Tinh solar power plant in Ha Tinh Province, Vietnam. The transaction value was USD 23.9 million or approximately THB 788 million. (Banpu Power's investment based on its equity in Banpu NEXT amounted to USD 11.95 million or approximately THB 394 million.) The transaction remains subject to certain conditions specified in the agreement and government approvals, with completion expected in the first quarter of 2022. The Ha Tinh solar power plant achieved commercial operation date on 13 June 2019 and is eligible for the Feed-in-Tariff (FiT) of US cent 9.35/kWh. The solar power plant supplies electricity through the national grid system under a Power Purchase Agreement with Vietnam Electricity (EVN) for a period of 20 years.

On 23 February 2022,

the Board of Directors Meeting approved the Company's dividend payment at a rate of THB 0.65 per share for the 2021 operating results during 1 January to 31 December 2021. An interim dividend had been paid to shareholders at a rate of THB 0.30 per share on 21 September 2021. The remaining dividend for the operating profits was proposed to be paid out to the shareholders at a rate of THB 0.35 per share. The dividend payment was appropriated from the corporate income tax-exempted profit, on which shareholders are not entitled to tax credits. The dividend is scheduled to be paid on 27 April 2022.

On 16 January 2022,

Banpu Renewable Singapore Pte. Ltd. (BRS), a subsidiary of Banpu NEXT Co., Ltd., which is a 50%-owned associate company of the Company, reported the commercial operation of Shirakawa solar power plant, which is located in Fukushima Prefecture. This 10-MW solar power plant entered into a power purchase agreement with Tohoku Electric Power Co., Inc. and is eligible for a Feed-in-Tariff (FiT) of 36 JPY/kWh for a period of 19 years. The Shirakawa Project can generate and supply electricity to approximately 2,000 households.

2022

Name, Headquarters Location, Type of Business, Registration Number, and Number of Shares

Name (Thai)	บริษัท บ้านปู เพาเวอร์ จำกัด (มหาชน)
Name (English)	Banpu Power Public Company Limited
Stock Symbol	BPP
Major Business	A holding company running major business in power generation and distribution and other related businesses
Registration Number	0107558000385
Authorized Capital	THB 31,012,020,000.00
Paid-up Capital	THB 30,477,317,000.00
No. of Shares	3,047,731,700 shares
Par Value	THB 10.00
Headquarters Location	26 th Floor, Thanapoom Tower, 1550 New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok 10400
Telephone	+66 2007 6000
Fax	+66 2007 6060
Website	www.banpupower.com
Company Secretary	Tel.: +66 2007 6000 Email: bpp_comsec@banpupower.co.th
Investor Relations	Tel.: +66 2007 6000 Email: investor_relations@banpupower.co.th

Revenue Structure

For the previous three years ended 31 December

Banpu Power Public Company Limited and Its Subsidiaries

Products/Services	Conducted by	% of Shareholding	2021		2020		2019	
			Revenue (THB Million)	%	Revenue (THB Million)	%	Revenue (THB Million)	%
Sales Revenue:								
1. Power	BIC	100.00	2,146.76	31.64	2,569.46	46.67	2,399.54	42.19
	BPPRIC ¹	100.00	-	-	89.24	1.62	754.97	13.28
	BKV-BPP ²	50.00	672.52	9.91	-	-	-	-
2. Steam	BIC	100.00	3,507.09	51.69	2,284.93	41.50	2,005.48	35.26
3. Energy Trading	BPPT G.K. ¹	100.00	-	-	128.01	2.33	141.73	2.49
4. Other Revenue ³	BIC	100.00	458.12	6.75	433.87	7.88	385.29	6.77
Total Sales Revenue			6,784.50	100.00	5,505.51	100.00	5,687.01	100.00
Participating Profit (Loss) from Investment in Associated Companies (Equity Method) ⁴			2,974.48		3,565.39		3,673.08	
Total Revenues and Share of Profit from Associated Companies			9,758.98		9,070.90		9,360.09	

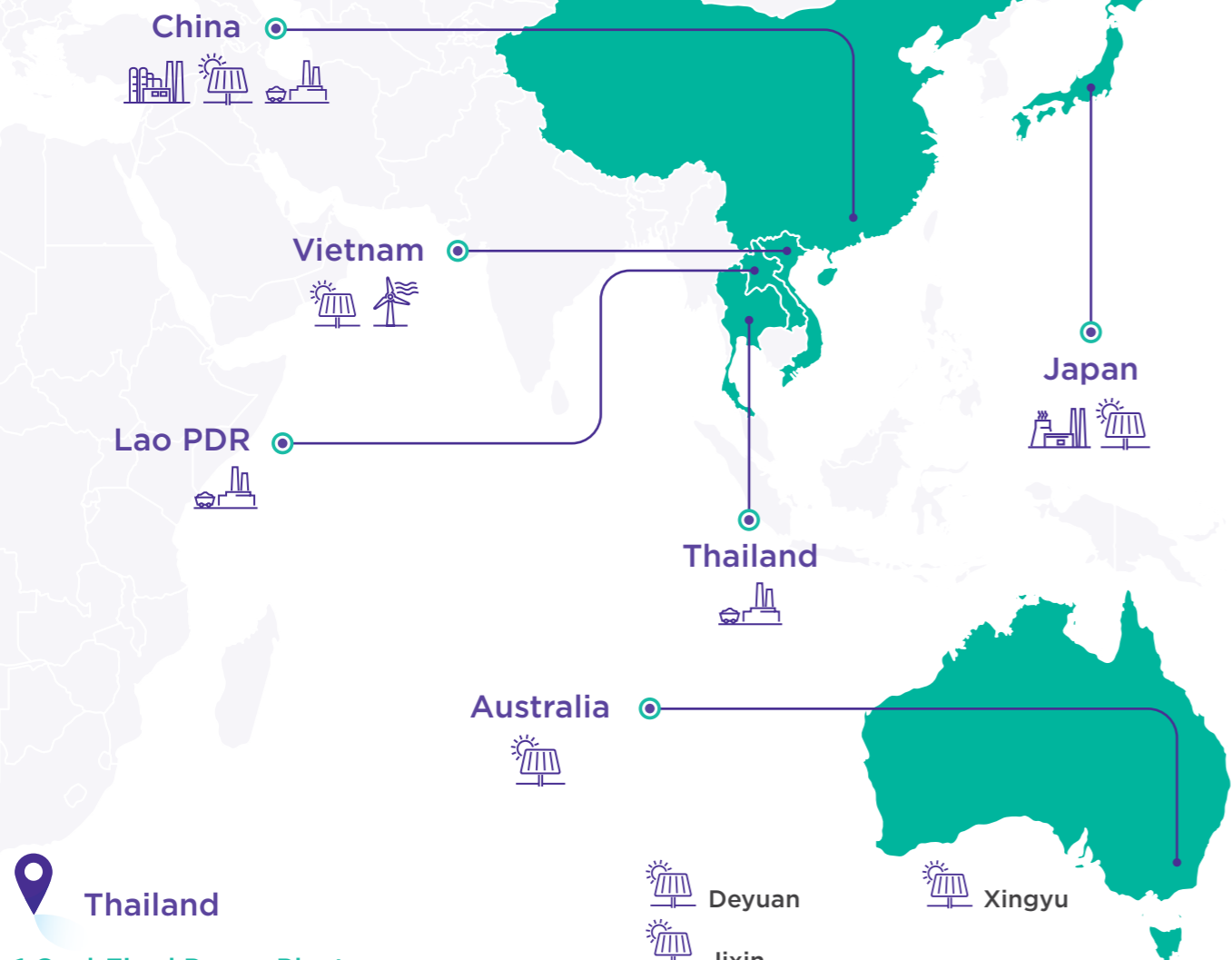
Remarks :¹BPPRIC is a 100% subsidiary of BPP investing in solar power business in China and BPPT G.K. is a 100% subsidiary of BPP investing in energy trading business in Japan. Both subsidiaries were a part of intra-group restructuring "Business Amalgamation" which created Banpu NEXT Co., Ltd., a flagship company for renewable energy and energy technology businesses established on 27 February 2020, in which BPP hold 50% ownership. Therefore, after completion of business amalgamation, the performance from BPPRIC and BPPT G.K. were reported as Profit (Loss) from Investment in Associated Companies (Equity Method) in Banpu NEXT Co., Ltd.

²BKV-BPP is an associated company of BPP. It is a joint-venture between BPPUS (BPP's 100% subsidiary) and BKV (Banpu's 96.3% subsidiary), which held 50% shareholding equally. In 2021, BKV-BPP invested 100% ownership in Temple I gas-fired power plant in the U.S.; therefore, BKV-BPP has realized Temple I financial performance for two months from 1 November - 31 December 2021.

³Other revenues primarily comprise revenue from hot water and cold water and subsidies from the Government of China for compliance with environmental standards. In addition to the extent that power and steam tariffs do not sufficiently reflect an increase in coal prices, the Company may receive subsidies from the Government of China on a case by case basis.

⁴The Company did not realize sales revenue from its joint ventures of power business whose shareholding is not more than 50%, but were reported as Profit (Loss) from Investment in Associated Companies (Equity Method), i.e., BLCP power plant (BPP hold 50%), HPC power plant (BPP hold 40%) and Banpu NEXT Co., Ltd. (BPP hold 50%).

Group Operations Map



- Thailand**
1 Coal-Fired Power Plant
BLCP
- Lao PDR**
1 Coal-Fired Power Plant
HPC
- China**
3 Combined Heat and Power (CHP) Plants
Luannan Zhengding
Zouping
- 7 Solar Power Plants**
Huineng Jinshan
Haoyuan Hui'en

- Deyuan
- Jixin
- 1 Coal-Fired Power Plant**
Shanxi Lu Guang
- Japan**
1 IGCC Power Plant
Nakoso
- 20 Solar Power Plants**
Olympia - Hitachi Omiya No.1
Olympia - Hitachi Omiya No.2
Olympia - Ozenosato-Katashina
Olympia - Sakura No.1
Olympia - Sakura No.2
- Xingyu

- Hino
- Mukawa
- Kurokawa
- Muroran 1
- Takeo 2
- Yabuki
- Nihonmatsu
- Yamagata lide
- Vietnam**
3 Wind Power Plants
El Wind Mui Dinh Vinh Chau - Phase 1
Vinh Chau - Phase 2 & 3
- Awaji
- Nari Aizu
- Tenzan
- Muroran 2
- Yamagata
- Kesenuma
- Shirakawa

- 3 Solar Power Plants**
Ha Tinh Chu Ngoc
Nhon Hai
- Australia**
2 Solar Power Plants
Beryl
Manildra
- United States of America**
1 Gas-Fired Power Plant
Temple I

○ Projects in Operation
○ Projects in Development

Banpu Power Public Company Limited, its subsidiaries, and its joint ventures currently operate power generation and distribution businesses, covering thermal power plants and renewable power plants, as well as energy technology businesses, as detailed below.

1. Thermal Power Plants

Banpu Power has invested in coal-fired and natural gas-fired power plants which deploy the innovative high-efficiency, low-emissions (HELE) technology to enhance the quality and reliability of power generation. Banpu Power currently operates eight thermal power plants in the Asia-Pacific region and the United States.

1.1 Banpu Power Investment Co., Ltd. (BPIC)

Banpu Power Investment Co., Ltd. (BPIC) is Banpu Power's wholly-owned subsidiary registered in Singapore through Banpu Power International Limited (BPPI). BPIC invested in three Combined Heat and Power (CHP) plants in the northern region of China with a total installed capacity of 613 MWe, consisting of 323 MW of electricity and 1,318 TPH of steam. The details are as follows:

Luannan Combined Heat and Power Plant



Location Luannan County, Tangshan City, Hebei Province, China

Shareholding Percentage

Banpu Power Investment Co., Ltd. 100%

Type and Technology

A subcritical coal-fired CHP plant which generates both electricity and steam

Generation Capacity

125 MW of electricity and 278 TPH of steam, or a total installed capacity of 227 MWe

Commercial Operation Date

Phase 1: June 2001

Phase 2: November 2018

Phase 3: December 2019

Power and Steam Purchasers

Generate and supply electricity to Hebei Electric Power Corporation's power grid and steam to Luannan County's industrial and household sectors

Zhengding Combined Heat and Power Plant



Location Zhengding County, Shijiazhuang City, Hebei Province, China

Shareholding Percentage

Banpu Power Investment Co., Ltd. 100%

Type and Technology

A subcritical coal-fired CHP plant which generates both electricity and steam

Generation Capacity

73 MW of electricity and 370 TPH of steam, or a total installed capacity of 139 MWe

Commercial Operation Date

Phase 1: October 2000

Phase 2: November 2005

Phase 3: January 2015

Power and Steam Purchasers

Generate and supply electricity to North China Grid Co., Ltd.'s power grid and steam to Zhengding County's industrial and household sectors

Zouping Combined Heat and Power Plant



Location Zouping County, Binzhou City, Shandong Province, China

Shareholding Percentage

Banpu Power Investment Co., Ltd.	70%
Xiwang Group Co., Ltd.	30%

Type and Technology

A subcritical coal-fired CHP plant which generates both electricity and steam

Generation Capacity

125 MW of electricity and 670 TPH of steam, or a total installed capacity of 247 MWe (173 MWe equity-based capacity)

Commercial Operation Date

Phase 1:	June 2001
Phase 2:	October 2006
Phase 3:	December 2007
Phase 4:	May 2017

Power and Steam Purchaser

Generate and supply electricity and steam to Xiwang Group Co., Ltd.'s industrial estate

1.2 BLCP Power Limited

BLCP Power Limited is an independent power producer (IPP) who operates BLCP power plant, a thermal power plant that uses high-quality bituminous coal imported mainly from Australia as fuel. BLCP power plant has been operating for 15 years.

BLCP Power Plant



Location Map Ta Phut Industrial Estate, Rayong Province, Thailand

Shareholding Percentage

Banpu Coal Power Limited	50%
Electricity Generating Public Company Limited	50%

Type and Technology

A subcritical coal-fired power plant using bituminous coal as fuel

Generation Capacity

1,434 MW from 2 production units of 717 MW each

Commercial Operation Date

Unit 1:	October 2006
Unit 2:	February 2007

Power Purchaser

Having entered into a long-term power purchase agreement with the Electricity Generation Authority of Thailand for a period of 25 years

1.3 Hongsa Power Company Limited

Banpu Power and a subsidiary of Ratchaburi Electricity Generating Company Limited, and Lao Holding State Enterprise, which is the government enterprise of Lao PDR, formed joint ventures: Hongsa Power Company Limited to develop, construct and operate the HPC power plant (HPC) and Phu Fai Mining Company Limited to operate a lignite coal mine, which holds a lignite mining concession, to supply lignite as fuel for HPC power plant.

HPC Power Plant



Location Hongsa District, Xayaburi Province, Lao PDR

Shareholding Percentage

Banpu Power Public Company Limited	40%
RATCH Group Public Company Limited (formerly named as Ratchaburi Electricity Generating Holding Public Company Limited)	40%
Lao Holding State Enterprise	20%

Type and Technology

A subcritical mine-mouth power plant fueled by lignite coal

Generation Capacity

1,878 MW from three production units of 626 MW each

Commercial Operation Date

Unit 1:	June 2015
Unit 2:	November 2015
Unit 3:	March 2016

Power Purchasers

Having entered into a long-term power purchase agreement with the Electricity Generation Authority of Thailand and Électricité du Laos for a period of 25 years

1.4 Shanxi Lu Guang Power Co., Ltd.

BPIC, a wholly-owned subsidiary of Banpu Power, has formed a joint venture to study and develop Shanxi Lu Guang power plant. This thermal power plant deploys the advanced clean coal ultra-supercritical (USC) technology, which is highly efficient and eco-friendly.

Shanxi Lu Guang (SLG) Power Plant



Location Changzhi City, Shanxi Province, China

Shareholding Percentage

Banpu Power Investment Co., Ltd.	30%
Gemeng International Energy Co., Ltd.	35%
Anhui Province Wenergy Co., Ltd.	35%

Type and Technology

A coal-fired power plant that deploys the advanced clean coal ultra-supercritical technology

Generation Capacity

1,320 MW from two production units of 660 MW each

Commercial Operation Date

Unit 1:	June 2021
Unit 2:	October 2021

Power Purchaser

Generate and supply electricity to Shanxi Provincial Grid

1.5 Nakoso IGCC Management Co., Ltd.

The Company holds 100% shares in BPIC, which has invested in 33.5% shares of Nakoso IGCC Management Co., Ltd (NIMCO). NIMCO holds 40% shares in Nakoso IGCC power plant, which deploys integrated gasification combined cycle (IGCC) technology for power generation. Mitsubishi Corporation Power Ltd. (Japan), one of the five investors in the power plant, is the developer of the technology resulting from over 30-year-long research and development. Nakoso is a large-scale IGCC power plant, which is highly efficient and emits low pollutions.

Nakoso IGCC Power Plant



Location Fukushima Prefecture, Japan

Shareholding Percentage

BPIC holds 33.5% shares in NIMCO, and NIMCO holds 40% shares in Nakoso IGCC power plant. Banpu Power accordingly holds 13.4% shares in the power plant.

Type and Technology

A gas-fired power plant deploying an integrated gasification combined cycle (IGCC) technology

Generation Capacity

543 MW (73 MW equity-based capacity)

Commercial Operation Date

April 2021

Power Purchaser

Tokyo Electric Power Company Holdings

1.6 Temple Generation Intermediate Holdings II, LLC

Banpu Power US Corporation (BPPUS), a Banpu Power's wholly-owned subsidiary, and BKV Corporation (BKV), a 96.3% owned subsidiary of Banpu Public Company Limited, jointly established BKV-BPP Power LLC (BKV-BPP), in which BPPUS and BKV equally hold 50% ownership. On 10 August 2021, BKV-BPP acquired 100% shares in Temple Generation Intermediate Holdings II, LLC, the entity that wholly owns Temple I CCGT power plant. Temple I CCGT is located in Texas, one of the U.S. states with fast-growing economy and population. Temple I CCGT power plant deploys combined cycle gas turbines (CCGT) technology – an advanced high-efficiency, low-emissions (HELE) technology. Its flexibility in priority dispatch according to Merit Order to serve the dynamic demand pattern in the market enables the power plant to compete in the Electric Reliability Council of Texas (ERCOT) market, which is a deregulated energy market.

Temple I CCGT Power Plant



Location Texas, the U.S.

Shareholding Percentage

Banpu Power US Corporation	50%
BKV Corporation	50%

Type and Technology

A natural gas-fired power plant using combined cycle gas turbines (CCGT) technology

Generation Capacity

768 MW (384 MW equity-based capacity)

Commercial Operation Date

July 2014

Power purchaser

The Electric Reliability Council of Texas (ERCOT)

2. Renewable Power Plants

Banpu Power currently operates renewable power generation and distribution business through investment in Banpu NEXT Co., Ltd., a subsidiary in which Banpu and Banpu Power equally own 50% of shares. Banpu NEXT's focus is to invest and develop solar and wind power projects in the Asia Pacific region, namely China, Japan, Australia, and Vietnam. The details are as follows.

2.1 Solar Power Plants in China

Banpu NEXT has invested in and developed operating seven solar power plants with a combined capacity of 177.32 MW. The power plants entered into long-term power purchase agreements under the Feed-in-Tariff (FiT) scheme for a 20-year period. The generated electricity is to be supplied to the power grid in provinces where each power plant is located. The details are as follows.

Solar Power Plants	Shareholding (%)	Generation Capacity (Megawatts)	Location (Province)	Commercial Operation Date
1. Huineng	100.00	21.51	Shandong	July 2016
2. Jinshan	100.00	28.95	Shandong	September 2016
3. Haoyuan	100.00	20.00	Shandong	October 2016
4. Hui'en	100.00	19.70	Shandong	January 2017
5. Deyuan	100.00	51.64	Zhejiang	February 2017
6. Xingyu	100.00	10.30	Shandong	July 2017
7. Jixin	100.00	25.22	Jiangsu	Phase 1: October 2015 Phase 2: August 2016
Total Generation Capacity		177.32		



Haoyuan



Deyuan



Hui'en

2.2 Solar Power Plants and Projects in Japan

Banpu NEXT has invested and developed solar power projects in Japan under the TK investment structure, through which investors and operators enter into agreements to form a partnership. An investor funds a business of TK operator in the forms of cash or other assets and has a right to obtain profit-sharing from the business. Banpu NEXT has invested in 20 solar power plants and projects in Japan thus far, 19 of which are commercially operational while the others are during the construction and development phases. All projects have entered into long-term power purchase agreements under the Feed-in-Tariff (FiT) scheme. The generated electricity will be fed through the power grid in the areas where the power plants are located. The details are as follows:

Solar Power Plants/Projects	Shareholding (%)	Generation Capacity (Megawatts)		Location (Prefecture)	Commercial Operation Date
		100%	Equity-Based		
1. Olympia - Hitachi Omiya No.1	40.00	2.00	0.80	Ibaraki	July 2013
2. Olympia - Hitachi Omiya No.2	40.00	2.00	0.80	Ibaraki	January 2015
3. Olympia - Ozenosato-Katashina	40.00	2.00	0.80	Gunma	January 2015
4. Olympia - Sakura No.1	40.00	2.00	0.80	Tochigi	December 2015
5. Olympia - Sakura No.2	40.00	2.00	0.80	Tochigi	October 2015
6. Hino	75.00	3.50	2.63	Shiga	May 2016
7. Awaji	75.00	8.00	6.00	Hyogo	May 2017
8. Mukawa	56.00	17.00	9.52	Hokkaido	August 2018
9. Nari Aizu	100.00	20.46	20.46	Fukushima	December 2018
10. Kurokawa	100.00	18.90	18.90	Miyagi	December 2019
11. Tenzan	100.00	1.96	1.96	Saga	October 2017
12. Muroran 1	100.00	1.73	1.73	Hokkaido	August 2018
13. Muroran 2	100.00	1.63	1.63	Hokkaido	January 2018
14. Takeo 2	100.00	1.00	1.00	Saga	October 2018
15. Yamagata	100.00	20.00	20.00	Yamagata	November 2020
16. Yabuki	75.00	7.00	5.25	Fukushima	December 2020
17. Kesenuma	100.00	20.00	20.00	Miyagi	November 2021
18. Nihonmatsu	100.00	12.00	12.00	Fukushima	November 2021
19. Shirakawa	100.00	10.00	10.00	Fukushima	January 2022
20. Yamagata lide	51.00	200.00	102.00	Yamagata	During feasibility study phase
Total Generation Capacity			237.08		



Kesenuma



Awaji



Yabuki

2.3 Solar Power Plants in Australia

Banpu NEXT has invested in two operating solar farms in New South Wales, Australia, through Banpu Energy Hold Trust, established by Banpu Renewable Australia Pty Ltd – a subsidiary of Banpu NEXT, and Banpu Energy Australia Pty Ltd – a subsidiary of Banpu.

The two solar farms are located in areas where there is steady growth in power demand and power consumption. Furthermore, the government has a clear policy to support renewable power generation. The generated electricity will be supplied to the National Electricity Market (NEM) under a long-term power purchase agreement. This acquisition has paved the way for future investments in Australia’s renewable energy industry. It also gave the Company a foothold in Australian wholesale electricity markets which have advanced trading systems and mechanisms. The details are as follows:

Solar Power Plants	Shareholding (%)	Generation Capacity (Megawatts)		Location (State)	Commercial Operation Date
		100%	Equity-Based		
1. Beryl	20.00	110.90	22.18	New South Wales	June 2019
2. Manildra	20.00	55.90	11.18	New South Wales	December 2018
Total Generation Capacity			33.36		



Beryl



Manildra

2.4 Solar and Wind Power Plants and Projects in Vietnam

Banpu NEXT has invested in and developed six solar and wind power plant projects in Vietnam, four of which are commercially operational while the others are during the construction and feasibility study phases. They enjoy long-term power purchase agreements under the Feed-in-Tariff (FiT) scheme for a period of 20 years. The generated electricity is to be sold to Vietnam Electricity (EVN) through the grid.

Power Plants/Projects	Shareholding (%)	Generation Capacity (Megawatts)		Location (Province)	Commercial Operation Date
		100%	Equity-Based		
1. El Wind Mui Dinh	100.00	37.60	37.60	Ninh Thuan	June 2019
2. Vinh Chau - Phase 1	100.00	30.00	30.00	Soc Trang	Under construction and development (Expected COD in 2022)
3. Vinh Chau - Phase 2 & 3	100.00	50.00	50.00	Soc Trang	During the feasibility study phase
4. Ha Tinh	100.00	50.00	50.00	Ha Tinh	June 2019
5. Chu Ngoc*	100.00	15.00	15.00	Gia Lai	June 2019
6. Nhon Hai*	100.00	35.00	35.00	Ninh Thuan	July 2020
Total Generation Capacity			217.60		

Note: Chu Ngoc and Nhon Hai power plants signed a sale and purchase agreement in January 2022.



Ha Tinh



Nhon Hai



El Wind Mui Dinh

3. Energy Technology

The Company drives the growth of Energy Technology business through the investment in Banpu NEXT, a leading smart energy solutions provider in Asia-Pacific, offers “Smart Energy Solutions for Sustainability,” which include smart hardware and digital platform. Banpu NEXT satisfies customer needs with specialized and innovative energy technologies of international standards to create a sustainable and fulfilling lifestyle. Being a leading energy technology company, Banpu NEXT works with its strong business partners to provide the best integrated energy solutions and after-sales services to ensure that customers can access affordable, reliable, and environmental-friendly energy. Banpu NEXT’s smart energy solutions are as follows.

3.1 Smart Data Analytics and Energy Management Solutions

Banpu NEXT offers smart energy consumption analytics and energy management solutions for monitoring, and analyzing energy consumption data on an accurate digital platform and provide a guideline for lower energy cost and optimize energy consumption of each customer.

3.2 Smart Energy Generation Solutions

Banpu NEXT assists customers in energy consumption management and reduces electricity costs by integrating smart hardware and digital platform, as well as comprehensive after-sales services.

3.2.1) Solar-Rooftop and Floating Solar Systems Installation Services

Banpu NEXT provides professional installation services for solar rooftop and floating solar systems, from consultation, system design, installation, inspection, and maintenance services to after-sales services. Major customers are large-scale industries and businesses who want to reduce electricity bills and help save the planet by using clean energy.

Currently, Banpu NEXT has a total capacity of 37 MW from the solar rooftop and floating solar projects in Thailand. Banpu NEXT provides installation and after-sales services to customers deploying modern technologies and innovations. Teams of engineers and customer services will monitor all sites' systems in real-time from the control room. Banpu NEXT's customers can also monitor their energy generation and consumption, electricity cost saving and carbon dioxide emissions reduction in real-time as well as track records via tablet or smartphone, along with other additional features.

3.2.2) Investment in Sunseap Group Pte. Ltd.

BPIN Investment Co., Ltd. (BPINI), a subsidiary of Banpu NEXT has acquired 47.5% of shares in Sunseap Group Pte. Ltd., the leading clean energy solutions provider in Singapore, whose major customers are government agencies, academic institutions, and companies.

On 2 November, BPINI has signed a Purchase and Sale Agreement (PSA) to divest a wholly-owned of 47.5% shareholding in Sunseap Group Pte. Ltd. The divestment was completed on 22 February 2022.

3.3 Smart Energy Storage Solutions

Banpu NEXT sees the energy storage system (ESS) as the necessity of the future since it will enhance the stability of the power generation system, enable efficient power utilization, especially in energy shortages areas. Promoting the use of electric vehicles and investing in ESS is one of Banpu group's contributions to the development of Thailand's energy sector.

3.3.1) Investment in Durapower Holdings Pte. Ltd.

Banpu NEXT acquired 47.68% shares of Durapower Holdings Pte. Ltd. in Singapore. This first step of expansion into the ESS business not only enhanced current business efficiency but also paved the way for growth and added values in the future.



Durapower specializes in design, manufacturing, and system integration of advanced lithium-ion battery LiB technology for automotive and energy storage systems. Its world-class lithium-ion battery factory is located in Suzhou, China, which can expand its capacity to 1 GWh. It deploys advanced technologies and has received over 40 world-class guarantee standards, including quality certifications and international patents. It is also ready to serve more customers based in over 20 countries in Europe, China, Japan, India, Thailand, and ASEAN countries, in response to increasing demand for LiB battery-powered vehicles, such as electronic vehicles, buses, trucks, household ESS, and ESS for large-scale renewable power generation projects.

3.3.2) e-PromptMove: All-in-one mobile solar power generation and storage system

Banpu NEXT is aware of the energy shortage in several areas and during the crisis. Thus, it applied its knowledge, experience, and innovation in energy, technology, and diverse energy solutions to develop an off-grid solar power generation and storage system called "BanpuNEXT e-PromptMove," Thailand's first all-in-one trailer that integrates mobile solutions for clean power generation and storage system. This innovative solution is highly mobile, ready to reach out to any places in need anytime, even in disaster areas.



The trailer was specially designed and manufactured to be sturdy and durable while fulfilling operational requirements. It is equipped with a monitoring screen to monitor power consumption. The energy management system software and Internet of Things (IoT) will enable efficient control, and data processing to deliver stable electricity for customer use 24 hours a day, anywhere, anytime.

3.3.3) Microgrid System

Due to energy scarcity and lack of access to electricity in some areas such as islands and remote areas, Banpu NEXT has developed the Microgrid System, an integrated service of power generation and battery or energy storage systems, commanded and controlled by Banpu NEXT's digital platform. The microgrid system can also link with various power generation sources, enabling reduction of energy costs and efficient power utilization for customers 24 hours a day.



3.4 Smart Energy Utilization Solutions

Banpu NEXT has created a business ecosystem of a comprehensive e-mobility fleet management system. Banpu NEXT has collaborated with its partners to develop a platform based on the concept of "Mobility as a Service" (MaaS) to provide one-stop service and solutions, from consultation, evaluation of mobility needs, designing the right management system for each organization to after-sales support by integrating advanced hardware and digital technologies for greater efficiency. Banpu NEXT has also developed applications and deployed real-time fleet management for better efficiency of after-sales services to truly meet customer needs, support the intelligent interconnection of traffic and transport systems, and save costs and time for users and stakeholders.

3.4.1) Mobility Sharing

Banpu NEXT has invested in HAUPCAR, a provider of short-term electric vehicle rental service, and jointly offered the “Banpu NEXT EV Car Sharing” service – a mobility sharing service on an hourly, daily, weekly, and monthly basis. The car rental service via application is safe and convenient. Booking can be done 24 hours a day with a few simple steps on HAUP mobile application. Picking-up, unlocking to drive away, and returning the car are contactless. This service not only promotes clean energy but also offers a convenient and eco-friendly travel alternative, enabling a seamless and comfortable smart transport system at passengers’ time preference, which is an element of a smart city.

3.4.2) Ride Sharing

Banpu NEXT realized the pollution problem from the transportation and daily commuting systems in urban areas. Banpu NEXT thus invested in Urban Mobility Tech Co., Ltd. (UMT), holding 39.3 % of its shares. UMT is a company which provides solutions to urban public transportation, focusing on first/last mile solutions. UMT offers a Tuk Tuk Hop service around Rattanakosin Island for tourists. In addition, UMT designed and manufactured compact EVs, starting from e-Tuk Tuk integrated with the Internet of Things (IoT) in fleet management. It also developed the “MuvMi” application to provide an on-demand ride-sharing service, allowing passengers to carpool and save travel expenses, which helps reduce the number of vehicle trips and optimizes energy efficiency.



MuvMi offers e-Tuk Tuk service in Bangkok areas with more than 100 e-Tuk Tuks and 2,000 service points covering 6 routes throughout Bangkok. The routes connect to public transportation systems, namely buses, ferries, trains, BTS and MRT trains, as well as well-known department stores. MuvMi routes cover the areas of Chulalongkorn University, Ari BTS station to Kampaengpet MRT station, Paholyothin, Ratanakosin Island, Asoke, Nana, Kasetsart University to Senanikom, and surrounding areas.

MuvMi e-Tuk Tuks are 100% clean energy vehicles with zero emissions of dust, fumes, and pollutions. Banpu NEXT has funded the project, supplied Durapower’s lithium-ion batteries for e-Tuk Tuks, completing Banpu group’s clean energy ecosystem. UMT has completed setting up 18 charging stations and will continue to set up more to improve the convenience and efficiency of travel.

3.4.3) Charger Management

Banpu NEXT, Thailand’s first fully integrated alternative mobility service provider in the form of Mobility as a Service (MaaS), aspires to promote promising Thai startups operating in the travel and smart mobility sectors. Banpu NEXT has invested in Evolt Technology Co., Ltd. (Evolt), which is specialized in the integrated management platform for charging stations. Evolt’s services range from charger supply, platform & soft management to charger installation by a team of experienced engineers and technicians, ready to deliver 24-hour customer service. Currently, Evolt has 300 charging stations in gas stations, office buildings, condominiums, restaurants, shopping centers, and top community malls. This partnership will help complete and grow Banpu NEXT’s e-mobility business ecosystem to become more robust and comprehensive.

3.4.4) Operation & Maintenance and Customer Services

Banpu NEXT has invested in Beyond Green Co., Ltd., the authorized distributor of all-purpose electric utility vehicle (Club Car) and provider of sales, concession, and rental fleet services in Thailand, Laos, and Cambodia. Beyond Green offers a wide range of hire vehicles in varying models to suit all needs of customers, whether it is hotels, resorts, hospitals, or factories. So far, there are more than 10 Club Car customer service centers across Thailand, and more 56 centers are expected to be opened by 2025. This investment is another key expansion to a more diverse EV business to serve customers in high growth potential markets and is considered an important mechanism strengthening businesses of both parties in research and development (R&D) and innovation of new products and services, as well as a platform to provide the best one stop after-sales service for customers.

3.4.5) Marine Tour e-Ferry

Banpu NEXT has launched **Banpu NEXT e-Ferry**, Thailand’s First Marine Tour e-Ferry, using energy technology innovation. The e-ferry is powered by lithium-ion batteries from Durapower Holdings Pte. Ltd., a joint investment with Banpu NEXT. In addition, Banpu NEXT installed a charging station at the Ao Po Pier in Phuket. Banpu NEXT uses an energy management system to control energy generation and distribution and ensure optimal efficiency. Data collected will be used for monitoring e-ferry operation and planning energy management and maintenance. Energy consumption data from the IoT platform is also used in developing and designing energy consumption to match customer demands and requirements.



3.4.6) e-Boat

Banpu NEXT has introduced Banpu NEXT e-Boat to promote green tourism. The 100% electric boat with a capacity of 20 passengers is strong, durable, and safe. Electricity is stored in high-quality lithium iron phosphate batteries, which have long battery life, equipped with a battery management system. All these features contribute to efficient energy use, enabling customers to save energy



and maintenance costs. Apart from these, the e-Boat can be allows configurable layout design to fit intended use in such businesses as hotels and marine tourism.

3.5 Smart Circular Economy Solution

Banpu NEXT has partnered with G.E.P.P. SA-ARD Co., Ltd. to provide waste management service via an application for commercial customers. The waste management system on a digital platform was designed to turn “Waste Littering” into systematic and efficient “Waste Management,” starting from sorting wastes from waste materials to record and analyze their data before deciding on how to properly manage them. Customers can access the report of data via this waste management platform, and they can track data via an application on how the wastes and recycling materials are managed, the benefits as well as the returned revenue from waste management. This solution enables customers to effectively utilize the resources in their businesses and adds value to waste materials, actualizing the goal toward the circular economy.

Banpu NEXT has deployed a wide range of integrated smart energy solutions, including hardware, software, and digital platforms, in driving smart city development to enhance smart energy management with cost efficiency, and eco-friendly from end to end. The details are as follows.

3.5.1) Khon Kaen Smart City Development

Banpu NEXT realizes the necessity of propelling Thailand towards Energy 4.0 and its role in driving renewable energy consumption. Banpu NEXT thus joined forces with Khon Kaen City Development Network to mobilize the “**Khon Kaen Smart City Development Plan**” under Khon Kaen Smart City 2029 master plan. Banpu NEXT and Khon Kaen City Development Network will conduct a feasibility study on building a clean energy integrated ecosystem, for instance, installation of solar power system and smart grid, use of energy storage system to improve energy consumption efficiency, development of smart transportation system and installation of alternative mobility systems to support the extension of light rail transit, and introduction of other modern energy technologies to Khon Kaen to create a smart environment for the residents' better quality of life and drive Khon Kaen toward becoming a smart city according to its development plan.

3.5.2) Smart Safety Zone in Phuket

Phuket is among the provinces selected as a pilot smart city in accordance with the Phuket City Municipality policy, with 7 targets, namely Smart Environment, Smart Economy, Smart Mobility, Smart Energy, Smart People, Smart Living, and Smart Governance. Banpu NEXT has taken part in supporting Smart Governance with its Smart Safety Platform for surveillance and management of government officers, as well as improving the safety and livability of the Phuket community. It also drives the development of Smart Mobility by introducing the first marine tour e-ferry service in Phuket to provide convenient and eco-friendly transportation and improve the quality of life of Phuket residents.

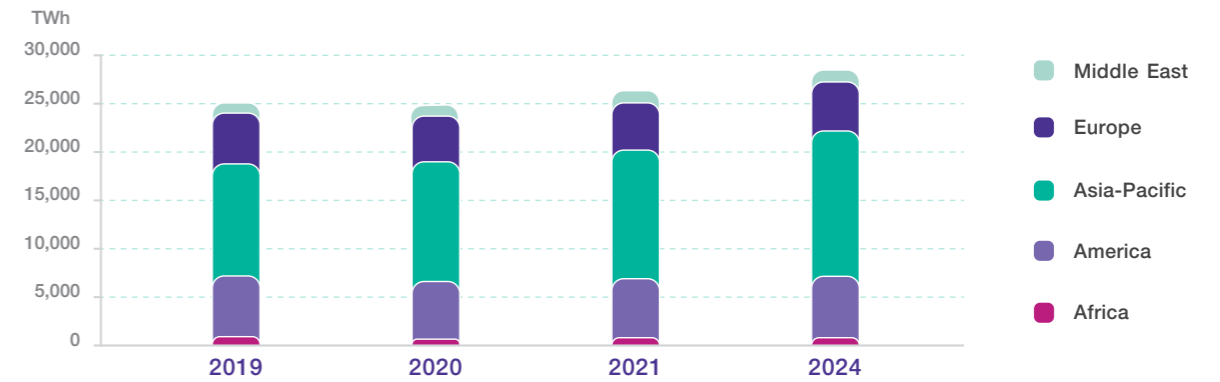


The Smart Safety Platform was installed in the areas of Thalang Road, Soi Romanee, and Phromthep Cape. Banpu NEXT has also worked closely with the private and public sectors to study and evaluate the area to design solutions that answer the needs of these two communities in Phuket. The Smart Safety Platform can connect with operating systems of other devices and work together efficiently across data collection, analysis and processing using AI technology. The solution will help improve the life quality and safety as well as solve problems for local people and tourists, such as air quality monitoring, CCTV cameras for surveillance of monitored places and detection of people counting, COVID-19 screening sensors, Disaster Warning such as high levels of PM2.5, and smart parking sensor.

Market and Competition

1. Thermal and Renewable Power Businesses

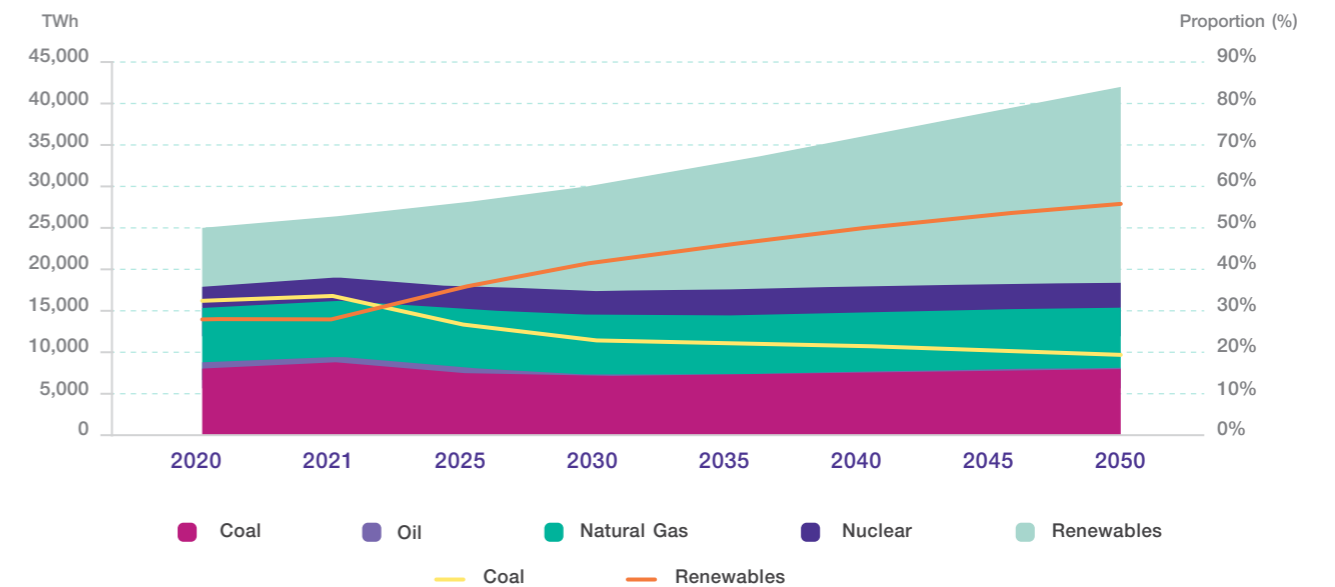
Global Electricity Demand 2019 - 2024



Source: Electricity Market Report by The International Energy Agency (IEA)

In 2020, the global electricity demand grew by 6%, reaching a highest record in a decade, driven by the post-pandemic COVID-19 economic recovery and the colder weather. The majority of electricity demand came from China, whose demand rose 10% over the past year. The global electricity demand from 2022 - 2024 was anticipated to grow around 2.7% per year on average.

Proportion of Global Power Generation Capacity by Fuel Source in 2020 - 2050



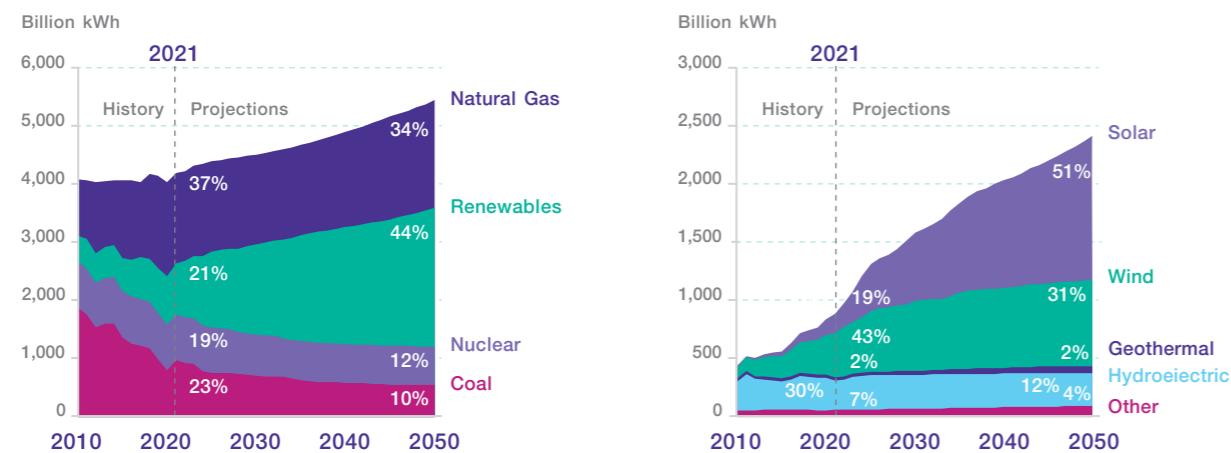
Source: Annual Energy Outlook 2021 by U.S. Energy Information Administration (EIA)

The global power generation capacity has also grown steadily. In 2021, the total capacity was 26,386 terawatts-hour (TWh), and the Compound Annual Growth Rate (CAGR) from 2021 - 2050 will be at 1.7% per year. The global capacity is projected to reach 41,953 TWh by 2050, driven by the growth of renewable power generation.

Considering the share of total global electricity capacity, capacity from coal is expected to fall from 33.8% in 2021 to 19.3% in 2050, while capacity from renewables will expand continuously from 28.1% in 2021 to 56.0% in 2050. The growth drivers are technology and innovation development, causing the reduction in generation costs, concerns about environmental impacts, and government measures in many countries to support renewable energy consumption, as well as renewable growth target.

1.1 Market and Competition in the United States of America

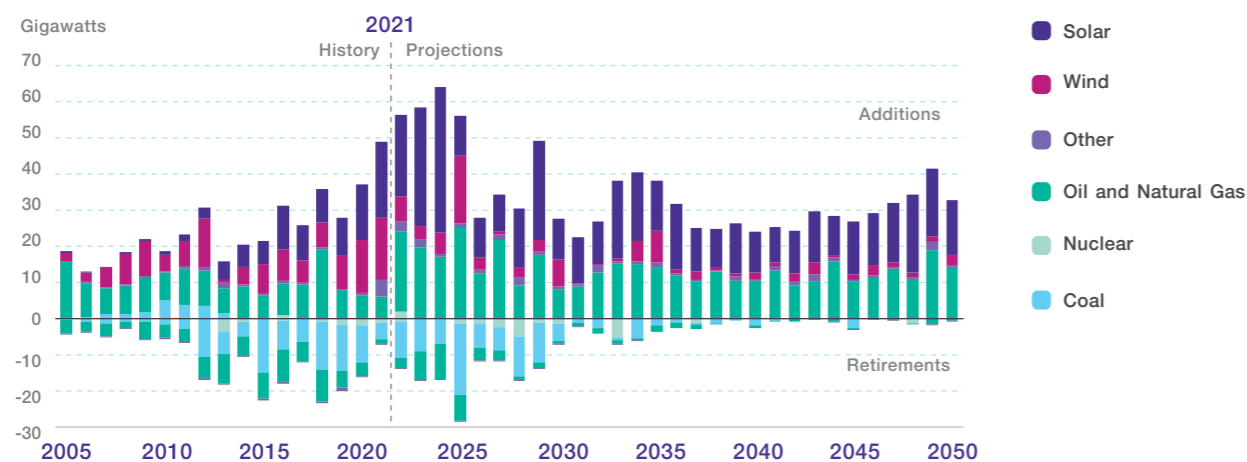
Estimated Proportion of Electricity Capacity by Fuel Source in 2020 - 2050



Source: Annual Energy Outlook 2022, Reference case by U.S. Energy Information Administration (EIA)

The International Energy Agency (IEA) estimated that the electricity demand in the U.S. would increase steadily at an annual average growth rate of around 1% with the increasing power generation from natural gas and renewables. Nuclear power generation and coal-fired power generation will have smaller shares. Among renewables, solar power generation will enjoy the highest growth since solar equipment cost have steadily declined.

Estimated New Installed and Decommissioned Power Capacity by Fuel Source in 2020 - 2050



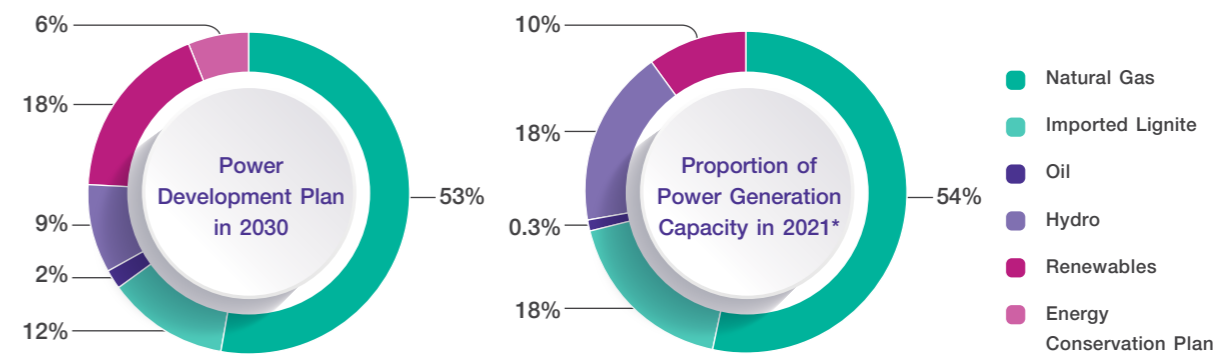
Source: Annual Energy Outlook 2022, Reference case by U.S. Energy Information Administration (EIA)

For new installed generation capacity, natural gas and renewables are expected to be major sources due to low fuel costs of natural gas fuel and steady decline of renewables' prices. During 2022-2025, there is a plan to expand wind power plant capacity of around 150 GW as a result of tax incentives. The investment in solar power plants is rising steadily while the proportion of coal-fired and nuclear power plants is falling due to the continuous decommissioning of such power plants. Currently, average wholesale electricity prices have fallen thanks to discoveries of new shale gas, which has led to falling gas prices in the U.S. On the other hand, the increased proportion of renewables pushed down the prices and electricity demand as compared with the previous forecast, which had been expected to grow at the same rate as the Gross Domestic Product (GDP).

1.2 Market and Competition in Thailand

In 2021, Thailand's installed power generation capacity amounted to 50,874 MW, a 12% increase from 2020. In April, the electricity demand peaked at 30,135 MW, 1,498 MW or 5% higher than 2020's peak demand at 28,637 MW. Power generation capacity in Thailand in 2021 consisted of natural gas 54%, imported Lignite 18%, oil 0.3%, hydro 18% and renewables 10%. In summary, power generation from natural gas, coal, hydropower, and oil decreased while renewable power generation and electricity imports increased.

Comparison of Power Development Plan and Current Proportion of Power Generation Capacity



Source: Energy Policy and Planning Office (EPPO), Ministry of Energy
*Information as at end-November 2021

1.3 Market and Competition in Lao PDR

Currently, there are more than 80 power plants in Lao PDR with an installed capacity of more than 10,000 MW or 53,000 million kWh. Electricity exports to Thailand, Vietnam and Cambodia are considered the country's main source of income. In 2021, Lao PDR planned to export 26,972 million kWh of electricity and reserve 7,253 million KWh for domestic consumption. It has signed power purchase agreements to supply electricity of 10,200 MW to Thailand, 5,000 MW to Vietnam, and 600 MW to Cambodia by 2025. Thailand has purchased electricity from Laos PDR through eight power plants, consisting of seven hydropower plants and one coal-fired power plant.

Most of Lao PDR's capacity is from hydropower, which accounts for 80% of total generation capacity, while coal and oil account for 19% and 1%, respectively. However, over 90% of domestic electricity consumption relies on hydropower generation. Therefore, Lao DPR will face power outages during the dry season, forcing the country to turn to electricity imports. Accordingly, the Lao government planned to diversify energy sources by increasing the fuel mix of power from solar, wind, and coal while reducing hydropower generation.

Source: Ministry of Planning and Investment, Lao PDR (Information as at November 2021)

1.4 Market and Competition in China

The growth rate in electricity consumption in China is as follows:

	Unit	2021	2020	2019	2018
Growth rate in generation capacity	%	7.6	6.6	6.3	6.7
Total generation capacity	Gigawatts	2,377	2,210	2,073	1,949

Source: National Energy Administration (NEA), China

In 2021, China's power generation capacity growth rate was 7.6% of total capacity, growing over the past year. More than 55% of total capacity came from coal-fired power plants while renewable energy capacity continued to grow and exceeded 635 GW in 2021. The Chinese government has announced that it would peak its carbon emissions by 2030 and achieve carbon neutrality by 2060, raising the proportion of non-fossil-fuel energy power generation to 80%.

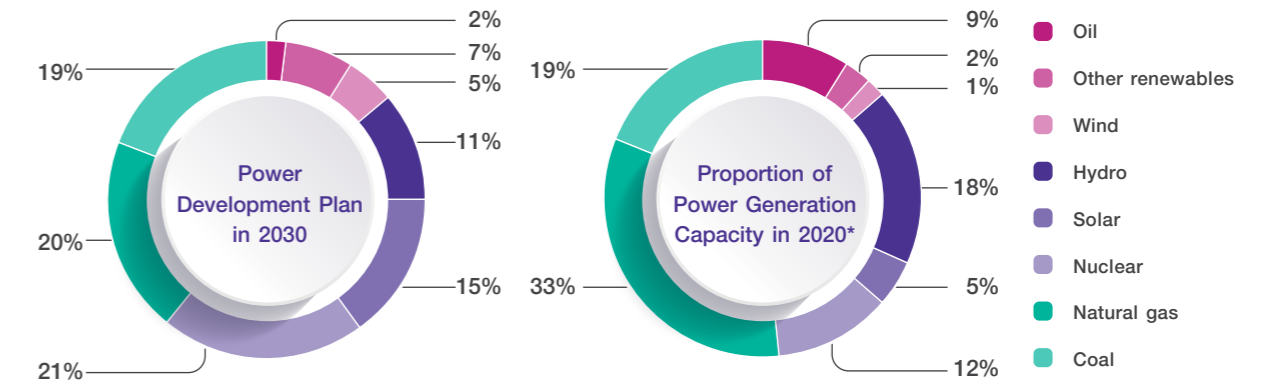
In the second half of 2021, China was hit by an energy crisis caused by production problems of coal exporters in many countries coupled with the decline in domestic production, as well as China-Australia trade disputes. As a result, coal prices, the primary fuel for power generation, climbed up steadily. Moreover, the Chinese government continued the fixed electricity price scheme, prompting some power plants to scale down their production to lessen the impact on operations. This led to supply shortages affecting both industrial and household sectors in many provinces across the country. The Chinese government has taken several measures to tackle the energy crisis, for example, increasing coal production quotas and opening coal mines in the Inner Mongolia Autonomous Region. It also raised the cap on electricity prices from the 10% limit to the 20% limit and lifted the cap on electricity prices in heavy industry to ease the pressure on power producers. In addition, the Chinese government has also reformed the electricity market by opening a wholesale market for all coal-fired power plants. The liberalized wholesale market allows commercial and industrial consumers to buy and sell electricity directly from the producers, enabling market-based energy distribution and electricity pricing.

Source: The National Development and Reform Commission of the People's Republic of China (NDRC) (Information as at October 2021)

1.5 Market and Competition in Japan

Japan's electricity consumption has enjoyed a stable growth with the majority of capacity from thermal power generation. Part of the capacity was from renewables, accounting for 24% of the total capacity of 63,764 MW, consisting of 3,580 MW from wind power, 10,549 MW from solar power, and 49,635 MW from hydropower. According to the Fifth Basic Energy Plan, Japan has set to achieve a target of 22-24% from renewables by 2030. The Government of Japan has replaced the renewable-based electricity pricing scheme from the Feed-in Tariff (FiT) scheme with the auction scheme. In 2021, newly developed solar power plants were eligible for the auction price rate of JPY 10.34 per kWh. In addition, there was a regulatory change prescribing that any solar power plant project development of over 40 MW operating capacity must submit an Environmental Impact Assessment (EIA) report. The new regulation has been effective from April 2020 onward.

Comparison of Power Development Plan and Current Proportion of Power Generation Capacity by Fuel Source



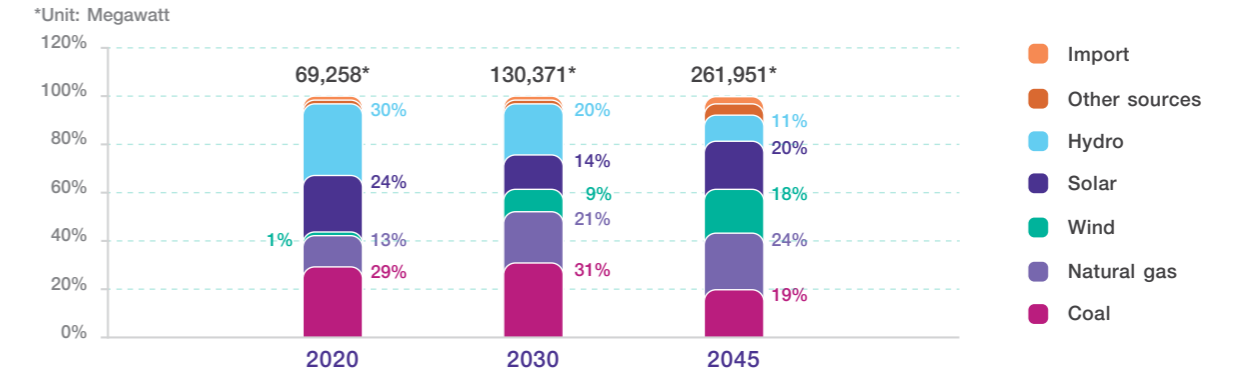
Source: The Fifth Basic Energy Plan, Ministry of Economy, Trade and Industry (METI), Japan. *Information as at February 2022

1.6 Market and Competition in Vietnam

In 2021, Vietnam's Gross Domestic Product (GDP) grew by 2.58% as the country was affected by the COVID-19 pandemic. It is forecasted that Vietnam's GDP in 2022 will be at around 5.5%, mainly due to continued economic recovery and the successful control of the COVID-19 outbreak.

Vietnam has set renewable capacity targets for 2045 in its 8th Draft Power Development Plan, aiming to increase wind capacity to 18% and solar capacity to 20% of the total target capacity of 261,951 MW.

Proportion of Installed Power Generation Capacity by Fuel Source under 8th PDP of Vietnam



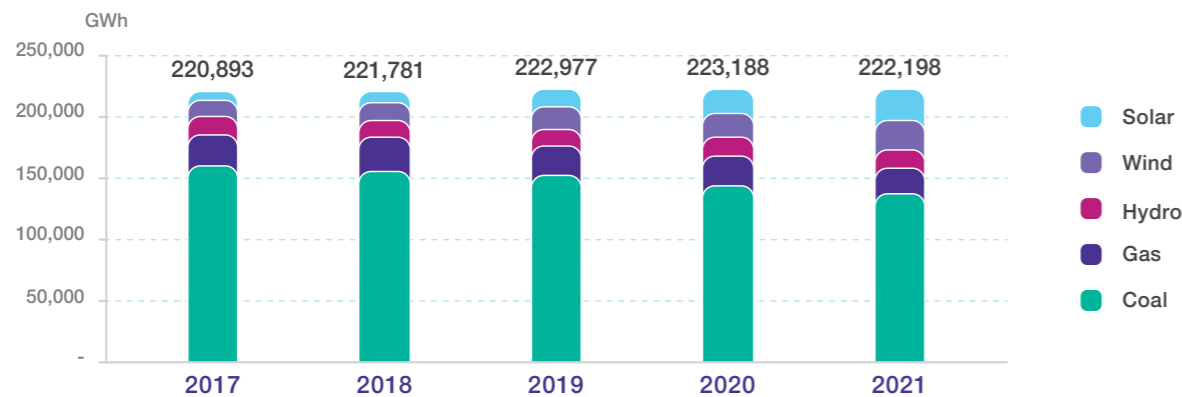
Source: Ministry of Investment and Trade Development, Vietnam *Information as at October 2021

Vietnam set the feed-in tariff (FiT) of US cents 9.35/kWh for the solar power projects that achieved commercial operation date (COD) by June 2019, US cents 7.09/kWh for the solar power projects that achieved COD by December 2020, US cents 8.5 /kWh for the onshore wind projects, and US cents 9.8/kWh for the nearshore wind projects that achieved COD by October 2021. In the future, the Vietnamese government will change the solar and wind pricing schemes from FiT to the auction scheme.

1.7 Market and Competition in Australia

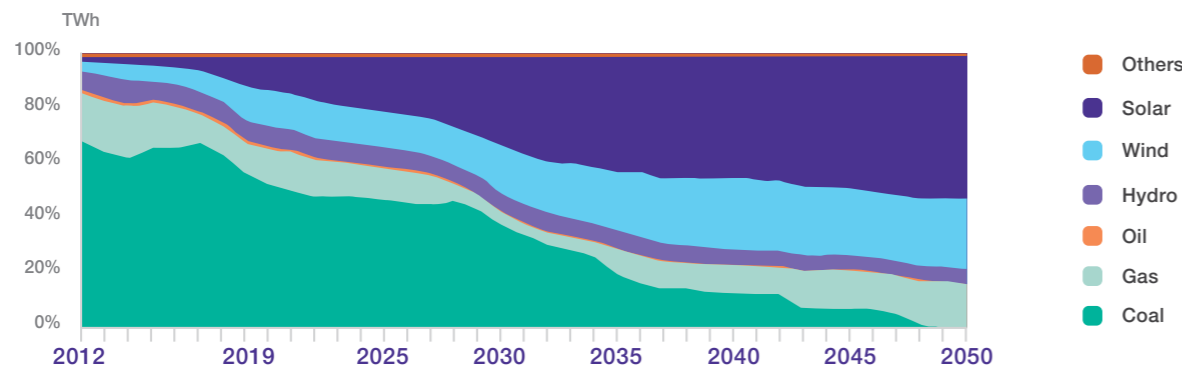
Australia has a free electricity market where electricity demand has been relatively stable over the past five years. In 2021, Australian electricity demand was at 222,198 GWh, falling 0.4% from last year. Australia's primary energy source is coal, with a share of 66% of total energy sources. However, the share of coal has steadily declined due to the increase in renewable energy, particularly solar energy, which has become more popular in households with solar rooftop systems. The Australian government announced its commitment to net-zero emissions by 2050, forcing states to formulate and implement policies to support more electricity generation from renewable sources. It is anticipated that the share of renewable energy will reach 84% by 2050.

Proportion of Electricity Consumption by Fuel Source



Source: National Electricity Market, Australia

Anticipated Proportion of Electricity Generation from Each Fuel Source



Source: BloombergNEF

Competitive Strategies

Competitive Strategies in Thailand

Banpu Power holds a 50% stake in BLCP Power Ltd., the operator of the BLCP power plant with a total capacity of 1,434 MW of which 717 MW is equity capacity. The BLCP power plant, which is located in the Map Ta Phut Industrial Estate, is a major power producer selling electricity directly to the Electricity Generating Authority of Thailand (EGAT). BLCP's dispatch rate in 2021 was at 99.1%, reflecting its effective operational readiness. BLCP's production output accounts for 5% of EGAT's total installed and purchased power capacity.

Competitive Strategies

1) Maintaining Operational Efficiency and Readiness of Power Plants

Banpu Power consistently improves efficiency and maintains equipment of power plants according to the maintenance schedule to secure the Availability Factor (AF) and Contracted Available Hours (CAH) in accordance with the power purchase agreement (PPA). In 2021, BLCP reported the Equivalent Availability Factor (EAF) of 90.6%.

2) Seeking Opportunities for Business Expansion

Banpu Power has been on the lookout for new domestic growth opportunities by aligning the domestic power business expansion plan with the National Energy Development Plan for 2018-2037 (PDP 2018), approved by the National Energy Policy Council (NEPC) on 24 January 2019. The plan proposes increasing the capacity of Isolated Power Supply (IPS) groups and efficient energy-saving measures. The PDP proposal will push electricity demand lower than projected while there are more policies promoting renewable power generation. Moreover, the development of new thermal and renewable power plants will face increasing competition in project bidding and in applying for electricity retail supply licenses. Therefore, the Company has prepared competent and experienced staffs from the Business and Project Development Department to monitor the government and related government agencies' policies and evaluate the Company's competitiveness. In addition, the business development team also prepares the Company's participation in the government project which allows private investment such as the Eastern Economic Corridor (EEC). It also responds to government support for the business sector's role in the Isolated Power Supply (IPS) projects that use renewable energy sources.

3) Stakeholder Relations Management

Banpu Power has supported activities and enhanced mutual understanding in the communities in all locations where it operates, resulting in a healthy relationship with the communities.

Major Competitors

- Banpu Power's thermal power plants that are commercially operational have no direct competitors who are power producers because the Company entered into a long-term power purchase agreement with the Electricity Generating Authority of Thailand.
- Major domestic power producers include Electricity Generating Plc., Ratchaburi Electricity Generating Holding Plc., Global Power Synergy Plc., Gulf Energy Development Plc., and international investors.

Competitive Strategies in Lao PDR

Banpu Power holds a 40% stake in Hongsa Power Company Limited, which operates the HPC power plant, the only mine-mouth power plant in Lao PDR. The HPC power plant has a total capacity of 1,878 MW, of which the Company holds 751 MW equity capacity. The power plant sells the majority of electricity to the Electricity Generating Authority of Thailand under the Independent Power Producer (IPP) scheme and some of its output to Lao PDR. The HPC power plant's production output constitutes 25% of the total electricity that Lao PDR supplies to Thailand.

Competitive Strategies

1) Maintaining Operational Efficiency and Readiness of Power Plants

All three production units of HPC power plant have been fully operational since 2016, with 100% dispatch in 2021. This demonstrates the operational stability and low operating costs, which are crucial for both countries' electricity systems.

2) Managing Relationship with Local Government Agencies and Communities

Banpu Power places importance on community development by promoting community engagement and improving the quality of life of local people. These measures have been realized into community development initiatives, for example, infrastructure development (water supply, electricity, and roads), partial relocation and rebuilding houses in appropriate areas, vocational training and promotion of employment at power plants, contract for project design, and equipment procurement.

3) Cost Management and Efficiency

In 2021, Banpu Power supported the HPC power plant to improve its efficiency and capacity readiness in power generation and distribution. The improvements covered equipment maintenance and coal transportation to the power plant, which helped maintain the Equivalent Availability Factor (EAF) at 84.54%. Moreover, the power plant increased readiness by stocking equipment parts and improving the speed and efficiency of maintenance, contributing to smooth power generation.

Major Competitors

Banpu Power's coal-fired power plant that is commercially operational has no direct competitors because the Company has a long-term power purchase agreement with the Electricity Generation Authority of Thailand and Électricité du Laos.

Competitive Strategies in China

Banpu Power's combined heat and power (CHP) plants and solar power plants in China are more highly efficient than average power plants and meet pollution control standards. Hence, they enjoy various supports from the Chinese government, such as guaranteed electricity sales to local electricity authorities, exclusive rights to sell steam and heat in permitted zones, and local government subsidies.

Competitive Strategies

1) Cost and Efficiency Management

The Chinese government has pursued electricity trading market reform to reflect fuel costs in each province and, at the same time, has imposed measures to stabilize electricity prices for households. Banpu Power has assessed the impact on the pricing in power and steam purchase agreements and adjusted the prices accordingly. For instance, Zouping CHP plant had agreed to sell steam to main customers at a reference price of CNY 125 per tonne, and when there is any change in the coal cost, plus or minus, for every CNY 0.01 per kilocalorie (inclusive of tax and transportation costs), the price of steam can be raised or lowered for CNY 5 per tonne. This risk management on the price fluctuation enabled Banpu Power to lessen the impact of higher fuel costs.

Banpu Power was able to maintain its profitability by improving production efficiency and strictly controlling the costs using the inventory management strategy, buying and stocking up coal when coal prices decline, and utilizing it during the time coal prices increase. Banpu Power also plans to expand capacity to neighboring areas to respond to an increase in steam and electricity demand driven by local economic growth.

2) Environmental Management

The Chinese government has a stringent policy on environment and pollution control, which restricts the use of coal as a major fuel source in industrial plants. Banpu Power uses highly efficient power generation processes that comply with current environmental standards with regular maintenance of all equipment and machinery. It also has a plan to upgrade environmental control equipment. Apart from that, Banpu Power monitors and assesses environmental impacts to ensure that its business operations fully comply with environmental laws, rules, and regulations.

The Company has considered deployment of the state-of-the-art technology called Ultra-Supercritical (USC), which is high efficiency, low emissions (HELE) technology, in such a new project as Shanxi Lu Guang power plant to minimize environmental impacts in accordance with international standards. Such technology can trap sulfur dioxide, nitrogen oxides, carbon monoxide, and other pollutants before being released into the atmosphere.

3) High Adaptability

Banpu Power has a specific team to closely monitor changing market conditions and align business operations to the market conditions or situations in order to embrace business opportunities and mitigate negative impacts. The Company is prepared to adjust the distribution of electricity, steam, hot and chilled water in response to the factors affecting the demand. For instance, Zhengding CHP plant would produce electricity, steam, and hot water for sale during winter. In summer, when customer demand shifted, it would swap to produce chilled water for sale, which helped generate more income and reduce the impacts of the seasonal decrease in electricity and steam sales.

4) Service Quality and Stakeholder Relations Management

Banpu Power prioritizes the quality of products and services. The Company strives to assure readiness and security in the generation and distribution of electricity and steam to respond to customers' needs at all times, especially the distribution of steam and hot water in winter. The Company always maintains strong customer relationships on the basis of mutual trust and benefits, which has earned trust and confidence from customers.

Relationship management with local government agencies and communities is also on the basis of mutual benefits through procuring basic utility services (electricity and steam) to local communities, building trust and equity as well as lending continued support to the community. This has brought Banpu Power acceptance from local government agencies and communities as an exemplary local enterprise. Despite a setback from external factors, the Company still enjoys full support from local governments, for instance, financial subsidies or approval to raise steam prices when coal prices increase.

5) Seeking Opportunities for Business Expansion and Added Value Creation

Banpu Power puts greater emphasis on investment in renewable energy to align with the government's policy to promote renewable energy. The Company also focuses on creating added value by expanding investment into related businesses while considering the costs of different fuel sources and appropriate technology. For example, the location of Luannan CHP plant is in the urban-industrial area, which gives it a strategic advantage to become the sole distributor of steam. Banpu Power is also considering expanding its customer base to new industrial areas to offer the service of the solar rooftop system. Moreover, the Company is conducting a feasibility study for the development of the Company's existing land to develop a biomass power plant project together with the combined heat and power plant.

Major Competitors

- Domestic and international power producers and investors

Competitive Strategies in Japan

Banpu Power expanded investment into Japan by starting with an investment in the solar power plant business. Currently, the Company has a combined capacity of 135 MW from commercially operational projects and 102 MW from under development projects. In 2021, the Company diversified its investment through joint investment in the Nakoso IGCC power plant with an installed capacity of 543 MW in Fukushima Prefecture. This gas-fired power plant deploys the IGCC technology - a high efficiency, low emissions (HELE) technology - which integrates gasification technology with the Gas-Fired Combined Cycle power plant. Besides, the power plant has entered into a long-term power purchase agreement and a long-term fuel supply agreement. The Company continues to create sustainable growth and seeks investment opportunities in power plants which deploy eco-friendly technologies in markets that have growing electricity demand and supporting government policies.

Competitive Strategies

1) Capability in Investment Management

Banpu Power has a strategy to collaborate with partners in seeking new investment opportunities as well as managing financial costs from multiple funding sources, especially from domestic financial institutions, to achieve long-term investment goals.

2) Project Development

Banpu Power closely monitors policy and regulatory changes of the Japanese government related to the energy industry, with a specific team to follow up and study the changes in detail as well as impacts on under-development projects to ensure that all projects achieve commercial operation date as planned.

3) Seeking Opportunities for Business Expansion and Added Value Creation

Since Japan's energy management is governed by a clear energy policy, Banpu Power faces low investment risk and can keep the risk to a manageable level although the Japanese government reduced the Feed-in Tariff (FiT) for solar power and turned to the auction scheme. To achieve the target return on investment, Banpu Power has adapted by focusing on cautious cost management, procuring important equipment to improve efficiency, and seeking appropriate funding sources. For the new investment, Banpu Power will prioritize projects under the Feed-in Tariff (FiT) scheme or acquire projects that have already achieved commercial operation date.

Banpu Power also constantly seeks investment opportunities in related businesses by building upon the existing power generation business to create added value, such as energy trading and retail electricity by expanding business opportunities with retail customers as well as solar rooftop business to fulfill demands of business and industrial sectors and renewable energy consumers.

Major Competitors

- Domestic and international power producers and investors

Competitive Strategies in Vietnam

Banpu Power has expanded investment in power business into Vietnam since 2016 under a Memorandum of Understanding (MoU) signed with Soc Trang Provincial People's Committee to carry out a feasibility study of investment in a renewable power project and was awarded an Investment Registration Certificate (IRC) in 2018. Banpu Power then established a subsidiary in Soc Trang province and prepared an experienced team with a good understanding of Vietnam's business environment to develop the project. Vinh Chau wind power plant project, Phase 1, is currently under construction, and a feasibility study is being conducted to further expand the generation capacity.

In 2020, Banpu Power expanded its investment through the acquisition of the commercially operational EI Wind Mui Dinh wind farm in Ninh Thuan province. The 37.6-MW wind farm is eligible for a Feed-in-Tariff (FiT) of 8.5 US cents per kWh for a period of 20 years. Located on the South Central Coast of Vietnam, Ninh Thuan province has the highest potential and investment opportunities in renewable energy, thanks to government support.

In addition, in December 2021, a subsidiary of Banpu NEXT Co., Ltd. (Banpu NEXT) entered into a purchase and sale agreement to invest in three solar farms: the 50-MW Ha Tinh Solar Farm in Ha Tinh province, the 15-MW Chu Ngoc Solar Farm in Gia Lai province, and the 35-MW Nhon Hai Solar Farm in Ninh Thuan province. The three solar farms are eligible for a FIT rate of 9.35 US cents per kWh. The investment is under approval process by the responsible authorities, which is expected to be completed in Q2/2022 and can generate immediate income to the Company.

Competitive Strategies

1) Managing Relationship with Local Government Agencies and Communities

Banpu Power builds a relationship with local government agencies on the basis of the acknowledgment of social and cultural differences. The Company focuses on becoming a mutually responsible partner with government agencies to sustainably engage in local community development by providing continuous support for community activities.

2) Project Development and Management

Banpu Power is fully aware of significant factors contributing to an investment decision. Thus, the Company carefully conducts a preliminary analysis and a feasibility study of every project. The Company also seeks advice from experts in many fields, such as engineering consultants, environmental consultants, legal consultants, financial consultants, and accounting and taxation consultants, to ensure accurate results of the feasibility study before investing and compliance with regulations and investment conditions in Vietnam. In addition, the feasibility study helps monitor the progress of project development and execution of each construction phase as planned.

3) Seeking Opportunities for Business Expansion and Added Value Creation

Vietnam has enjoyed a continuous growth rate in recent years and is expected to achieve a 5.5% of gross domestic product (GDP) growth in 2022 (Source: World Bank, as at January 2022). Such a high growth rate will lead to a continuous increase in electricity demand. The Vietnamese government also has a clear energy management plan to increase renewable power generation capacity, which is a promising opportunity for Banpu Power to make an investment.

Major Competitors

- Domestic and international power producers and investors

Competitive Strategies in Australia

Banpu group has been driving the growth of renewable energy business through Banpu NEXT, an affiliated company in which Banpu Power holds a 50% stake. Banpu NEXT has expanded investments in the renewable energy business in Australia. In June 2021, Banpu NEXT established Banpu Energy Hold Trust to invest in two solar farms with a combined generation capacity of 166.8 MWdc, comprising 110.9 MWdc from the Beryl Solar Farm (Beryl or BSF) and 55.9 MWdc from the Manildra Solar Farm (Manildra or MSF). Both solar farms are in New South Wales, where there is a constant growth of electricity consumption and demand and the government has a clear policy to promote electricity generation from renewable sources. Power plants under long-term power purchase agreements will supply electricity to the National Electricity Market (NEM). The acquisition of these two solar farms has paved the way for renewable energy investments in Australia and is a penetration

into an advanced electricity trading and wholesale electricity market. The Company has continuously sought investment opportunities, focusing on project development capabilities, building trust with business partners and promoting growth in renewable energy and related businesses. In addition, the Company is studying the feasibility of developing the integrated energy solution platform and energy trading business to create value and profitability from electricity trading.

Competitive Strategies in the United States of America

On 1 November 2021, BKV-BPP Power LLC (BKV-BPP), a 50%-owned affiliated company of Banpu Power US Corporation (BPPUS), which is 100% owned by Banpu Power, invested in the 768-MW Temple I Combined Cycle Gas-Turbine (Temple I CCGT) Power Plant, which achieved commercial operation date on 15 July 2014. Temple I CCGT is located in Texas, one of the fastest-growing economic and population centers in the U.S. The power plant can generate and supply the power needs of about 750,000 households in Central Texas. Equipped with a pollution control management system to maintain low emissions, the power plant is highly efficient and flexible in power generation in accordance with power consumption patterns. Its priority dispatch makes it ideal for the competition in the Electric Reliability Council of Texas (ERCOT) market. This investment is the Company's stepping stone to an advanced and free electricity trading market, creating added value from the synergy between Banpu Power and BKV Corporation, a subsidiary of Banpu Public Company Limited, through knowledge and resource sharing to maximize the benefits of investment.

Competitive Strategies

1) Maintaining Readiness and Enhancing Efficiency of Power Plants

Temple I power plant undergoes annual maintenance in spring and fall or during March and October, to ensure the highest operational readiness during the time when electricity consumption peaks (in winter and summer). Moreover, to prevent impact from winter storms, the power plant installed windshields to protect outdoor equipment from blizzards and extreme temperatures. It also installed the heat tracing system on pumps, valves, gauges, and other equipment to prevent them from freezing and becoming inoperable. In 2021, a wet compression system was installed to increase the power plant's efficiency. The system allows a larger volume of air to be compressed before being fed into the combustion process along with natural gas, thus increasing generation capacity during summer, the time when the ERCOT market's power demand peaks.

2) Cost and Efficiency Management

Regarding fuel cost management, the Temple I power plant is one of a few power plants in Texas that own gas storage facilities. Therefore, BKV-BPP can purchase natural gas when the prices are low and store it at the plant as a reserve for power generation when gas prices are higher. Over the past year, natural gas prices have been volatile, mainly due to severe weather conditions and supply-demand imbalance when tight domestic supply could not keep up with increasing demand during a year. However, with BKV-BPP's team of experts in the natural gas business and effective operational management of both BKV Corporation and Banpu Power, Temple I could harness its gas storage and maintain profitability from this storage optimization.

3) Management of Predictable Cash Flow

Selling electricity in a free market, the Company has to compete with other electricity producers by offering competitive prices. In this context, the Company's earnings can be more volatile than electricity suppliers who are under long-term power purchase agreements. To manage its predictable cash flows, Banpu Power has a team responsible for risk management by using financial hedging instruments, such as Heat Rate Call Options. Under the Heat Rate Call Options Agreement, BKV-BPP will earn a fixed revenue amount as agreed in the agreement. In principle, the power plant is obligated to supply electricity to the counterparty when the counterparty exercises the right to "call" the plant at a specified heat rate agreed in the purchase agreement, and the counterparty shall bear the fuel costs incurred.

4) Seeking Opportunities for Business Expansion and Added Value Creation

The Company monitors market conditions, growth, and investment trends. It seeks investment opportunities in various projects across the U.S., including natural gas-fired power plants, renewable power plants, or other technologies. The Company also aims to create added value through further investments in related businesses, for example, by exploring opportunities to invest in new fuel sources that are aligned with the country's energy development policy and get support by financial institutions. The Company is also looking for an opportunity to enter into a power purchase agreement with major electricity consumers or expand the business into the retail markets.

Major Competitors

- Domestic and international power producers and investors

2. Energy Technology

Banpu NEXT Co., Ltd., a subsidiary of Banpu Power, is a leading smart clean energy solution provider in the Asia-Pacific region, offering smart energy solutions for sustainability that include smart hardware and digital platforms. It satisfies customers' needs with innovation and expertise in energy technology at international standards for the sustainable betterment of life. With its strong business partnerships, Banpu NEXT, as a leading energy technology company, can offer customers the best all-in-one energy solutions and after-sales services at reasonable prices allowing them to enjoy efficient, reliable, and eco-friendly energy.

2.1 Turnkey Solar Solutions Business

Solar panels for power generation see a continuous upward trend, especially in 2021. Prices of raw materials for panel production, such as glass, silicon, and aluminum, have increased as Chinese manufacturers suffered from power shortages and were forced to suspend production intermittently. Thus, some models of solar panels were out of stock. The solar panel production is expected to return to normal in March 2022 at the earliest. However, solar panel prices are likely to remain high because the production will be mainly for backlog orders.

Thailand has higher growth potential than what analysts expected. In addition, Thailand is one of the largest and diverse production bases of renewable power generation, reaffirming the growth potential of its renewable energy industry sector. Solar power generation also enjoys government support through the Feed-in Tariff scheme and the Alternative Energy Development Plan 2018-2037 (AEDP 2018) with an aim to increase solar power generation to 9,290 MW.

The growth driver for solar power system installation in Thailand has been solar rooftop systems for homes, residential buildings, industrial plants, or commercial buildings, most of which are located in Bangkok Metropolitan. These segments, particularly industrial plants and commercial buildings, have high potential growth as entrepreneurs want to cut costs and shift to clean energy in compliance with more stringent policies to reduce carbon emissions.

2.2 Electric Vehicle Business

Pollutions and daily commutes are major problems facing urban residents. Nowadays, pollution problem is a growing concern for both government and people sectors. Electric vehicles (EVs) have become an attractive option for Thai people, and the EV trend is likely to continue growing. The government has provided support for the EV market in Thailand through development of energy policies and plans that offer incentives for EV manufacturers and interested buyers such as corporate income tax exemption, duty exemption for imported parts and equipment, and excise tax reduction for EVs. The number of EV charging stations has gradually increased from government and private sector investments.

In addition, the use of electric cars for public transport has been increasing, such as short-term EV rental or car-sharing service, which helps reduce the number of personal cars, cut energy consumption, alleviate air pollution problem, and improve urban transportation.

2.3 Smart City Solutions Business

Smart City Development Plan is another policy that the government prioritizes and considers as an urgent agenda to address in alignment with the country's development toward Thailand 4.0 under the 20-year National Strategy. The government encourages cities to leverage cutting-edge smart technologies and innovations to improve the quality of urban services, enhance city administration, reduce costs and resources use of the target cities and populations by focusing on good design and promoting participation of business and citizen sectors in urban development. Starting with the development of pilot smart cities in seven provinces in 2018, the Digital Economy Promotion Agency (DEPA) targets to develop 100 smart cities in 76 provinces and Bangkok by 2022. Measures to drive the target include promotion of citizen participation in city administration and infrastructure development through more deployment of technologies, especially in the development of energy infrastructure, a critical infrastructure for mobilizing Thailand toward becoming a smart city. Those smart energy technologies ranging from energy management systems (EMS), energy storage systems (ESS), and electric vehicles (EVs) are intended to achieve maximum energy efficiency.

Marketing Policy for Integrated Energy Services

Banpu NEXT has established an explicit, transparent, and accountable marketing policy to support the Banpu group's Sustainable Development Policy as follows:

- To expand the customer portfolio to cover major markets in Asia
- To create added value to products and services as an integrated energy solutions provider, offering installation services for solar power generation systems and diverse energy solutions with state-of-the-art technology; to properly satisfy varying needs of customers in different areas while transitioning to sustainable smart cities, and to develop support systems for the best customer services to make Banpu NEXT the customer's first choice always
- To maintain ethical standards in marketing competition and respect customers, competitors, and stakeholders
- To ensure transparency, credibility, integrity, and professionalism

Competition

Energy Technology

Solar Power Generation and Smart Energy Solutions for Sustainability

Competitive Strategies

Rising demand for solar rooftop systems and governmental support have attracted more players into the market. Banpu NEXT has chosen to differentiate itself by offering full-range smart energy solutions. Using advanced and suitable technologies, the company designs its products and services based on customer pain points and requirements with an aim to improve the quality of life for customers, contribute to Thailand's transition to clean and sustainable energy, and drive smart cities in the country in the future. Banpu NEXT's major competitive strategies are as follows:

o Customer-Centricity

When it comes to service and solutions development, Banpu NEXT deploys a customer-centric approach by taking into account the customer's pain points and needs in energy utilization. A team of experts will visit customers at their sites to discuss their needs. Cutting-edge technologies and innovations are integrated to support data collection, analysis, and evaluation to provide efficient and cost-effective energy solutions to customers, help solve their problems, and respond to their needs as much as possible.

o Integrated Smart Energy Solutions Offerings

Banpu NEXT does not only provide solar rooftop system installation services but also other energy solutions for betterment of customers' lives. The company also helps promote and drive the use of clean energy and related technologies to support Thailand's smart cities initiative. Solutions offered are, for example, the Microgrid System, Energy Management System (EMS), and Energy Storage System (ESS) for power generation control, transmission, and power storage to achieve maximum energy efficiency, as well as Electric Vehicle solutions. Each of Banpu NEXT's solutions starts with by Smart Data Analytics in order to truly understand customers' pain points and respond appropriately to diverse needs of customers in each area.

o Product Excellence

Banpu NEXT uses TIER 1 quality products from industry leading brands with guaranteed industrial standards. The company's engineering team has an expertise in designing systems that address specific needs of each project. System installations are compliant with international standards while state-of-the-art technology such as drone thermal scan is used for inspecting solar panels to ensure safe, cost-effective, and efficient clean energy.

o Service Excellence

Banpu NEXT has built and developed many systems to support after-sales service, for instance, a control room for real-time monitoring of power generation, allowing timely correction of system malfunctions by a team of experienced engineers and customer service. The "BANPU Application" for mobile was developed to allow real-time tracking of the power generation system, the amount of power generated, and the power-saving performance. Customers can also view historical data and will be alerted when a system failure occurs. Moreover, Banpu NEXT has a customer service department that is responsible for providing information, handling complaints, and responding to customer queries through various channels. Customers can report problems about Banpu NEXT's smart energy solutions 24 hours everyday, allowing the company to promptly solve the issues.

o Strong Ecosystem

Led by the Greener & Smarter strategy, Banpu NEXT operates its business by focusing on building partnerships with suppliers in the energy technology business, clean energy-related businesses, and all sectors to enhance its business potential, strengthen energy technology, and create a robust business ecosystem. The company is ready to embrace technologies and ideas from new-generation startups with a potential to complement its all-in-one energy solutions through funding and collaboration in order to transform innovations into new businesses or to increase business growth.

o Brand Building and Communication Strategies

Banpu NEXT has implemented a communication strategy that aligns with Banpu group's Greener & Smarter strategy and environmental, social, and governance (ESG) principles. The company is driving "Smart Energy Solutions for Sustainability" through full-range services and creating a new S-curve for its five core businesses, namely renewable energy, energy storage, energy trading, e-mobility, and smart energy. It strives to create business growth in line with future energy trends and smart city concept in response to modern consumers lifestyles by highlighting value for money, reliability, and eco-friendliness while propelling all businesses toward sustainability.

Banpu NEXT communicates with target customers and all groups of stakeholders through online and offline marketing channels, including press releases and articles on its business direction and services, promotional marketing activities, and corporate social responsibility activities as follows:

- Press Conference on Current Business Direction and Five-Year Business Plan (2021 - 2025):** The plan comprises driving clean energy technology business and creating the new S-curve for five core businesses, namely renewable energy, energy storage, energy trading, e-mobility, and smart energy. It also includes expanding investment and customer portfolio in all business groups in Thailand and overseas to achieve Banpu's target to increase EBITDA from greener energy and energy technology businesses to more than 50% in 2025 in response to future energy trends.
- Launch of Smart Safety Platform:** Banpu NEXT rolled out a Smart Safety Platform for safety surveillance and safety management by government officials to raise safety standards for managing three areas of concern: pandemics, COVID-19 in particular; crimes; and environmental hazards. Safety surveillance systems have been installed on the roads of Rommanee Alley and Rawai Sub-district (in the neighborhoods of the Municipality Office and Promthep Cape), Phuket. The smart safety platform can sync up and work efficiently with other systems, from data collection, AI analytics and processing, to feeding results into the control center. It helps increase efficiency and enables officials to devise an accurate prevention plan for potential incidents. It also features an app allowing government officials to monitor, supervise, and issue commands from anywhere, anytime. The platform gives local people and tourists more confident in safety, and promotes Phuket's community safety and livability.



- Full Acquisition of Engie Services (Thailand) Co., Ltd. (ESTH):** Banpu NEXT announced the full acquisition of ESTH, a leading provider of energy management service in Thailand, to diversify its offerings in energy management system (EMS) and smart energy solutions to achieve full range ecosystem development from sourcing, installation of energy efficiency devices and technology, and maintenance of relevant systems such as compressed air and cooling systems in buildings or industrial plants in Thailand. Upon completion of the acquisition, Banpu NEXT has been able to seamlessly continue to provide services to existing customers and immediately offer the services to new prospects with efficient energy management system, digital platform, and highly experienced team of experts from ESTH. With services targeted at industrial plants and commercial buildings, this investment is expected to pave way for Banpu NEXT's expansion to foreign markets to create exponential growth.

- MOU Signing with SP Group:** Banpu NEXT partnered with SP Group, a leading utilities group in Singapore and the Asia-Pacific, to develop sustainable energy and smart city solutions across Thailand and Asia-Pacific. Through this partnership, the expertise and strengths of both companies in sustainable clean energy solutions are combined to drive urban decarbonization efforts in the region. They will collaborate in exploring business opportunities of energy management system development such as the applications of district cooling systems, cross-border renewable energy certificates (RECs) platform, and smart city solutions to support the development of sustainable and smart energy cities in order to harness smart energy development for a better living and more sustainable future for everyone and to meet future demand for renewable energy solutions.



- Reinforcing Banpu NEXT's Brand Image as Thailand's First Provider of Integrated Alternative Mobility in the Form of Mobility as a Service (MaaS):** The company is determined to drive forward smart mobility and provide consumers and businesses convenient access to EVs by offering full-range service that covers all types of transport systems, namely EV service, charging station service, and after-sales service. The company partnered with "MuvMi," a leading Thai start-up, to expand the MuvMi electric tuk-tuk ride-sharing service by expanding to 200 units to serve important areas in Bangkok, emphasizing the convenience of on-demand mobility service offered through the MuvMi app. MuvMi allows passengers to share ride with others traveling on the same route, facilitating the pollution-free connection with mass transit systems at a reasonable price. It is also suitable for people of all ages and meets urban travel needs in the modern era. Banpu NEXT plans to meet the steadily rising demand by preparing to expand the service areas to cover 3,000 points all over Bangkok.



- Announcing Partnership with Evolt Technology to Expand Integrated EV Charging Station Platform:** Deploying digital technology and user-friendly applications to enhance work efficiency, this partnership targets to provide consumer access to 5,000 charging stations nationwide by 2025. It will extend the capacity and improve Banpu NEXT's business potential, as well as strengthen and enrich Banpu NEXT's e-mobility ecosystem. Accommodating all commuting modes and mobility needs, the partnership allows consumers and businesses to conveniently access EVs, respond to the trend of sharing economy through ride-sharing, mobility sharing, fleet & charger management, and after-sales services.



Corporate Social Responsibility (CSR) Activities during the COVID-19 Pandemic

- EV Car Sharing for Caring Project** It was a collaboration between Banpu NEXT and "HaupCar" to provide Smart Micromobility service for medical personnel at Budsarakam Field Hospital with a fleet of 21 EV cars and e-scooters. The electric vehicles were provided for free sharing among medical staff throughout their operations at the field hospital (IMPACT, Muang Thong Thani).



The project was aimed to provide convenient and safe travel for the medical staff at the field hospital and to facilitate moving of medical supplies between buildings.

- "MuvMi ASA KHONSONG" Transport Service Project under the Mitr Phol-Banpu Solidarity to Aid Thailand on COVID-19 Confrontation Endowment** It was executed by the collaboration between Banpu NEXT and MuvMi. The project aimed to provide MuvMi e-Tuk Tuks for transporting COVID-19 recovered patients home for free. The service ran in three hospitals under the Bangkok Metropolitan Medical Office and other three hospitals under the Phayathai-Paolo Medical Group. Besides taking recovered patients home safely, it assisted those affected by COVID-19 together with the Food For Fighters network, delivering more than 60,000 meals and 4,000 survival bags to affected communities. MuvMi ASA KHONSONG also sent 5,000 home isolation kits to patients recuperating at home. In addition, the project joined with the Let's be Heroes Foundation in transporting survival bags to many affected communities.



Apart from using public relations to promote reputation and drive business growth, Banpu NEXT has adopted a communications-based co-branding strategy to enhance credibility for Banpu NEXT and increase opportunities to attract new customers. As part of the effort, the company also helps create a positive image of its customers that care about sustainability through publishing interviews of industry leaders that are using Banpu NEXT's smart energy solutions or solar roof system as follows:

- **The Summer Lasalle Project** It is an exemplary real estate entrepreneur who prioritizes sustainability over profits, chose to use "Smart Energy Solutions," which meet energy consumption needs, housing trends, and future living in the smart city era.
- **4 businesses in Sukhothai province** They realized their sustainable business concept by deploying the solar rooftop system in bid to reduce pollution, create good quality of life for people, lower long-term energy costs, and make Sukhothai a greener city.
- **Betagen plant's successful reduction of electricity cost** The electricity cost was reduced up to THB 6 million per year. It has been made possible with Banpu NEXT's smart energy generation, or the solar roof system which provides quick results while also catering for large scale customers' long-term energy saving needs.

Major Competitors

Banpu NEXT has no major competitor offering full-range smart energy solutions as it does since the majority of competitors in the market focuses on installation services and rooftop solar system design. The competitors in the market can be classified into three groups: retail operators offering installation services, large operators offering installation services as well as investment packages, and foreign investors. Over 50% of competitors in the market are retail operators.

The Company's competitors in the solar rooftop solutions business are large operators offering installation services with investment package since they are financially stable operators with diverse services to offer. Meanwhile, smaller operators with access to funding from foreign investors can also offer similar services. Besides, there is competition in the residential segment in which many companies want to obtain market share before others.

Pricing Policy

Banpu NEXT offers various pricing packages according to the conditions and requirements of customers. Currently, the company offers two pricing options for rooftop solar power system installation services: installation invested by Banpu NEXT and installation costs paid by customers depending on the equipment, installation size, and service model chosen by the customers. Banpu NEXT also adjusts installation and equipment costs according to market conditions. It also keeps up with recent technological advancements to provide customers with smart technology options of the highest efficiency at the best prices.

Customer Profiles

Banpu NEXT's customer portfolio consists of enterprises seeking alternative energy management solutions or medium and large enterprises that primarily consume electricity during the daytime, such as factories and commercial buildings, and industrial parks or communities seeking full utilization of smart energy technology. In 2021, 75% of customers signing solar power installation contracts with Banpu NEXT chose the first option in which Banpu NEXT is an investor, and customers benefit from savings on electricity bills. The other 25% of customers opted for the system installation service in which they invest in equipment and installation and enjoy the free use of solar energy generated from their rooftops. However, with growing customer needs for lower installation costs, more discount schemes, shorter contract periods, or additional services, Banpu NEXT has adjusted its proposals accordingly to better satisfy varying needs and different characteristics of customers. For other solutions, such as electric vehicle management, energy storage system, and energy management, customers have similar investment needs, namely, periodic payment plans or lease options. Due to the COVID-19 pandemic, customers suspend lump-sum investments.

Distribution and Distribution Channels

Banpu NEXT offers solar rooftop power generation and smart energy solutions through an open bidding process announced by customers, direct negotiations with customers, and presentations to renewable energy agencies and organizations. Banpu NEXT will contact prospective customers to introduce the company and listen to customers' needs. Then the engineering team will survey the site to design the power generation system or other solutions befitting the customer's project, such as electric vehicle management, energy storage system, or energy management, and make a project proposal. Banpu NEXT expands its sales channels through events, activities, and happy customer referrals.

Assets for Business Operations

Fixed Assets Owned by Subsidiaries Operating Major Businesses

As of 31 December 2021, fixed assets owned by subsidiaries operating major businesses are as follows:

Asset	Company	Characteristics of Ownership	Book Value (THB Thousand)	Obligation
Building and infrastructures	Shijiazhuang Chengfeng Cogen Co., Ltd.	Owner	1,129,980	None
Plant machinery and equipment	Shijiazhuang Chengfeng Cogen Co., Ltd.	Owner	1,314,248	None
Furniture and office equipment	Shijiazhuang Chengfeng Cogen Co., Ltd.	Owner	1,272	None
Tools	Shijiazhuang Chengfeng Cogen Co., Ltd.	Owner	1,473	None
Motor vehicles	Shijiazhuang Chengfeng Cogen Co., Ltd.	Owner	2,011	None
Construction in progress	Shijiazhuang Chengfeng Cogen Co., Ltd.	Owner	2,340	None
Building and infrastructures	Tangshan Banpu Heat and Power Co., Ltd.	Owner	707,756	None
Plant machinery and equipment	Tangshan Banpu Heat and Power Co., Ltd.	Owner	2,893,187	None
Furniture and office equipment	Tangshan Banpu Heat and Power Co., Ltd.	Owner	5,404	None
Tools	Tangshan Banpu Heat and Power Co., Ltd.	Owner	13,047	None
Motor vehicles	Tangshan Banpu Heat and Power Co., Ltd.	Owner	3,115	None
Construction in progress	Tangshan Banpu Heat and Power Co., Ltd.	Owner	2,009	None
Building and infrastructures	Zouping Peak CHP Co., Ltd.	Owner	532,656	None
Plant machinery and equipment	Zouping Peak CHP Co., Ltd.	Owner	2,131,195	None
Tools	Zouping Peak CHP Co., Ltd.	Owner	2,414	None
Motor vehicles	Zouping Peak CHP Co., Ltd.	Owner	2,331	None
Construction in progress	Zouping Peak CHP Co., Ltd.	Owner	5,317	None
Total Book Value			8,749,756	

Details of Land Rights of Power Business in China

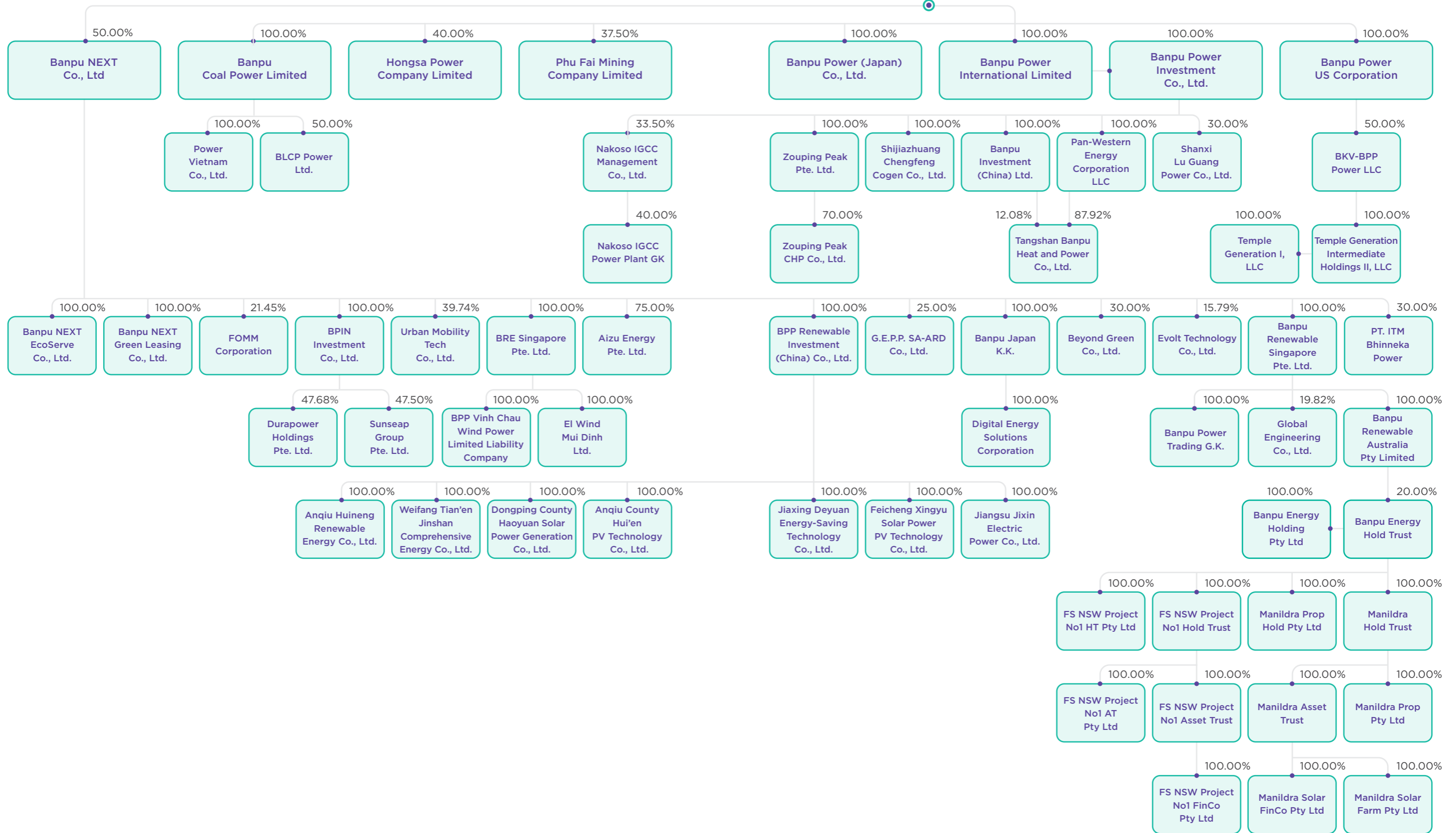
Land Rights Held by Subsidiaries Operating Major Businesses

As of 31 December 2021, land rights held by subsidiaries operating major businesses are as follows:

Location	Rights holder	Area (sq m)	Start Date	End Date	Objective	Book Value of Land Rights (THB Thousand)
Zhengding County, Shijiazhuang City, Hebei Province, P.R.China	Shijiazhuang Chengfeng Cogen Co., Ltd.	7,132	27 Dec 2006	2 Sep 2053	To be the location of Zhengding CHP plant	99,793
		67,354	16 Feb 1998	30 Nov 2047		
		17,665	28 Dec 2016	26 Mar 2062		
		23,135	18 Apr 2001	17 Apr 2031		
Luannan County, Tangshan City, Hebei Province, P.R.China	Tangshan Banpu Heat and Power Co., Ltd.	225,172	18 Apr 2020	18 Apr 2070	To be the location of Luannan CHP plant	449,941
		2,100	22 Sep 2018	21 Sep 2068		
		90,370	1 Jan 2017	31 Dec 2066		
		40,960	1 Jan 2017	Under consideration of a government agency		
Zouping County, Binzhou City, Shandong Province, P.R.China	Zouping Peak CHP Co., Ltd.	105,831	30 Aug 2001	3 Jul 2051	To be the location of Zouping CHP plant	48,196
		18,190	29 Dec 2007	29 Dec 2056		
		24,315	29 Dec 2008	3 Dec 2058		

Banpu Power Group Structure

As of 31 December 2021
(Direct and indirect shareholdings more than 10%)



Details of the Company, Its Subsidiaries, Associated Companies and Joint Ventures of Banpu Power Public Company Limited

as of 31 December 2021

Name	Type of Business	Authorized Capital	Paid-up Capital	No. of Paid-up Capital (Shares)	Par Value per Share	% of Holding	Head Office	Telephone
1. Banpu Power Public Company Limited	Energy generation business	31,012,020,000 THB	30,477,317,000 THB	3,047,731,700	10	78.66% (held by Banpu Power Public Company Limited)	1550 Thanapoom Tower, 26 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok	66 2007 6000
Subsidiaries								
Thailand								
2. Banpu Coal Power Ltd.	Investment in energy and power business	5,921,587,160 THB	5,921,587,160 THB	592,158,716	10	100.00% (held by Banpu Power Public Company Limited)	1550 Thanapoom Tower, 26 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok	66 2007 6000
3. Power Vietnam Co., Ltd.	Investment in energy and power business	400,000,000 THB	400,000,000 THB	40,000,000	10	100.00% (held by Banpu Coal Power Ltd.)	1550 Thanapoom Tower, 26 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok	66 2007 6000
4. Banpu Power (Japan) Co., Ltd.	Investment in renewable energy business	5,000,000 THB	5,000,000 THB	500,000	10	100.00% (held by Banpu Power Public Company Limited)	1550 Thanapoom Tower, 26 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok	66 2007 6000
China								
5. Shijiazhuang Chengfeng Cogen Co., Ltd.	Power and steam generation and sales	30,516,000 USD	30,516,000 USD	NA	No par value*	100.00% (held by Banpu Power Investment Co., Ltd.)	East of Jingshen Highway, Zhengding County, Shijiazhuang City, Hebei Province, P.R.China, 050800	86311 85176918
6. Banpu Investment (China) Ltd.	Investment in energy business and other industrial areas	30,000,000 USD	30,000,000 USD	NA	No par value*	100.00% (held by Banpu Power Investment Co., Ltd.)	Unit 508, 5 th Floor, Tower 21, No. 10 Jiuxianqiao Road, Chaoyang District, Beijing, P.R.China	8610 57580388
7. Tangshan Banpu Heat and Power Co., Ltd.	Power and steam generation and sales	78,082,200 USD	47,504,216.60 USD	NA	No par value*	87.92% (held by Pan-Western Energy Corporation LLC) 12.08% (held by Banpu Investment (China) Ltd.)	West of Gujiaying Villiage, Bencheng Town, Luannan County, Tangshan City, Hebei Province, P.R.China, 063500	86315 4168274
8. Zouping Peak CHP Co., Ltd.	Power and steam generation and sales	261,800,000 CNY	261,800,000 CNY	NA	No par value*	70.00% (held by Zouping Peak Pte. Ltd.)	Handian Town, Zouping County, Binzhou City, Shandong Province, P.R.China, 256209	86543 4615655
Singapore								
9. Banpu Power Investment Co., Ltd.	Investment in power business	NA	111,962,391 USD	104,917,663	No par value*	100.00% (held by Banpu Power International Limited)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	65 6338 1888
10. Zouping Peak Pte. Ltd.	Investment in power business	NA	2 SGD 140,495,758 CNY	2 140,495,758	No par value*	100.00% (held by Banpu Power Investment Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	65 6338 1888

Remark: * Under corporate law

Name	Type of Business	Authorized Capital	Paid-up Capital	No. of Paid-up Capital (Shares)	Par Value per Share	% of Holding	Head Office	Telephone
Mauritius								
11. Banpu Power International Ltd.	Investment in power business	117,835,000 USD	117,835,000 USD	117,835,000	1	100.00% (held by Banpu Power Public Company Limited)	4 th Floor, Ebene Skies, Rue de L'Institut, Ebene, Republic of Mauritius	230 404 8000
Cayman Islands								
12. Pan-Western Energy Corporation LLC	Investment in power business	100,000 USD	100,000 USD	10,000,000	0.01	100.00% (held by Banpu Power Investment Co., Ltd.)	PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands	1 345 949 8066
United States of America								
13. Banpu Power US Corporation	Holding company for investment in energy generation and related business	100 USD	100 USD	10,000	0.01	100.00 % (held by Banpu Power Public Company Limited)	251 Little Falls Drive Street, Wilmington, Delaware, 19808	NA
Associated companies								
Indonesia								
14. PT. ITM Bhinneka Power	Electric Power Generator	130,000,000,000 IDR	32,500,000,000 IDR	45,823	1,000,000	30.00% (held by Banpu Next Co., Ltd.)	Pondok Indah Office Tower 3, 3 rd Floor, 3 Jl. Sultan Iskandar Muda Kav. V-TA Pondok Pinang, Kebayoran Lama, Jakarta 12310, Indonesia	6221 29328100
Thailand								
15. Banpu NEXT Co., Ltd.	Smart clean energy solution business	11,559,000,000 THB	11,559,000,000 THB	1,155,900,000	10	50.00% (held by Banpu Power Public Company Limited)	1550 Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok	66 2095 6569
16. Banpu Next Green Leasing Co., Ltd.	Investment in energy business and leasing	50,000,000 THB	50,000,000 THB	5,000,000	10	100.00% (held by Banpu NEXT Co., Ltd.)	1550 Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok	66 2095 6569
17. Beyond Green Co., Ltd.	Distribution of electric vehicles	714,285,700 THB	714,285,700 THB	7,142,857	100	30.00% (held by Banpu NEXT Co., Ltd.)	115/1, 115/6, Motorway Road, Thap Chang Subdistrict, Saphan Sung District, Bangkok, 10250, Thailand	66 2136 0490
18. EVolt Technology Co., Ltd.	Providing end-to-end electronic vehicles solution provider with nationwide coverage	5,937,500 THB	5,937,500 THB	59,375	100	15.79% (held by Banpu NEXT Co., Ltd.)	926 Block 28, Building C, 2 nd Floor, Unit C201-202, Soi Chula 7, Wangmai Subdistrict, Pathumwan District, Bangkok 10330, Thailand	66 2095 6569
19. Urban Mobility Tech Co., Ltd.	Electric vehicle business	1,070,000 THB 723,750 THB	1,070,000 THB 723,750 THB	107,000 72,375	10	39.74% preference shares (held by Banpu NEXT Co., Ltd.)	256 Soi Soonvijai, Rama IX Soi 17 Road, Bangkapi Subdistrict, Huaykwang District, Bangkok 10310, Thailand	66 86 887 4796
20. Banpu NEXT EcoServe Co., Ltd.	Energy Management Services	96,000,000 THB	96,000,000 THB	960,000	100	100.00% (held by Banpu NEXT Co., Ltd.)	1550 Thanapoom Tower, 24 th Floor, New Petchburi Road, Makkasan Subdistrict, Ratchathewi District, Bangkok 10400, Thailand	66 2095 6569

Name	Type of Business	Authorized Capital	Paid-up Capital	No. of Paid-up Capital (Shares)	Par Value per Share	% of Holding	Head Office	Telephone
Australia								
21. Banpu Renewable Australia Pty Limited	Renewable energy	7,900,002 AUD	7,900,002 AUD	7,900,002	1	100.00% (held by Banpu Renewable Singapore Pte. Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
22. Banpu Energy Hold Trust	Renewable Energy	NA	NA	82,320,008 20,580,002	NA	20.00% (held by Banpu Renewable Australia Pty Ltd.)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
23. Banpu Energy Holding Pty Ltd.	Renewable Energy	10 AUD	10 AUD	10	1	100% (held by Banpu Energy Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
24. FS NSW Project No 1 Hold Trust	Renewable Energy	NA	NA	6,932,058,900	NA	100% (held by Banpu Energy Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
25. FS NSW Project No 1 HT Pty Ltd.	Renewable Energy	100 AUD	100 AUD	100	1	100% (held by Banpu Energy Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
26. FS NSW Project No 1 Asset Trust	Renewable Energy	NA	NA	8,206,490,677	NA	100% (held by FS NSW Project No 1 Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
27. FS NSW Project No 1 AT Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1	100% (held by FS NSW Project No 1 Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
28. FS NSW Project No 1 FinCo Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1	100% (held by FS NSW Project No 1 Asset Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
29. Manildra Hold Trust	Renewable Energy	NA	NA	6,926,658,900	NA	100% (held by Banpu Energy Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
30. Manildra Prop Hold Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1	100% (held by Banpu Energy Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
31. Manildra Asset Trust	Renewable Energy	NA	NA	3,701,105	NA	100% (held by Manildra Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
32. Manildra Prop Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1	100% (held by Manildra Hold Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
33. Manildra Solar Farm Pty Ltd.	Renewable Energy	100 AUD	100 AUD	100	1	100% (held by Manildra Asset Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
34. Manildra FinCo Pty Ltd.	Renewable Energy	1 AUD	1 AUD	1	1	100% (held by Manildra Asset Trust)	Level 20, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
Japan								
35. FOMM Corporation Corp.	Planning, developing, manufacturing and selling of compact electric vehicle	NA	3,505,170,250 JPY	2,046,635	No par value*	21.45% (held by Banpu NEXT Co., Ltd.)	7-7 Shinkawasaki, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0032	81 4 4200 4020
36. Global Engineering Co., Ltd.	Electricity sales and resource aggregator of virtual power plant	NA	308,200,000 JPY	3,635,000	No par value*	19.82% (held by Banpu Renewable Singapore Pte. Ltd.)	Nishiko Living Kashii 2 nd Floor, 1-1-1, Kashii, Higashi-ku, Fukuoka City, Fukuoka Prefecture, Japan 813-0011	81 92 692 7547
37. Banpu Power Trading G.K.	Energy trading	NA	100,000,000 JPY	NA	No par value*	100.00% (held by Banpu Renewable Singapore Pte. Ltd.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	81 3 6205 4665

Remark: * Under corporate law

Name	Type of Business	Authorized Capital	Paid-up Capital	No. of Paid-up Capital (Shares)	Par Value per Share	% of Holding	Head Office	Telephone
38. Banpu Japan K.K.	Investment in renewable energy business	NA	83,500,000 JPY	13,700	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	81 3 6205 4665
39. Digital Energy Solutions Corporation	Electricity sales and management	NA	50,000,000 JPY	5,000	No par value*	100.00% (held by Banpu Japan K.K.)	Kasumigaseki Building, 33 rd Floor, 3-2-5, Kasumigaseki, Chiyoda-ku, Tokyo, Japan 100-6033	81 3 6205 4665
Singapore								
40. Durapower Holdings Pte. Ltd.	Investment holding company (with subsidiaries undertaking manufacturing of Lithium-Ion Battery (LiB) for EV and Energy Storage System (ESS))	NA	59,737,835.50 SGD	385,699	No par value*	47.68% (held by BPIN Investment Co., Ltd.)	66 Kallang Pudding Road, #05-02 Hor Kew Business Centre, Singapore 349324	65 6846 0180
China								
41. BPP Renewable Investment (China) Co., Ltd.	Investment in renewable energy business	160,000,000 USD	97,620,000 USD	NA	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	Unit 509, 5 th Floor, Tower B21, UBP, No.10 Jiuxianqiao Road, Chaoyang District, Beijing 100015	8610 57580388
42. Anqiu Huineng Renewable Energy Co., Ltd.	Solar power generation	66,000,000 CNY	66,000,000 CNY	NA	No par value*	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	1 st Floor, Unit 1, Dafugou Villiage, Wushan Town, Anqiu County, Weifang City, Shandong Province, P.R.China	8610 57580310
43. Weifang Tian'en Jinshan Comprehensive Energy Co., Ltd.	Solar power generation	83,000,000 CNY	83,000,000 CNY	NA	No par value*	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	2 nd Floor, Unit 1, Dafugou Villiage, Wushan Town, Anqiu County, Weifang City, Shandong Province, P.R.China	8610 57580310
44. Dongping County Haoyuan Solar Power Generation Co., Ltd.	Solar power generation	69,000,000 CNY	69,000,000 CNY	NA	No par value*	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	East side of the north section of Xishan Road, Dongping County, Taian City, Shandong Province, P.R.China	8610 57580310
45. Anqiu County Hui'en PV Technology Co., Ltd.	Solar power generation	62,000,000 CNY	62,000,000 CNY	NA	No par value*	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	Unit 2, Longwangmiao Villiage, Dasheng Town, Anqiu County, Weifang City, Shandong Province, P.R.China	8610 57580310
46. Jiaxing Deyuan Energy-Saving Technology Co., Ltd.	Solar power generation	150,740,000 CNY	150,737,585.55 CNY	NA	No par value*	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	No. 999 Xianghu Road, Yaozhuang Town, Jiashan County, Jiaxing City, Zhejiang Province, P.R.China	8610 57580310
47. Feicheng Xingyu Solar Power PV Technology Co., Ltd.	Solar power generation	55,000,000 CNY	55,000,000 CNY	NA	No par value*	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	Huangtuling Villiage, Anzhan Town, Feicheng County, Tai'an City, Shandong Province, P.R.China	8610 57580310
48. Jiangsu Jixin Electric Power Co., Ltd.	Solar power generation	64,000,000 CNY	64,000,000 CNY	NA	No par value*	100.00% (held by BPP Renewable Investment (China) Co., Ltd.)	Zhengwei Villiage, Qianfeng Town, Jinhua County, Huai'an City, Jiangsu Province, P.R.China	8610 57580310

Remark: * Under corporate law

Name	Type of Business	Authorized Capital	Paid-up Capital	No. of Paid-up Capital (Shares)	Par Value per Share	% of Holding	Head Office	Telephone
Singapore								
49. Aizu Energy Pte. Ltd.	Investment in renewable energy business	NA	1,601,577,059.88 JPY	1,601,577,060	No par value*	75.00% (held by Banpu NEXT Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	65 6338 1888
50. Sunseap Group Pte. Ltd.	Investment in renewable energy business	NA	13,496,111.63 SGD 351,330,319.05 SGD	1,289,714 2,531,247	No par value*	47.49% (held by BPIN Investment Co., Ltd.)	2 Boon Leat Terrace, #04-03/04 Harbourside Building 2, Singapore 119844	65 6816 1000
51. Banpu Renewable Singapore Pte. Ltd.	Investment in renewable energy business	NA	15,810,029,719.80 JPY 71,295,176.69 USD	15,810,029,719 71,295,175	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	65 6338 1888
52. BRE Singapore Pte. Ltd.	Investment in renewable energy business	NA	39,820,001 USD	39,820,001	No par value*	100.00% (held by Banpu NEXT Co., Ltd.)	8 Marina Boulevard, #05-02 Marina Bay Financial Centre, Singapore 018981	65 6338 1888
Mauritius								
53. BPIN Investment Co., Ltd.	Investment in renewable energy business	212,497,600 USD	212,497,600 USD	212,497,600	1	100.00% (held by Banpu NEXT Co., Ltd.)	4 th Floor, Ebene Skies, Rue de L'Institut, Ebene, Republic of Mauritius	230 404 8000
Vietnam								
54. EI Wind Mui Dinh Ltd.	Wind power production, power transmission and distribution	235,128,370,557 VND	235,128,370,557 VND	NA	No par value*	100.00% (held by BRE Singapore Pte. Ltd.)	Tu Thien Commune, Phuoc Dinh Ward, Thuan Nam District, Ninh Thuan Province, Vietnam	025 9651 1234
55. BPP Vinh Chau Wind Power Limited Liability Company	Power production, Installation of electrical systems	427,395,900,000 VND	427,395,900,000 VND	NA	No par value*	100.00% (held by BRE Singapore Pte. Ltd.)	Wind power plant no.3, Street 48, Vinh Phuoc ward, Vinh Chau town, Soc Trang province, Vietnam	849 0988 5015
Joint Ventures								
China								
56. Shanxi Lu Guang Power Co., Ltd.	Power generating and sales	1,745,818,000 CNY	1,500,000,000 CNY	NA	No par value*	30.00% (held by Banpu Power Investment Co., Ltd.)	Songcun Town, Zhangzi County, Changzhi City, Shanxi Province, P.R.China	86355 8580511
Japan								
57. Nakoso IGCC Management Co., Ltd.	Electricity power generation, supply services of electricity power and steam	NA	1,000,000 JPY	17,600,000	No par value*	33.5% (held by Banpu Power Investment co., Ltd.)	2-6-1 Marunouchi, Chiyoda-ku, Tokyo, Japan 100-8086	81 3 3210 2121
58. Nakoso IGCC Power Plant GK	Power generation	NA	100,000,000 JPY	NA	No par value*	40.00% (held by Nakoso IGCC Management Co., Ltd.)	102-3, Kawada Iwama-machi, Iwaki-shi, Fukushima Prefecture	81 2 4651 2211

Remark: * Under corporate law

Name	Type of Business	Authorized Capital	Paid-up Capital	No. of Paid-up Capital (Shares)	Par Value per Share	% of Holding	Head Office	Telephone
Lao PDR								
59. Hongsa Power Co., Ltd.	Power generating and sales	927,000,000 USD	927,000,000 USD	92,700,000	10	40.00% (held by Banpu Power Public Company Limited)	NNN Building 4 th Floor, Room No.D5 Bourichan Road, Phonsinouane Village, Sisattanak District, Vientiane Capital, Lao PDR	856 21 222482
60. Phu Fai Mining Co., Ltd.	Mining concession	50,000 USD	50,000 USD	5,000	10	37.50% (held by Banpu Power Public Company Limited)	NNN Building 4 th Floor, Room No.D5 Bourichan Road, Phonsinouane Village, Sisattanak District, Vientiane Capital, Lao PDR	856 21 222482
Thailand								
61. BLCP Power Limited	Power generation and sales	12,010,000,000 THB	12,010,000,000 THB	120,100,000	100	50.00% (held by Banpu Coal Power Limited)	9, I-8 Road, Map Ta Phut Industrial Estate, Amphoe Muang, Rayong Province 21150, Thailand	6638 925 100
62. G.E.P.P. SA-ARD Co., Ltd.	Integrated waste management platform	2,666,700 THB	2,666,700 THB	26,667	100	25.00% (held by Banpu NEXT Co., Ltd.)	559/186 Nonsi Road, Chong Nonsi Subdistrict, Yannawa District, Bangkok, Thailand	668 4360 2928
United States of America								
63. BKV-BPP Power LLC	Investment in energy generation and related business	NA	173,963,925 USD	NA	No par value*	50% (held by Banpu Power US Corporation)	251 Little Falls Drive Street, Wilmington, Delaware, 19808	1 720 375 9680
64. Temple Generation Intermediate Holdings II, LLC	Energy generation and related business	NA	NA	NA	No par value*	100% (held by BKV-BPP Power LLC)	251 Little Falls Drive, Wilmington, Delaware, 19808	1 720 375 9680
65. Temple Generation I LLC	Energy generation and related business	NA	NA	NA	No par value*	100% (held by Temple Generation Intermediate Holdings II, LLC)	1999 Bryan Street, Suite 900, Dallas, TX 75201-3136	1 720 375 9680

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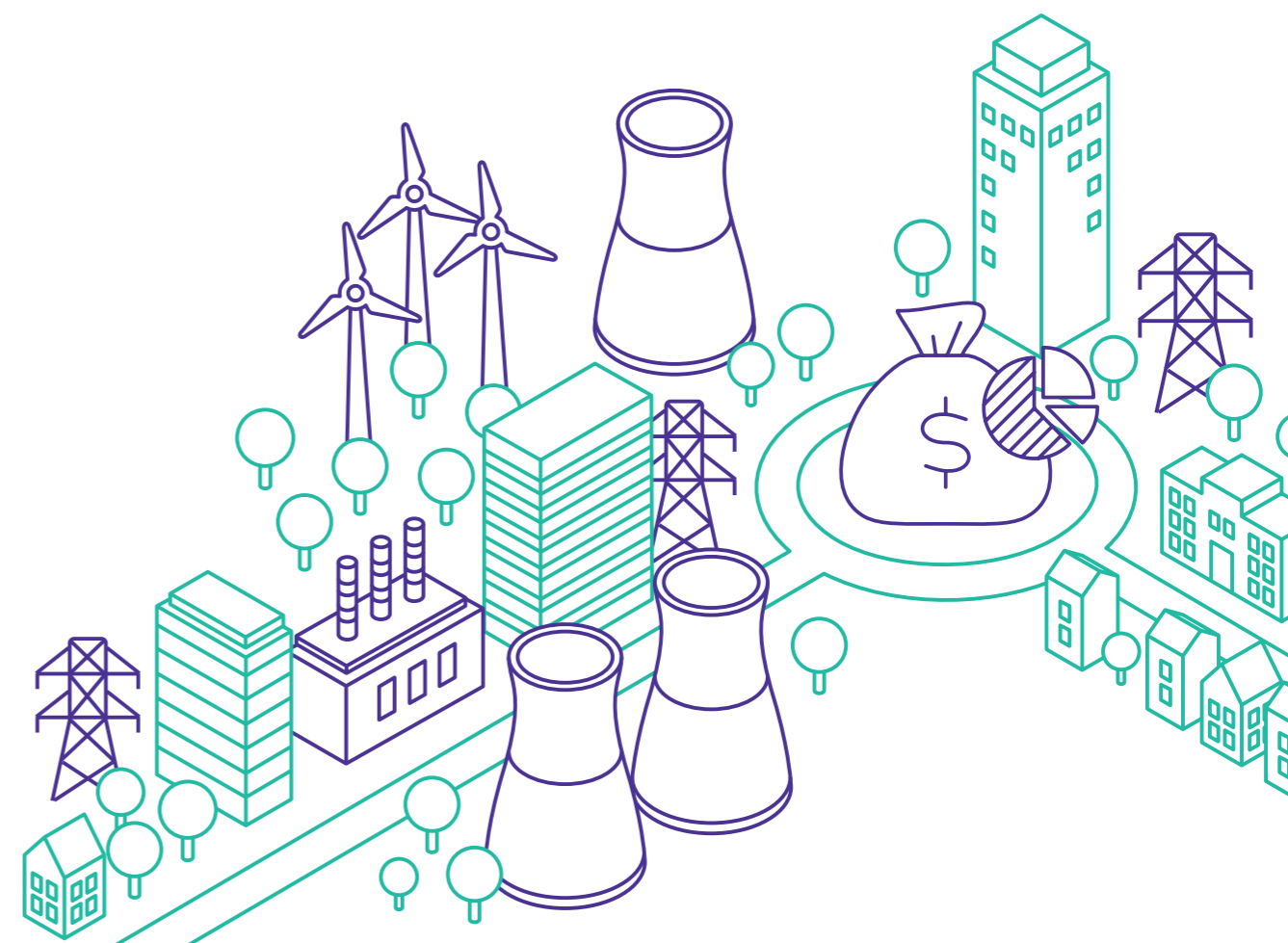
Major Shareholders

Ten Major Shareholders as of 31 December 2021

Major Shareholders	Amount of Shares Held	Percent
1. Banpu Public Company Limited	2,397,199,497	78.655
2. Bualuang Long-Term Equity Fund	46,061,700	1.511
3. Mitr Phol Sugar Corporation Limited	43,074,157	1.413
4. Thai NVDR Company Limited	22,845,969	0.750
5. Bualuang Long-Term Equity Fund 75/25	19,745,200	0.648
6. South East Asia UK (Type C) Nominees Limited	16,657,300	0.547
7. Mr. Vitit Pongpirodom	15,000,001	0.492
8. Mr. Tawat Tassaneepong	12,300,000	0.404
9. City Holding Company Limited	11,457,300	0.376
10. Social Security Office	11,349,700	0.372
Total	2,595,690,824	85.168

Dividend Policy

Banpu Power has a policy to pay approximately 50% of its net profit from the consolidated financial statements less all kinds of statutory and corporate reserves. However, the dividend payout rate will be dependent on cash flows, investment obligations of the Company and its affiliates as well as legal and other requirements.



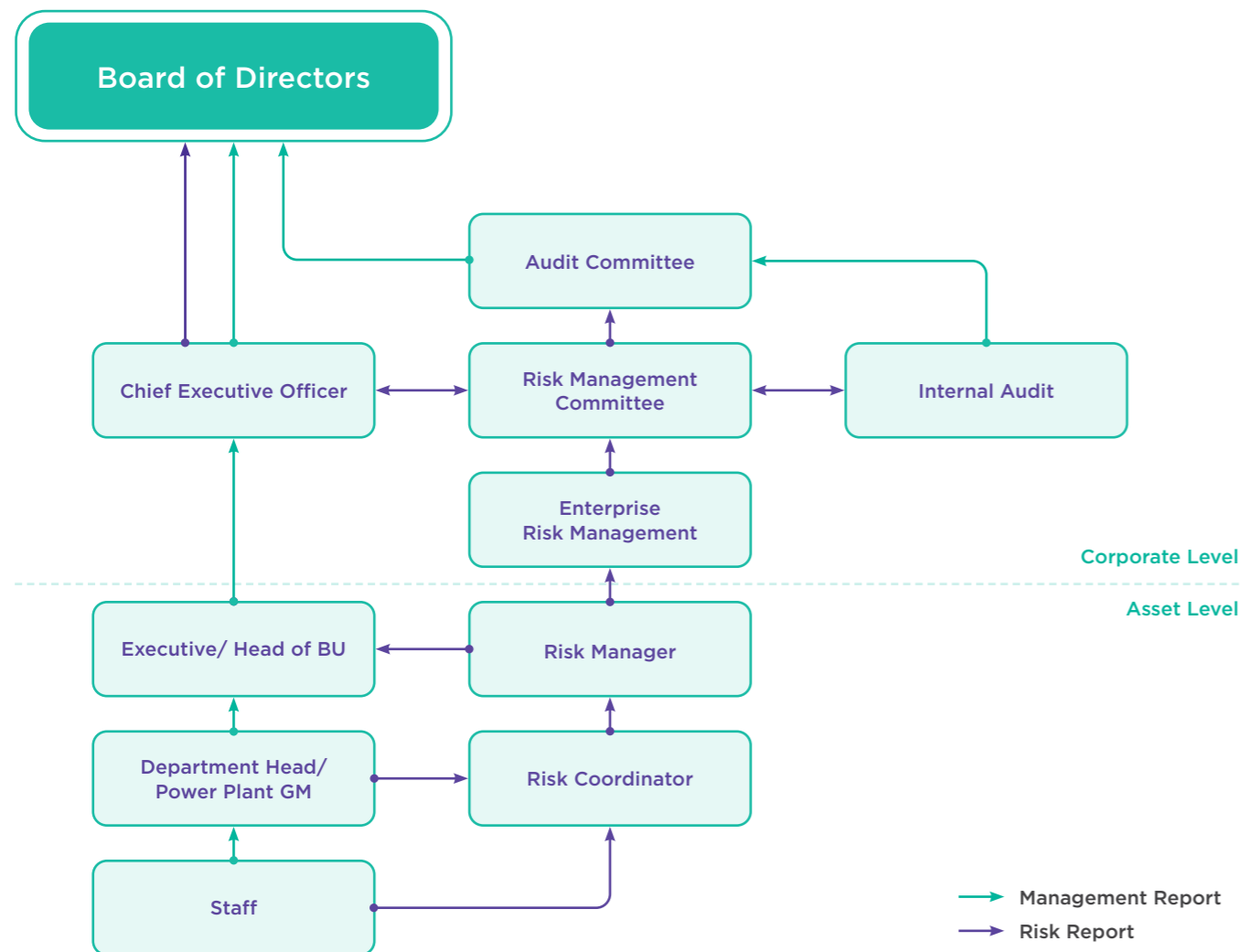
2. Risk Management and Risk Factors

Risk Management

In 2021, Banpu Power Public Company Limited continued stable growth according to its strategy, achieving the target expansion of assets and generation capacity. Meanwhile, the Company has realized different business risks associated with types of business that have been expanded. Aside from past achievements, the Company places importance on sustainable development while focusing on risk management to stabilize and sustain its business operations according to its goals and maintain risks at an acceptable level, as well as to enable effective management of risks and crises that could occur to operations. Banpu Power thus aims to develop and strengthen the risk management system, consisting of risk identification, risk assessment, risk management, and control and monitoring of risks, to efficiently prepare for and cope with any current and future changes facing the Company.

The Company manages risks through formulation processes of policy, operation framework, and audit procedures. It also cultivates corporate culture to engage all employees in risk management process while creating mutual understanding and responsibility for risk management. Banpu Power's risk management system is under the supervision of the Board of Directors, with the responsibilities delegated to the Audit Committee and the Risk Management Committee, which includes stakeholder management and reviewing roles and responsibilities of operational risk management. The risk management structure is illustrated below.

Risk Management Structure



The Risk Management Committee consists of the Chief Executive Officer (CEO) and senior management. The committee has the following responsibilities:

1. Assess and manage risks to mitigate the impact of risk that can affect the Company's operations
2. Provide support to related policies to ensure efficient risk mitigation and to raise awareness on any risks arising from the Company's activities
3. Provide essential internal and external resources to enable efficient risk management

Banpu Power's Risk Management Policy has been announced and regularly updated. A directly responsible unit was set up to work with involved departments in order to drive effective risk management throughout the organization. The Company also has a mechanism in place for searching out and identifying risks.

Risk Factors

Banpu Power's key risks cover dimensions of corporate governance, social, and environmental. In developing the annual action plan to align with its strategic direction and link with the sustainability management context, the Company assesses the likelihood of risks and their potential impacts on stakeholders and prioritizes them before categorizing them as corporate risks. The Company then assigns responsible people to manage the risks at an acceptable level, monitor progress, and regularly review risk issues. Besides, the Company has integrated risk management principles with its work processes to raise awareness of business uncertainty and has taken risk management as part of its business operations to prepare for future risks from business disruptions. The Risk Management Committee convenes to monitor risks and assess risk management performance according to the risk mitigation plan and report the review of the risk management system to the Audit Committee and the Board of Directors on a quarterly basis. The Company's risks can be categorized as follows.

1. Strategic Risk

1.1 Risk in Human Resources Management and Competency Development to Accommodate Future Growth

As Banpu Power's goal is to achieve steady growth, its human resources play a pivotal role in driving organizational success. Thus, the Company has managed human resources risks to ensure that the workforce's knowledge and competency are aligned with its business model. Existing human resources development includes talent management and Individual Development Plan (IDP), as well as succession planning to recruit and prepare high-potential personnel for future leadership roles to succeed current executives and accommodate long-term business growth.

1.2 Risk in Achieving Business Growth as Targets

Banpu Power is well aware of intense market competition; as a result, the Company focuses on seeking new business projects or expanding

its operations to other countries in order to properly and continuously increase opportunities and achieve business success. The Company also assesses the risks of each project to obtain the target returns.

1.3 Risk in Construction and Project Management

Banpu Power has managed risk in construction projects by selecting well-known and skilled construction contractors and signing carefully written construction agreements. The Company has closely monitored the projects' progress and coordinated with contractors to ensure that the project quality remains consistent with the requirements stated in the agreement. In Q3/2021, Shanxi Lu Guang (SLG) power plant in China achieved commercial operation date (COD), followed by Nihonmatsu and Kesenuma solar farms in Japan in Q4/2021. Shirakawa solar power plant project in Japan and Vinh Chau wind power plant project in Vietnam are expected to achieve COD by Q1/2022.

2. Financial Risk

2.1 Foreign Exchange Risk

Banpu Power operates internationally; thus, foreign exchange volatility can directly or indirectly impact its revenues and expenses as well as net profit and net loss. To mitigate the impact from foreign exchange volatility, the Company implemented a cash flow hedge by matching revenues and expenses in foreign currencies, entered into forward foreign exchange contracts for the amount of projected revenues and expenses, and employed derivative instruments as appropriate to prevent foreign exchange risk.

3. Operational Risk

3.1 Risk in Power Generation

Banpu Power regularly analyzes and monitors investment returns against the set targets as well as implements measures to ensure that its power plant operations run smoothly as planned. The Company has closely monitored the power plants' operations, emphasizing root cause analysis to improve operational systems in terms of plant reliability and plant efficiency. It also prepares adequate and appropriate critical spare parts for the power plants, carries on staff capability building and knowledge sharing programs among the companies in its group, and regularly conducts emergency response exercises. In addition, the Company has procured appropriate property damages insurance and business interruption insurance to cushion the impact from adverse incidents.

3.2 Risk in Safety, Occupational Health, Environment and Society

Banpu Power places great importance on occupational health and safety, social and environmental management. In 2021, the Company continued its focus on the three-Zeros goals, namely 1) Zero Incident, 2) Zero Repeat of the same incidents, and 3) Zero Compromise on compliance to applicable occupational safety rules and standards of each country where it operates.

To meet the target, Banpu Power has developed an occupational health and safety management system with adherence to its safety culture, including strengthening the occupational health and safety system following the ISO 45001 standards.

3.3 Natural Disaster Risk

Global climate change is increasing the likelihood of natural disasters that might disrupt the operation of power plants. Therefore, the Company has established measures to reduce potential effects on its operations, for instance, taking natural disaster risk factors into consideration when selecting investment projects, seeking out technologies to reduce disaster vulnerability, and adopting the Business Continuity Management Systems (BCMS). In addition, the Company has procured appropriate property damage insurance and business interruption insurance to cover loss and damage from unexpected incidents.

3.4 COVID-19 Pandemic Risk

Banpu Power continued its measures to reduce the potential impact on its business operations by continuously implementing the Business Continuity Management System. Moreover, the Company has taken proactive measures in every business unit in each country, such as COVID-19 control and prevention measures among staff and contractors who have to access power plants to operate and maintain machinery and equipment. It also utilizes IT systems to facilitate working from home, remote equipment monitoring, etc. These measures enabled the Company to keep its business operations running smoothly and efficiently.

4. Risk in Compliance with Applicable Laws and Regulations

4.1 Risk from Legal, Regulatory, and Policy Changes in the Countries Where the Company Has Invested

As Banpu Power operates business assets in both Thailand and overseas, it needs to comply with the laws, regulations, and policies of each

country. The Company has its Compliance Department and/or local legal consultants regularly monitor the announcement of new laws, regulations, and policies as well as amendments and changes. In addition, it has established a central legal database for use by all locations and communicated with all units in the Company regarding the new or amended laws to ensure that they realize the impact and what they need to comply with.

5. Emerging Risks

5.1 Climate Change Risk

Climate change is an environmental issue which is a top concern for the global community. At the 26th UN Climate Change Conference of the Parties (COP26), countries agreed on measures to reduce carbon dioxide emissions. Investors and financial institutions also consider climate change risk management and opportunities of climate change as an investment factor. Accordingly, Banpu Power has implemented measures to control and mitigate the impact from climate change risk, for example, conducting business under the Banpu group's Greener & Smarter strategy, reducing greenhouse gas emissions in business units, and increasing investment portfolio in renewable power plants and thermal power plants that deploy high efficiency, low emissions (HELE) technologies. The Company is also preparing a plan to implement for climate-related reporting based on the framework of the Task Force on Climate-related Financial Disclosures (TCFD), which will be carried out and disclosed to investors within 2023.

5.2 Risk in Cybersecurity and Personal Data Protection

Cyber threats in various forms are becoming more prevalent with pervasive impact.

Banpu Power firmly believes that the implementation of all the above risk management measures can reduce potential risks and impact and increase opportunities for sustainable growth. In addition, it will be a key factor contributing to the accomplishment of business goals in line with the Company's direction and strategic plan.

Banpu Power is fully aware of such threats and sees the necessity to prevent and minimize potential impacts. The Company has implemented key risk management activities, for instance, formulating the Information and Cybersecurity Policy in accordance with the ISO 27001 and ISO 27701 standards, devising the policy and procedures in compliance with the Personal Data Protection Act (PDPA), raising awareness of cyber threats among employees and formulating practice and prevention guidelines. Each year, there are drills for a cyberattack response plan and an IT recovery plan as well as crisis communication training by simulating cyber-attacks and data breaches. The Company has earned ISO 27001 certification for Information Security Management Systems (ISMS).

5.3 Risk in Disruptive Technologies

Changes in energy technologies, such as the micro-grid system, renewable energy system, energy storage system, and big data system, have geared consumers' energy consumption behavior and relevant laws and regulations toward clean energy technologies and reduced dependence on the centralized power grid. This disruption altered power demand patterns in many countries, including Thailand. To address the risk, Banpu Power has partnered with Banpu group to enhance the opportunities in renewable energy and energy technology businesses. Meanwhile, Banpu group has been split and restructured to become more agile to enable research and development for future solutions and further develop existing projects. Besides, the Company considered the possibility to restructure the organization to align with its business strategy and increase future competitive advantage through investment in Banpu NEXT Co., Ltd.

3. Driving Business Sustainability

Banpu Power Public Company Limited, a power-generating and distributing company operating thermal power, renewable power, and energy technology businesses, is committed to sustainable development in accordance with the Environmental, Social, and Governance (ESG) principles to create value for all stakeholders. Following its Greener & Smarter strategy, the Company balances business growth by deploying high efficiency, low emissions (HELE) technologies to ensure reliable and stable delivery of electricity to customers in line with the energy sustainability principle. The Company responds to energy demand in economic and social development while conducting its businesses in accordance with good corporate governance principles, maintaining sustainable growth in the face of energy transformation in both production and consumption, and joining efforts to achieve the United Nations Sustainable Development Goals (SDGs).

3.1 Sustainability Management Policy and Targets

Banpu Power stresses balancing its portfolio from thermal and renewable power generation according to the energy sustainability principle, which reflects its responsibility and dedication to delivering affordable, reliable, and eco-friendly electricity. The Company's Sustainable Policy can be summarized as follows.

1. Competitiveness Enhancement

- **Human Resource Management**

As employees are the crucial factor driving the Company toward the goal in a stable and sustainable manner, the Company needs an effective recruitment system and human resource management that apply three principles, i.e., equity-based, performance-based, and competency-based principles. Banpu Power has recruited quality staff from diverse backgrounds and cultures. United by a strong corporate culture "Banpu Heart," they are able to brave any challenges and let their professionalism shine through. The Company also analyzes the corporate goals to identify essential future skills and knowledge and prepare individual development plans to improve employees' skills, knowledge, and leadership while promoting a healthy work-life balance. Apart from that, Banpu Power established the Job Evaluation Committee, the Organization Development Committee, the Compensation Committee, and the Corporate Governance and Nomination Committee to ensure transparency in line with the Corporate Governance Policy and empower human resources to support them in achieving the Company's goals.

- **Operational Excellence and Innovation Development**

Banpu Power promotes continuous improvement of power generation and encourages corporate innovations. The Company set up the Innovation Committee and joined hands with Banpu group to help mobilize innovations in the workplace. To align with its Greener & Smarter strategy, the Company embraces innovation to enable quality, stability, and reliability in power generation. The Company also deploys high efficiency, low emissions (HELE) technologies while continually improving its operation and stressing flexibility. Furthermore, the Company takes great care of its customers by delivering products and solutions that meet their expectations and reinforcing customer relationship management while seeking new investment opportunities in renewables such as solar, wind, and hydro power. As for its employees, Banpu Power promotes knowledge management across the organization and organizes knowledge-sharing sessions for the Innovation Awards Recognition program to showcase outstanding innovative projects from the operational to the corporate level.

2. Stakeholder Value Creation

- **Corporate Governance**

Banpu Power has formulated the Corporate Governance Policy, the Anti-Corruption Policy, and set forth corporate governance practices in the Code of Conduct for directors, executives, and employees. The Company engages stakeholders by communicating policies and practices to trading partners and business alliances to keep everyone on the same page. It also places great importance on complaint handling procedure and whistleblower protection as a mechanism that keeps all complaints strictly confidential. Complaints will be submitted through the Company Secretary to be investigated and resolved in an appropriate timeframe. Corporate governance complaints can be filed via the Company's website.

[Whistleblower Channels](#)

- **Compliance with Laws and International Standards**

Banpu Power strictly complies with applicable laws and regulations as well as international standards of practices. It has set a procedure to ensure compliance with laws and the Company's policies through various processes, such as corporate compliance, internal audit, and Quality Assurance Review (QAR). External assessments and certifications include ISO 9001 Quality Management System, ISO 45001 Occupational Health and Safety Management System, ISO 14001 Environmental Management System, ISO 22301 Business Continuity Management System, ISO 27001 Information Security Management System, and Global Reporting Initiative (GRI). The Company's legal and regulatory compliance and adoptions of international standards are also mechanisms for internal process improvement.

- **Occupational Health and Safety**

Banpu Power has the policy to provide the safest working environment for its employees, contractors, and stakeholders. The working environment has been developed with safety

and occupational health in mind, including regular inspections and continuous safety culture cultivation. The Company set a 3-Zero target as follows:

1. Zero Incident by preventing and correcting unsafe behaviors or working conditions
2. Zero Repeat by identifying and solving the root causes to prevent recurrence of the incidents
3. Zero Compromise by strictly conforming to safety rules, regulations, and standards

- **Environment**

Banpu Power explores opportunities to invest in renewable energy and deploys high efficiency, low emissions (HELE) technologies in generating electricity and other energy forms. To comply with the international standards for an environmental management system, the Company has clear practices for every operation unit before launching any projects to prevent and lessen environmental impacts, reduce or optimize resource consumption, prevent impacts at their sources, and properly manage the environment throughout the supply chain. The Company also mitigates potential environmental impact from power generation, and the environmental performance is periodically reviewed by independent organizations to ensure proper management and compliance with laws and international standards.

- **Community and Society**

Banpu Power respects human rights and conducts its business on the basis of transparency. The Company prioritizes community engagement and social responsibility by involving communities since the beginning of the project through stakeholder needs analysis to create mutual understanding and establish effective communication channels for each group of stakeholders. The Company pays all taxes to contribute to community development while creating opportunities for employment and procurement. In addition, the Company has carried out development projects appropriate to each community to drive sustainable development in all locations where it operates.

[Sustainable Development Policy](#)


Management Approach

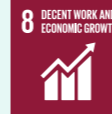
To mobilize sustainability implementation, the Company established the Banpu Power Sustainable Development Committee, consisting of the chief executive officer as chairperson, and all senior executives, including heads of business units as members. The committee has duties to formulate the Sustainability Policy and related policies, devise a strategic plan, and monitor implementation of the plan. They take responsibility to ensure that the Company fully responds to stakeholder expectations, has appropriate risk management, remains competitive while being agile to change, and able to sustain growth. The committee regularly reports sustainability performance to the Board of Directors, which oversees corporate sustainability, to jointly establish explicit policies and indicators for the short and long term, fostering inclusion and action in all business units. Apart from that, the Company annually discloses sustainability performance to stakeholders in the Sustainability Report, with assurance by external assessors on issues of stakeholder interest.




Banpu Power conducted a materiality assessment related to its business operations to prioritize short and long-term sustainability issues. The Company has established strategies and targets for 2021 - 2025 in alignment with the Greener & Smarter strategy, with an action plan and appropriate indicators. There are regular performance monitoring and assessment by business units, the Sustainability Committee, the Risk Management Committee, and the Board of Directors. In addition, the external assessment results at the national and international levels are reviewed to devise a plan to elevate the Company's sustainability operations to keep us with the content changes, comply with international standards, and satisfy stakeholder expectations.

Performance Targets

The United Nations Sustainable Development Goals (SDGs) are a framework that reflects stakeholder expectations and the direction for future sustainable development policy at local and international levels. Banpu Power has aligned its performance targets with the SDGs as follows:

	United Nations Sustainable Development Goals (SDGs)	Targets for 2025
	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency	<ul style="list-style-type: none"> Achieve the power generating capacity target of 5,300 MWe comprising 4,500 MWe from the thermal power generation and 800 MW from renewable power generation Improve energy efficiency and availability with the Availability Factor (AF) target of no less than 90% and the Forced Outage Factor of less than 5% Key Environmental, Social and Governance (ESG) indicators are part of the performance appraisal of the CEO and are also cascaded to senior management.

	United Nations Sustainable Development Goals (SDGs)	Targets for 2025
	8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	<ul style="list-style-type: none"> Workplace environment complies with regulatory requirements and standards. No major incident and occupational illness in employees and contractors <ul style="list-style-type: none"> Zero fatality Zero lost time injury frequency rate: LTIFR Zero total recordable injury frequency rate Zero high-consequence injury rate Zero fatality caused by occupational ill-health Zero total recordable occupational ill-health frequency rate Zero tier-1 process safety event rate Employee engagement score of no less than 80% Banpu Heart score of no less than 80% Proportion of employees having Individual Development Plans equivalent to 100% All critical positions are identified for succession planning. Proportion of business units conducting human rights risk assessment of no less than 70% in 2021 No human rights complaint and the proportion of human rights complaints entering a dispute resolution mechanism equivalent to 100% All business units have a risk management plan with ESG issues. Customers and products <ul style="list-style-type: none"> Zero complaint about customer privacy Zero complaint about safety and environment concerning product use All customers' complaints are investigated and resolved within an appropriate timeframe.

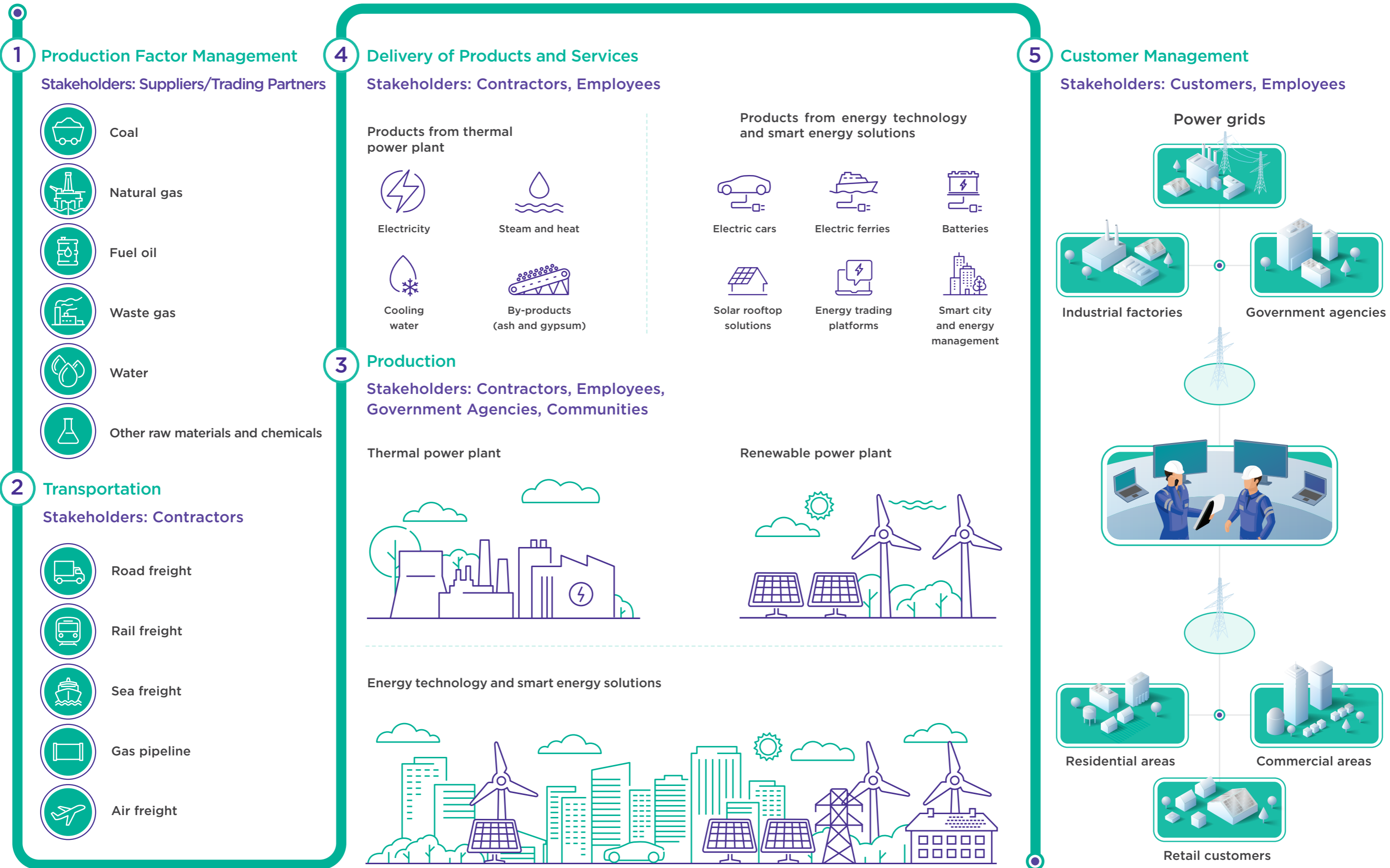
	United Nations Sustainable Development Goals (SDGs)	Targets for 2025
	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	<ul style="list-style-type: none"> Reduce emissions intensity of the thermal power plants to achieve ultra-low emissions <ul style="list-style-type: none"> $\text{SO}_2 \leq 0.0766$ tonnes/KWh $\text{NO}_x \leq 1.184$ tonnes/KWh $\text{PM} \leq 0.0230$ tonnes/KWh No significant environmental incident, social incident, and fines of non-compliance at all operation assets No significant complaint from communities both from operations and relocations All complaints from communities must be resolved through a dispute mechanism. All thermal power plants in China get certified ISO 14001 (Environmental management system standards). Proportion of procurement and hiring contracts with local trade partners equivalent to 50% Proportion of ESG risk assessments for key trading partners equivalent to 100% The Company's contracts contain ESG requirements equivalent to 100% Cybersecurity and Privacy Maturity Score of no less than 2.5 (full score = 5)
	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	<ul style="list-style-type: none"> Water consumption intensity less than $0.868 \text{ m}^3/\text{MWh}$ 100% re-use/recycling of fly ash and bottom ash Zero hazardous waste disposal to landfill All operational control assets assessed for potential biodiversity impact
	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	<ul style="list-style-type: none"> GHG emissions intensity < 0.676 tonnes $\text{CO}_2\text{e}/\text{MWh}$ in combined heat and power plants under Banpu Power's direct management Achieve over 800 MW of renewable energy generation capacity Disclose climate change information according to Task Force on Climate-related Financial Disclosures (TCFD) Business continuity management (BCM) system established and rehearsed in all business units, with the proportion of critical business functions having rehearsed the BCM plan equivalent to 100%.

	United Nations Sustainable Development Goals (SDGs)	Targets for 2025
	16.5 Substantially reduce corruption and bribery in all their forms	<ul style="list-style-type: none"> Achieve zero incidents involving non-compliance, corporate governance, and corruption All significant complaints must be investigated and resolved within the appropriate timeframe through a dispute mechanism. Be certified as a member of the Collective Action Coalition Against Corruption (CAC)

Notes: 1. The scope of performance targets covers the production units under Banpu Power's direct management.
2. Targets under review and finalization, such as energy reduction targets, are not included in this report.

3.2 Management of Impacts on Stakeholders in the Business Value Chain

Banpu Power Value Chain



The Company focuses on creating stakeholder engagement and inclusiveness in order to help determine material ESG issues in its operations, prioritize issues for implementation to respond to all stakeholders' expectations, and disclose performance information with transparency in accordance with the international engagement practice - the AA 1000 Stakeholder Engagement Standard (AA1000SES).


Stakeholder Analysis Processes

1. Identify stakeholders involved with the Company's operations, both inside and outside the organization.
2. Determine levels of the Company's impacts on stakeholders in environmental, social and governance aspects.

3. Determine levels of stakeholder influence on the Company regarding finance, operations, rules and regulations, reputation and strategies, etc.
4. Classify stakeholders based on levels of the Company's impacts and levels of stakeholder influence.
5. Prioritize the importance of stakeholders to determine appropriate engagement channels for each group of stakeholders.

[Stakeholder Engagement Standard](#)

In May 2021, the Company reviewed stakeholder identification and identified the following key direct stakeholders:

Stakeholders	Engagement Channels	Stakeholders' Issues of Interest	Key Operations
 <p>Joint-venture Partners, Shareholders, Investors and Financial Institutions</p>	<ul style="list-style-type: none"> The Board of Directors meetings of subsidiaries and joint ventures The Annual General Meeting of Shareholders Presentation of investment information on various agendas such as the quarterly meetings and the roadshows, to present information and answer questions Organizing the analyst meetings Presentation of information at the Opportunity Day event organized by the Stock Exchange of Thailand Providing channels for receiving complaints Conducting a satisfaction survey Preparation of the annual report and sustainability report Dissemination of information via the website 	<ul style="list-style-type: none"> Performance, project development, and business growth related to climate change Financial and accounting policies Cash flow management Cost control Provision of accurate and complete financial information within an appropriate time frame Risk management Business operation transparency Developing and creating innovations to enhance competitive advantage Qualifications and compensations of the Board of Directors and executives Operation of socially responsible businesses with strong ESG management 	<ul style="list-style-type: none"> Establishing the Greener & Smarter strategy; investing in renewable energy business through Banpu NEXT Co., Ltd. and investing in natural gas-fired power plants Formulating climate change policy and management approach; disclosing risks, impacts, and climate-related activities Implementing a risk management system in all business units Aligning business operations with the Corporate Governance Policy and Code of Conduct; participating in the annual CG assessment (In 2021, the Company received a five-star rating (Excellent) from the Corporate Governance Report of Thai Listed Companies (CGR) 2021, organized by the Thai Institute of Directors (IOD); being certified as a member of Thailand's Private Sector Collective Action Coalition Against Corruption (CAC)

Stakeholders	Engagement Channels	Stakeholders' Issues of Interest	Key Operations
 <p>Employees</p>	<ul style="list-style-type: none"> Conducting an employee engagement survey Conducting a Banpu Heart corporate culture survey Setting up the Welfare Committee Setting up the Occupational Health and Safety Committee Setting up the Innovation Committee Organizing CSR activities Organizing activities to promote the corporate culture Providing channels for receiving complaints Developing a performance appraisal system Dissemination of news release within the organization Preparation of the annual report and sustainability report Dissemination of information via the website 	<ul style="list-style-type: none"> Business directions and the organization's sustainable growth Business ethics and responsibility for employees Fair compensation Performance appraisal Career path Capacity building Participation in decision-making and allowing employees to voice their opinions Work-life balance Occupational safety and working environment 	<ul style="list-style-type: none"> Evaluating qualifications of the Board of Directors for the preparation of a board skill matrix, and appointing an additional director whose qualifications and experience align with the Company's performance targets Participating in the ESG performance assessment (In 2021, the Company received the Rising Star Sustainability Award from the Stock Exchange of Thailand); being selected as a member of the S&P Global Sustainability Yearbook 2022 by participating in the ESG performance assessment of leading companies worldwide in the Electric Utilities industry Establishing two-way communication with employees to regularly create understanding and employees' participation Communicating about corporate governance and integrating it with the corporate culture Ensuring that labor management complies with laws and international standards; establishing clear, transparent, and fair Key Performance Indicators (KPI) Allocating budget and providing capacity-building programs; preparing individual development plans Cultivating Banpu Heart corporate culture Monthly checking on working environment and safety

Stakeholders	Engagement Channels	Stakeholders' Issues of Interest	Key Operations
			<ul style="list-style-type: none"> Determining appropriate preventive measures against the COVID-19 pandemic for each workplace, such as developing information systems and other systems to support remote working; providing health checks before starting work; facilitating vaccination for employees, etc.
 <p>Government Agencies</p>	<ul style="list-style-type: none"> Meetings and visits on various occasions Site visits and operation inspections Submission of reports and information as required by laws Disclosure of information as requested Participation in the projects organized by the government Preparation of the annual report and sustainability report Dissemination of information via the website 	<ul style="list-style-type: none"> Legal and regulatory compliance, and management of potential economic, social, and environmental impacts from non-compliance 	<ul style="list-style-type: none"> Compiling and regularly updating relevant laws Implementing a compliance risk inspection and monitoring system, particularly monthly audits and reporting and independent auditing Power plants under Banpu Power's direct management are certified for quality, safety, and environment management.
		<ul style="list-style-type: none"> Corporate governance according to the Code of Conduct 	<ul style="list-style-type: none"> Announcing the Corporate Governance Policy and Code of Conduct and regularly reviewing and monitoring performance
		<ul style="list-style-type: none"> Creating economic, social, and environmental values 	<ul style="list-style-type: none"> Carrying out social responsibility projects; paying taxes as required by laws; and promoting local procurement and employment
		<ul style="list-style-type: none"> Optimal utilization of natural resources 	<ul style="list-style-type: none"> Carrying out environmental projects to minimize resource utilization
 <p>Customers</p>	<ul style="list-style-type: none"> Meeting with customers to devise the work plan, understand market situations, and set delivery targets according to the plan Meeting for operators to share their experiences on power plants operations and contract management 	<ul style="list-style-type: none"> Equivalent Availability Factor (EAF) of electricity and other energy forms as specified in the agreements Delivery of quality products and services as agreed at affordable prices Business continuity management to deliver products and services without interruption in case of unexpected crises 	<ul style="list-style-type: none"> Implementing efficient production and maintaining the Equivalent Availability Factor (EAF) of electricity and other energy forms as specified to supply affordable and accessible energy according to customers' needs Preparing the business continuity management plan to ensure continuous delivery of products and services without interruption even amid crises

Stakeholders	Engagement Channels	Stakeholders' Issues of Interest	Key Operations
	<ul style="list-style-type: none"> Visiting customers to learn about their problems and find ways to improve Disclosing information as requested Conducting a customer satisfaction survey Establishing a complaints mechanism via multiple channels such as by telephone and via website 		<ul style="list-style-type: none"> Implementing the ISO 9001 quality management systems
 <p>Suppliers/Contractors</p>	<ul style="list-style-type: none"> Disclosure of procurement information via the website or applications Meeting with suppliers/contractors Training for suppliers/contractors to build capacity and create working safety Conducting a satisfaction survey 	<ul style="list-style-type: none"> Procurement and returns A fair selection process An operation/maintenance outage plan Working environment and work safety 	<ul style="list-style-type: none"> Ensuring equitable disclosure of procurement information Carrying out transparent procurement with fair selection criteria overseen by the Supplier/Contractor Selection Committee Establishing environmental and safety measures as guidelines for contractors and relevant parties at the equivalent standard for employees
 <p>Communities and society</p>	<ul style="list-style-type: none"> Conducting a community attitude survey Surveying the community's basic information and opinions prior to the start of a project Providing channels for receiving grievances over the phone and on the website Meeting with the community Establishing a joint development committee with the community Carrying out community relations and activities with the community Site visits to Company's operations Preparation of the annual report and sustainability report Dissemination of information via the website 	<ul style="list-style-type: none"> Environmental Management 	<ul style="list-style-type: none"> Deploying high efficiency, low emissions (HELE) technology in project design and the improvement of the production process Establishing an efficient environmental management and monitoring system and maintaining discharging ultra-low emissions into the environment
		<ul style="list-style-type: none"> Community Development Projects Social Responsibility 	<ul style="list-style-type: none"> Regularly involving communities and looking for opportunities to carry out projects to build capacity and sustainability Providing aid to communities and society during the COVID-19 pandemic, such as financial support to curb the spread and donation of medical equipment and survival bags

In 2021, the Company surveyed the satisfaction of five stakeholder groups, namely, joint-venture partners, regulatory bodies, consultants, trading partners, and financial institutions. Questionnaires were sent to respondents via online channels to gather information, and results were used to improve the Company's operating systems. The results revealed that overall, 97.56% of the stakeholders had "Very Good" satisfaction, and 2.44% had "Good" satisfaction.

Topics	Score (Percent)
Working with Banpu Power's People	95.12
Compliance with Partnership Terms and Conditions	100
Transparent Treatment and Selection Criteria	98.78
Communication Channels Effectiveness	92.68
Partnership Contribution Together	97.56
Cooperation in Information Provision and Exchange	96.58

3.3 Sustainability Management - Environmental Dimension

- Environmental Policies and Practices**

Banpu Power established environmental policies and practices under the Greener & Smarter strategy, namely Environmental Policy, Climate Change Policy, Water Resources Management Policy, Waste Management Policy, and Biodiversity Policy. These policies are based on an analysis of the Company's material sustainability issues; they are operational guidelines in all locations where the Company operates with an emphasis on impact mitigation, environmental improvement, and natural resources conservation. The Company fully complies with applicable laws while remaining watchful and agile to changes. Environmental impacts have been evaluated, and a surveillance and prevention system is in place. The Company has a management approach to minimize environmental impacts from the project planning. It deploys high-efficiency, low emissions (HELE) technologies in power generation and encourages conservation and optimization of resources, particularly energy, water, and land use. Other management strategies are communication, awareness-raising, capacity-building, and promotion of stakeholder engagement, especially employees and those involved in the Company's value chain.

Environmental Policy

- Environmental Performance**

Energy

- **Strategy**

The Company's major costs are fuels used for generating power, steam, and other forms of energy. Thus, its strategies focus on controlling fuel consumption to maximize efficiency, using high efficiency and environmental-friendly technology, and supporting energy-saving projects and innovations.

- **Target**

The amount of coal consumption by each power plant meets governmental requirements

- **Management Approach**

Banpu Power focuses on energy optimization as follows:

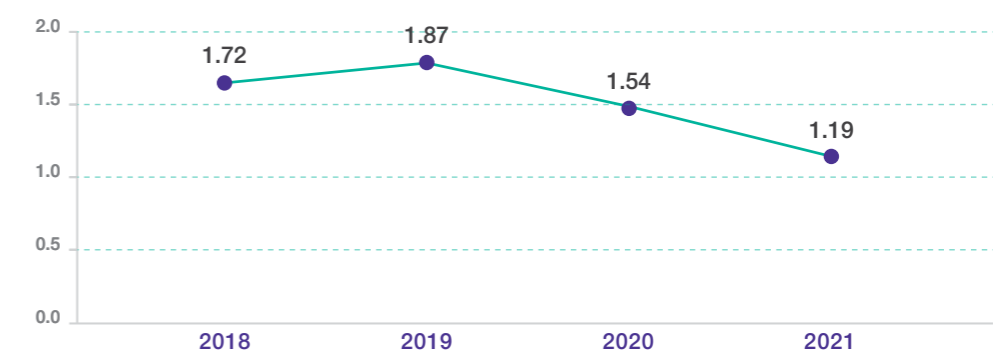
- Deploying high efficiency and environmental-friendly technology to minimize fuel consumption
- Improving the boiler efficiency to achieve complete combustion
- Planning for efficient maintenances to increase the power plants' availability factor and reduce the forced outage factor

- Looking for opportunities to reduce power losses in the system
- Improving other support systems to reduce energy consumption, such as improving feedwater quality inside the boiler to extend boiler life and prevent power and water losses
- Seeking alternative energy sources in the area such as waste gas, natural gases, and biomass fuels
- Planning procuring fuels from various sources to get high-quality fuels at reasonable prices and to reduce fuel shortage risk
- Developing integrated energy management applications for power plants, starting from procurement, storage, blending to combustion in the production process

- **2021 Performance**

In 2021, the Company's energy consumption intensity was at 1.19 GWh, a decrease of 22.7% compared to 2020, which is 30.8% improved from the target. This is owing to the Company's improvement of the production process by blending low-calorific value coal in the Zhengding combined heat and power (CHP) plant, blending activated carbon which was waste from its customers' industrial plants, and bring it to replace coal for the Zouping CHP plant. The blended coal was tested, and the power plant equipment was also improved and checked for energy efficiency and safety. This improvement has increased energy efficiency, reduced coal consumption, and recycled industrial waste, resulting in a fuel cost reduction of approximately CNY 44.25 million. Moreover, the Company's energy consumption intensity has significantly improved.

Energy Consumption Intensity (GJ/MWh)



Over the past year, coal prices have surged due to constrained supply worldwide. In addition, China announced the law to limit coal consumption in power plants to reduce GHG emissions. The Company has since studied strategies to reduce energy consumption as follows:

- Improving boilers to utilize coal of diverse qualities; reusing coal ash to reduce coal consumption; using exhaust gases from customers' industrial processes as fuel, etc.
- Seeking ways to produce and use clean energy, such as installing solar panels on coal stockyards, roads, and parking lots; conducting feasibility studies on biomass and waste power generation projects

- Develop energy management applications using digital technology, such as market intelligence tools or IRIS for fuel purchase, coal blending application, and digital transformation for holistic improvement of the power plant by integrating digital technology in the power generation processes to prevent energy losses

Water

● **Strategy**

As water is an important resource for power generation, the Company analyzed water resource risks and potential impacts to the production units, both in terms of physical impacts and legal compliance, especially those related to climate change. The analysis will be used to determine adaptive strategies, namely improvement of production processes, reduction of water losses in the system, water resources optimization, and holistic water management, including both inlet water and discharged water, to minimize the impacts from water utilization in the area.

[Water Resource Management Policy](#)

● **Target**

- Water consumption intensity < 0.868 cubic meters/MWh
- Discharged-water quality meets the legal standards

● **Management Approach**

Water is an essential resource for power generation and the livelihood of surrounding communities. Risks in water resources are related to climate change, and can lead to water shortage in the area affected by changing climate. Therefore, the Company regularly assesses water resource risk, particularly in the water-stressed areas. Water management focuses on recycling as much water as possible to minimize water consumption and water discharge to comply with water quality standards. Details are as follows:

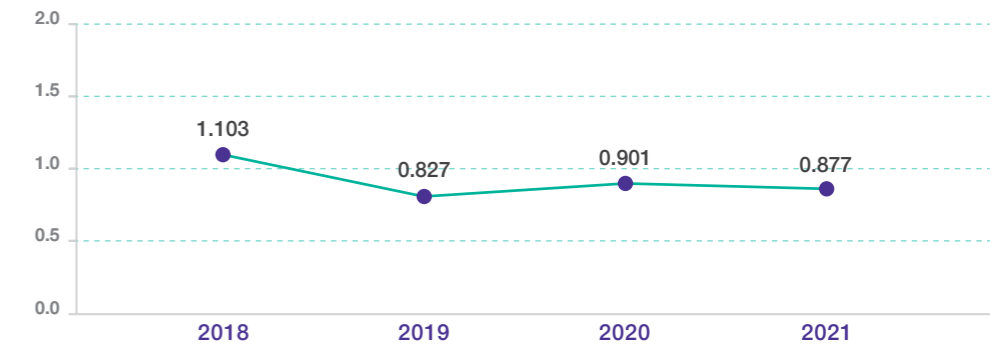
- Optimizing water utilization and looking for opportunities to reduce water consumption and reuse or recycle water
- Improving quality of discharged water according to legal requirements; developing measures to prevent chemical leakage and contamination at its source
- Implementing holistic water management to ensure fair and effective utilization of water resources and prevent impact on stakeholders in the area
- Assessing risks in water resources and establishing measures and practices in the event of an emergency to reduce the impact and restore the area
- Developing a surveillance system for both quality and quantity to ensure that water being treated and discharged complies with legal standards
- Promoting engagement of stakeholders, especially the local communities and the research sector, to conserve water resources and improve water quality and management in the areas

● **2021 Performance**

In 2021, the Company's three combined heat and power (CHP) plants in China had a water consumption intensity of 0.877 cubic meters/MWh, decreasing 2.7% compared to 2020, and above the target of 1%. The falling steam demand in the industrial sector led to an increase in water consumption intensity compared to distributed electricity, steam, and other energy sources. However, the new power generation units in China had been designed not to discharge wastewater from the system to reduce water consumption in the area. Therefore, water consumption intensity has been decreasing for many years. In addition, water has been recycled through a recycling process to be reused, which can significantly reduce the amount of water drawn from water resources.

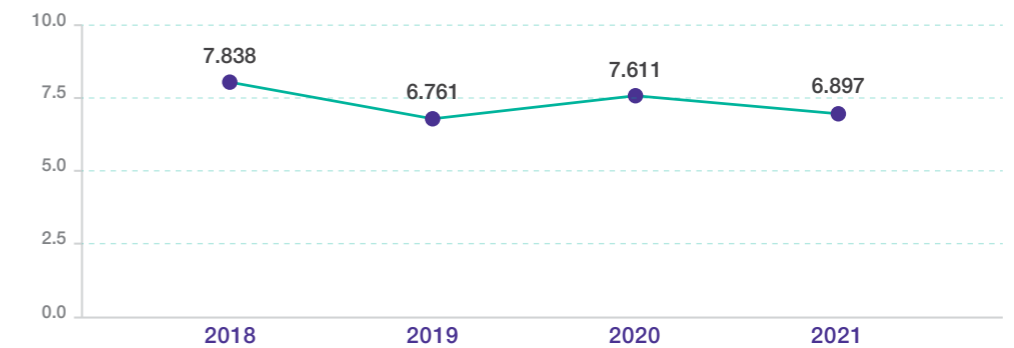
Water Consumption Intensity

(Cubic meters/MWh)



Water Withdrawal

(Million cubic meters)



Waste

● **Strategy**

The Company stresses utilizing environmental-friendly and state-of-the-art technologies to reduce waste at the source, promoting reuse and recycling of waste to optimize resource utilization and cut waste management costs. In addition, the Company has an effective system as well as regular drills to prevent and handle leaks of hazardous waste.

[Waste Management Policy](#)

● **Target**

- Zero hazardous waste disposed to landfill
- Proportion of fly ash reused or recycled no less than 100% per year
- Proportion of synthetic gypsum reused or recycled no less than 100% per year

● **Management Approach**

Banpu Power has implemented waste management according to the Environmental Policy by adopting the 3Rs principle: Reduce, Reuse, and Recycle. It aims to achieve the zero hazardous waste to landfill target and compliance with best-practice standards and laws of each country. As a result, wastes from the CHP plants have been classified into three types: hazardous waste, non-hazardous waste, and ash and gypsum.

Waste Type	Example	Management Approach
Non-hazardous waste	<ul style="list-style-type: none"> Paper and office equipment Metal scraps, materials and equipment, and packaging Household waste Organic waste from tree trimmings and mowing to maintain the area 	<ul style="list-style-type: none"> Deploying a digital system to reduce consumption of materials and equipment Storage and classification of the waste for further reuse and recycling
Hazardous waste	<ul style="list-style-type: none"> Oil absorbent material and used lubricants Used batteries Chemicals used to improve water quality and other chemicals, including their packaging 	<ul style="list-style-type: none"> Reducing consumption Looking for opportunities to transform hazardous waste into treatable and reusable waste Reducing the use of packaging by transporting and transmitting chemicals directly to storage tanks Storing and classifying wastes for reuse and recycling Defining measures to prevent and handle waste leakages in the event of an emergency Transportation, disposal, and sales for recycle of waste in compliance with legal standards. Delivering wastes for disposals by the certified external parties
Ash and gypsum	<ul style="list-style-type: none"> Fly ash Bottom ash Synthetic gypsum 	<ul style="list-style-type: none"> Classifying fly ash according to size that customers' needs and market demands Exploring the market to sell fly ash, bottom ash, and gypsum for utilization as construction materials Preparing appropriate and adequate storage areas for ash and gypsum Delivering ash and gypsum for disposals by the certified external parties

● **2021 Performance**

In 2021, hazardous waste generated by the three CHP plants in China amounted to 1,170 tonnes, consisting of 176 tonnes of hazardous waste and 994 tonnes of non-hazardous waste. All of the waste were eliminated by proper methods, achieving the zero hazardous waste disposed to landfill target. Meanwhile, by-products generated by the air treatment process at the CHP plants in China were ash and synthetic gypsum. The amount of ash generated from fuel combustion was 688,623 tonnes, consisting of 510,809 tonnes of fly ash, 177,814 tonnes of bottom ash, and 87,964 tonnes of synthetic gypsum. The fly ash was classified by size before selling to be utilized as construction materials. The classification of fly ash according to size to meet customers' needs is a way to add value to fly ash. The Company can sell fly ash at higher prices because it meets the market's demand. 99.98% of ash and gypsum were reused or recycled.

Air Quality

● **Strategy**

Sulfur dioxide (SO₂), nitrogen oxides (NO_x), and dust particles are the key indicators of air quality from the thermal power plants' stack as well as surrounding communities' issues of interest. The Company has deployed highly efficient and environmentally friendly power generation technology in its newly acquired power plants, with improved pollutant-trapping and combustion systems, resulting in highly efficient fuel combustion and ultra-low emissions.

● **Target**

- Air quality from the stack meets legal requirements.
- Emission intensity
 - SO₂ emission intensity ≤ 0.0766 tonnes/GWh
 - NO_x emission intensity ≤ 1.184 tonnes/GWh
 - Particulate matters (PM) emission intensity ≤ 0.0230 tonnes/GWh

● **Management Approach**

Banpu Power has established emission control measures in accordance with legal requirements for the health and safety of its employees and surrounding communities as follows:

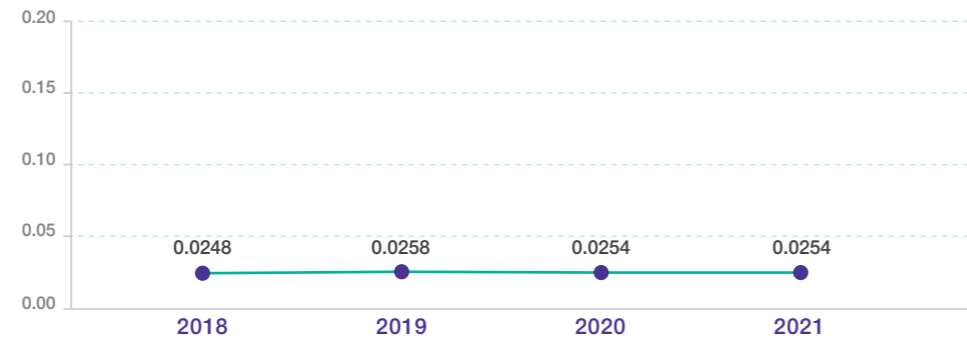
- Deploying highly efficient technologies to improve the system that removes pollutants and dust particles from stack emissions, for example, flue gas desulfurization (FDG), an electrostatic precipitator, and bag filters
- Opting for low-sulfur coal to reduce SO₂ at the source: Banpu Power has entered into a long-term purchase agreement with coal resources that can supply coal of specified quality. There is also an online trading system for coal traders to offer coal that meets Banpu Power's requirements.
 - Deploying clean technologies to improve complete combustion, such as high efficiency, low emissions (HELE) technology for power generation; the clean technologies, namely "pulverized fuel combustion" and "fluidized bed combustion" to reduce SO₂ and NO_x as well as particulate matters during combustion
- Implementing the continuous monitoring system for air quality throughout the production process before being emitted; defining preventive measures, which are under the regular inspection of external agencies

● 2021 Performance

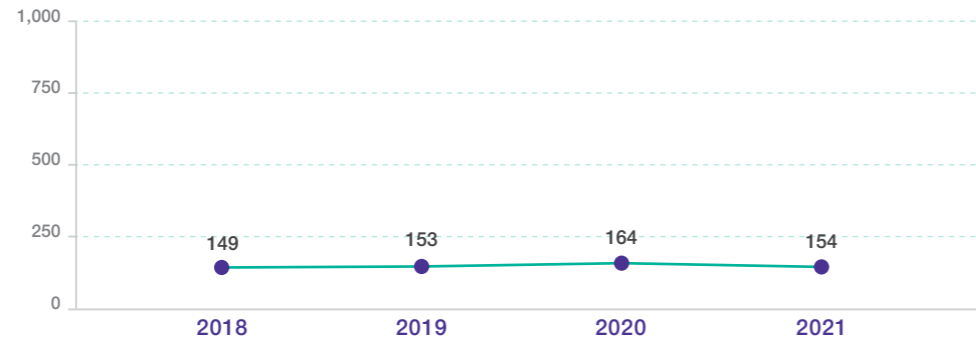
The three CHP plants in China have continually improved the air quality before being emitted from stacks since 2013; therefore, the air quality has improved significantly.

In the past year, the quality of air emitted from stacks was higher than legal standards and met the set targets. The power plants also gained acceptance and received special grants from the government for excellent air quality control.

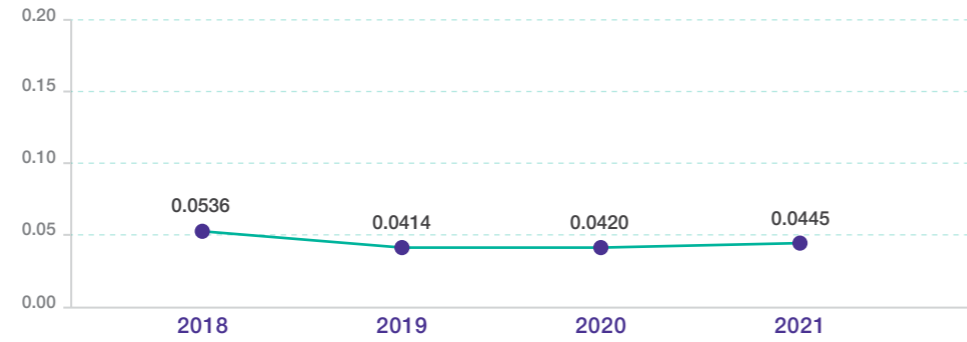
SO₂ Emission Intensity
(tonnes/GWh)



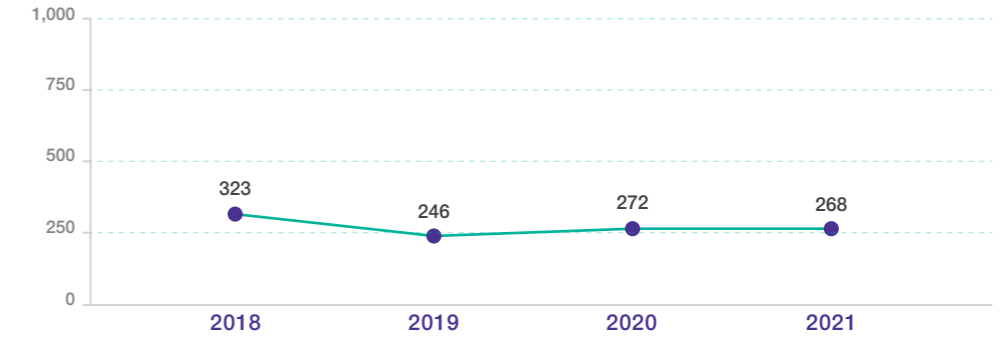
SO₂ Emission
(tonnes)



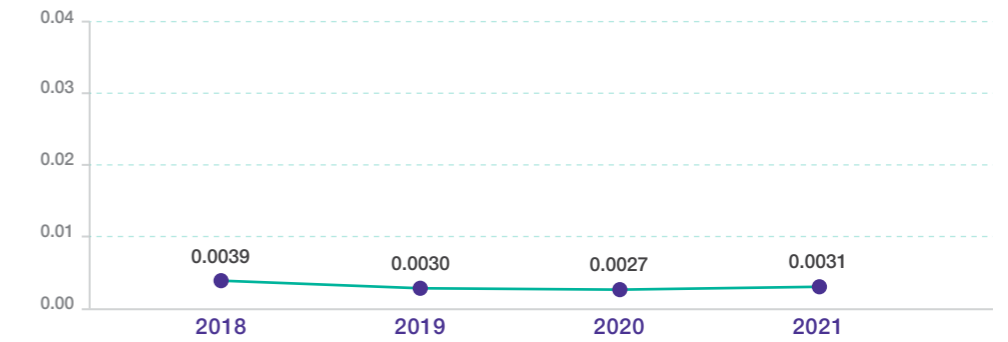
NO_x Emission Intensity
(tonnes/GWh)



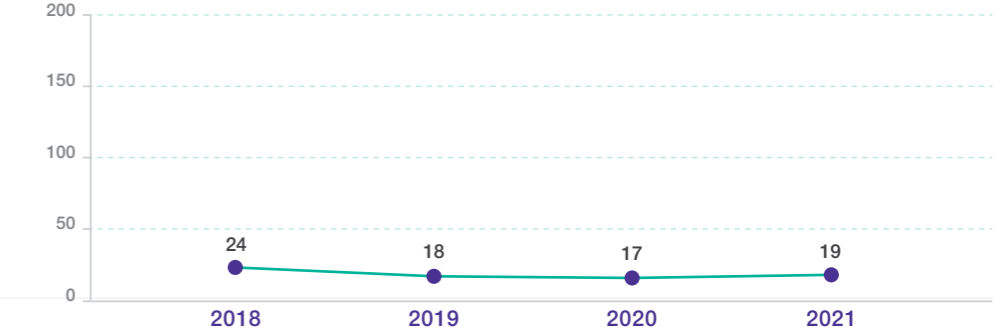
NO_x Emission
(tonnes)



PM Emission Intensity
(tonnes/GWh)



PM Emission
(tonnes)



Greenhouse Gas Emissions

● Strategy

As climate change poses impacts on sustainable development and human wellbeing, it has become a global concern, and countries have joined forces to reduce GHG emissions. The Company has established the following measures to adapt to climate change and mitigate its impacts by reducing GHG emissions intensity.

- Investing in renewable energy to make the transition to a low-carbon society in the future
- Deploying high-efficiency, low-emissions (HELE) technologies and improving the power plant efficiency to reduce consumption of energy and raw materials
- Establishing a business continuity management and integrating climate change risk management to increase resilience

[Climate Change Policy](#)

● Target

- GHG emissions intensity during 2021-2025 not exceeding 0.676 tonnes CO₂e/MWh
- Renewable power generation capacity of not less than 800 MW by 2025

● Management Approach

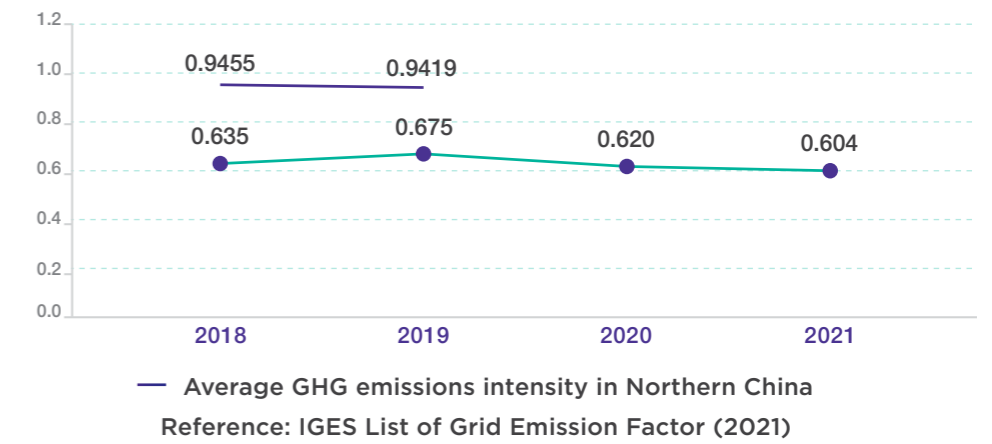
Banpu Power's power generation and energy businesses rely mainly on fuels in their production processes. So, the Company aims to reduce Scope 1 emissions by reducing fuel consumption. It also seeks opportunities to reduce GHG emissions by improving energy efficiency, reducing energy loss in the production process, conducting studies on alternative fuels, and investing in low-carbon businesses to achieve the GHG emissions target. In addition, the Company has taken internal carbon pricing into account when making investment decisions in any projects. The Company also jointly established the following climate-related task forces with Banpu group.

- The Climate Change Committee is responsible for driving climate-related operations, monitoring climate change impacts and progress of climate performance in the Company, and gathering internal data on climate-related innovations.
- The Task Force on Climate-related Financial Disclosures (TCFD) Working Group is responsible for driving information disclosure according to the TCFD recommendations.
- The Committee on a Feasibility Study of Decarbonization Project oversees feasibility studies of various projects to reduce GHG emissions.

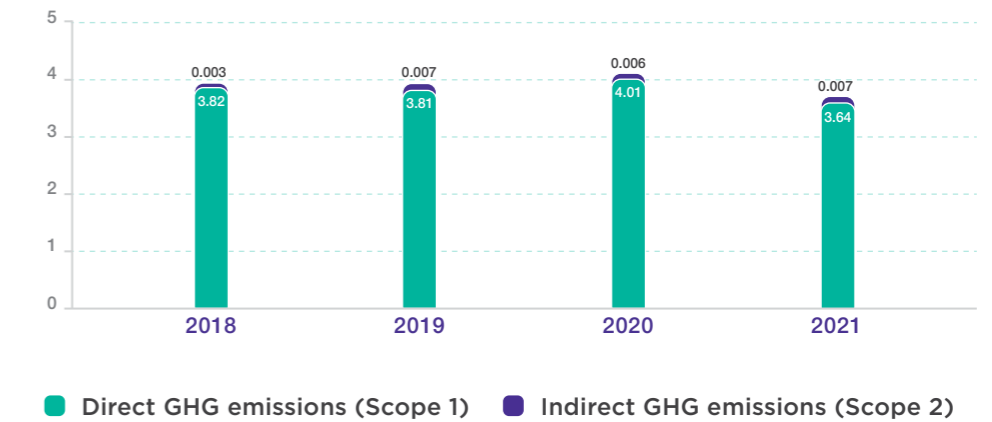
● 2021 Performance

- Banpu Power's GHG emissions intensity was 0.604 tonnes CO₂e/MWh, decreasing 10.8% compared to the target and 4.4% lower than the year 2012 baseline. This resulted from years of continuous improvement of the Company's power plants' efficiency, such as reducing energy and water losses in the system, improving the power plants to enable utilization of fuels with varying heating values, and reusing fly ash as fuel to reduce coal consumption and bottom ash. The Company also complies with the Chinese government's regulation to limit coal consumption in power plants as well as the Emission Trading Scheme enforced in China. Banpu Power's CHP plants in China managed to control GHG emissions in compliance with the legal limit, so they can sell surplus emission rights or spare the allowances to cover future needs.
- The Company invested in HELE power plants with low GHG emissions, namely the Nakoso IGCC power plant in Japan, which deploys the Integrated Gasification Combined Cycle (IGCC) technology, and the natural gas-fired "Temple I" power plant in Texas, the U.S, which deploys Combined Cycle Gas Turbine (CCGT) technology, having high-efficiency and low GHG emissions.

The GHG emissions intensity from the CHP plants in China
(tonnes CO₂e/MWh)



The amount of direct and indirect GHG emissions
(tonnes CO₂e)



- The Company is always on the lookout for opportunities to invest in renewable energy through Banpu NEXT Co., Ltd. a subsidiary in which Banpu and Banpu Power each hold a 50% shareholding in order to drive the low-carbon society in the future. In 2021, Banpu NEXT achieved expansion of renewable energy capacity to 460 MW.
- Enhancement of adaptability to climate-related risks
 - **Operational risk management:** Banpu Power has adopted the Business Continuity Management System (BCMS) in preparation for unexpected interruptions in business operations such as natural disasters and pandemics to ensure uninterrupted delivery of products and services to customers and stakeholders. The Company (jointly with Banpu group) obtained the ISO 22301 certification for Business Continuity Management for the Beijing and Bangkok offices.
 - **Changes in policies and regulations regarding energy and GHG emissions:** Banpu Power has a responsible unit to monitor and anticipate regulatory changes in all locations both at the local and government levels to timely respond and adapt to stricter environmental standards. It also seeks investment opportunities in the renewable energy business supported by the governments.
- Disclosure of climate change risk information
 - Conducting an assessment of risks and opportunities related to climate change according to the Task Force on Climate-related Financial Disclosures (TCFD)
 - Organizing training to create understanding and awareness on climate change, which can be both risk and opportunity for the Company, among the Board of Directors, executives, and employees. Key issues include the net zero emission target, information disclosure in accordance with the TCFD framework and resolutions of the 26th Session of the United Nations Framework Convention on Climate Change (COP26) and knowledge about energy storage technologies.

Banpu Power has a system in place to monitor its compliance with environmental laws based on performance reports of operating units and audits by the Internal Audit Department. In the past year, there were no issues, complaints, or disputes regarding environmental management.

Legal compliance and environmental disputes

Banpu Power has a system in place to monitor its compliance with environmental laws based on performance reports of operating units and audits by the Internal Audit Department. In the past year, there were no issues, complaints, or disputes regarding environmental management.

3.4 Sustainability Management - Social Dimension

• Social Policies and Practices

Banpu Power places importance on social performance, which is part of its long-term targets and performance, with emphasis on stakeholder engagement and sustainable social development. The Company also prioritizes sustainability issues on social aspect involving internal and external stakeholders, namely occupational health and safety, staff capacity building and labor practices, employee engagement through the corporate culture “Banpu Heart”, as well as community engagement and human rights operations.

[Social Policies](#)

• Social Performance

Treatments of Employees and Workers

◎ Strategy

- **“Banpu Heart” corporate culture** plays a crucial role in connecting and uniting employees from diverse ethnic and cultural backgrounds to collaborate in driving the corporate goals. Banpu Heart is also adopted in the recruitment process in which candidates have to take a culture-fit assessment to test if they possess Banpu’s shared values in addition to the required professional competency for a job position. The Company also promotes employee participation and engagement through immediate supervisors and a wide variety of activities.
- **Continuous Competency Development** is the Company’s approach for developing employees from operational to management levels. All employees are required to take competency assessments and have individual development plans (IDPs) that are regularly reviewed.
- **Compliance with International Labor Standards** The Company arranges working environments that comply with international standards. There is also a fair and transparent performance appraisal system and a systematic complaint handling process.

◎ Target

- Employee engagement scores of no less than 70% in Thailand and no less than 75% in China
- Banpu Heart scores of no less than 70%
- 100% of employees having competency assessment and IDPs
- All working environments comply with applicable legal requirements.
- No work-related accidents and severe injuries
- No complaints related to labor management

◎ Management Approach

The Company undertakes social performance efforts based on stakeholder engagement to gain stakeholders’ opinions for operational planning and implementation. For example, the Company established the Banpu Change Leader group to help drive corporate culture, the Welfare Committee to supervise arrangements of employee welfare, and an Occupational Health and Safety Committee to take care of working environments. Leadership competency development is also the Company’s top priority to prepare for future workforce planning. As supervisors work closely with employees, the Company expects them to use their leadership skills to instruct, inspire, and engage employees under their supervision. In addition, in every year the Company measures employees’ performance based on their KPIs, which have been set as performance targets for employees from management to operational levels, to ensure transparency and fairness in performance appraisal. The performance is divided into target-based and corporate culture behavior-based performance. The Company has also set leadership KPIs for division managers and higher that are evaluated against the performance on the Company’s long-term targets and the assessment by subordinates. The employees’ performance appraisal is conducted twice a year.

● 2021 Performance

- Employee engagement scores were 69% in Thailand and 93% in China.
- Banpu Heart scores were 79% in Thailand and 95% in China.
- 100% of employees had competency assessments and IDPs.
- All working environments complied with applicable legal requirements.
- No work-related accidents and severe injuries among employees and contractors
 - Zero fatality
 - Zero lost time injury
- No complaints related to labor management

Customer Management

● Strategy

Banpu Power's major customers are government agencies, state-owned agencies purchasing electricity under long-term power purchase agreements, the industrial and community sectors purchasing steam and other energy sources. The Company has integrated international standards into its operations, such as ISO 9001 Quality Management System, ISO 45001 Occupational Health and Safety Management System, ISO 14001 Environmental Management System, business code of conduct, and consumer privacy. These standards are applied in all production units to ensure systematic internal management and responsiveness to customer requirements. The ISO 22301 Business Continuity Management System (BCMS) standard ensures system recovery and continuous delivery of products and services within the specified time, even under unexpected circumstances.

● Target

- 100% of customer complaints are resolved in a timely manner.
- No customers' complaints related to customer privacy
- No customers' complaints on safety and environmental issues related to products and services

● Management Approach

Banpu Power has applied the ISO 9001 Quality Management System Standard to its production units having regular contact with customers. One of the effective management approaches is Customer Focus in the following areas:

1. Establishing a communication system to understand customers' needs and expectations and seeking opportunities to respond to their needs
2. Setting operational targets in accordance with customers' needs and expectations
3. Communicating to all employees about customers' needs and expectations

4. Measuring customer satisfaction to continuously improve the operation
5. Systematically building relationships with customers
6. Balancing the needs of customers and stakeholders

In addition, Banpu Power focuses on building relationships with customers as partners of mutual success by prioritizing the delivery of sustainable value to all customers with adherence to the following four values:

- 1. Product value:** Deploying high efficiency, low emissions (HELE) technologies enables the Company to control the quality of air, water, and environmental management in compliance with international standards.
- 2. Service value:** The Company has improved production efficiency to ensure availability, reliability, and flexibility in response to customer demands and to control product quality in accordance with the standards and terms specified in the agreement with customers.
- 3. People value:** The Company supports employee development to equip them with knowledge and capacity while cultivating corporate culture so that all employees have qualifications and readiness to respond to customer needs and are able to properly and promptly resolve customer problems.
- 4. Reputation value:** The Company is committed to professional business operations, with adherence to professionalism, the code of conduct, and good corporate governance principles.

● 2021 Performance

A customer satisfaction survey conducted under the ISO 9001 Quality Management System Standard revealed a high level of satisfaction as anticipated. There were no customer privacy complaints or safety and environmental complaints related to product use.

In the past year, three combined heat and power (CHP) plants in China were able to maintain the availability factor according to the demands of both public and private customers. With strict prevention measures, the power plants could continue production and constantly deliver supply even during the COVID-19 pandemic. In addition, the Company has been certified for ISO 9001 Quality Management System Standard, ISO 45001 Occupational Health and Safety Management System Standard, ISO 14001 Environmental Management System Standard, and ISO 22301 Business Continuity Management System Standard.

Community and Social Responsibility

● Strategy

The Company engages communities and listens to their opinions since the feasibility study phase to gain inputs for project development to reduce potential impacts. It also assesses social and stakeholder impacts, determines measures for monitoring and prevention of impacts throughout the periods of construction and implementation, and establishes effective communication channels as well as channels for community complaints.

● Target

- All community engagement projects are implemented according to the prevention and mitigation plan for community impacts.
- No significant complaints from the communities
- All complaints have proceeded to the investigation process and are timely resolved.

● Management Approach

Banpu Power has conducted a social impact assessment, starting from a feasibility study of a project based on the international standards in order to thoroughly understand economic and social conditions in the project area. The Company has engaged the communities through the analysis of stakeholders, namely directly-impacted group, indirectly-impacted group, and beneficiaries. The Company uses the information gained as inputs for establishing engagement with each group and communication channels. In addition, the information is useful for implementing suitable social responsibility programs that truly meet the community's needs in accordance with sustainable development principles to create sustainable social returns in all locations where the Company operates.

Banpu Power assigned a responsible community engagement unit to develop the short and long term operational plan for each community, including vulnerable groups (those who are unable to protect their rights or lack the freedom to make decisions, such as children, the elderly, refugees, and indigenous peoples). The Company also provides channels for communication and receiving complaints to enable timely investigation and resolution.

At the large-scale thermal power plants in which Banpu Power owns through joint-ventures, the Company set up a tripartite committee consisting of power plants, community, and representatives of the government sector. The committee members collaborate in monitoring environmental and social performance and community development projects to provide feedback for continuous improvement and deliberating on community development projects that truly meet the needs of each area.

● 2021 Performance

In the past year, no significant complaints were received from the surrounding communities at both the power plants where the Company has management control and the joint venture's power plants, and targets for community engagement were also achieved. In addition, Banpu Power has announced stakeholder engagement guideline, which focuses on building stakeholder engagement in local communities on providing clear operational guidelines for responsible persons in each area.

[Stakeholder Engagement Standard](#)

Social Compliance and Social Disputes

The Company has a monitoring system to regularly track the Company's social compliance based on performance reports of operational units and audits by the Internal Audit Department. In the past year, there were no complaints or social disputes.

Awards and Achievements



The Company received the Rising Star Sustainability Awards – Sustainability Excellence in the category of companies with a market capitalization of THB 30,000-100,000 million, assessed by the Stock Exchange of Thailand.



The Company has been a listed company included in the Thailand Sustainable Investment (THSI) Index for four consecutive years.



The Company was affirmed "A+" credit rating with a "stable" outlook by TRIS Rating.



The Company was ranked one of the top 268 listed companies with Excellent CG Scoring by the Thai Institute of Directors (IOD).




The Company was selected as a member of the S&P Global Sustainability Yearbook 2022 by participating in the ESG performance assessment of leading companies worldwide.


Banpu Power is moving forward to expand business growth under the Greener & Smarter strategy to deliver energy solutions, which is a key driver for economic and social development. To achieve its goal, the Company deploys high efficiency, low emissions (HELE) technologies while focusing on good corporate governance and effective risk management to balance the needs of all stakeholders.

3.5 Community and Social Engagement


Banpu Power Public Company Limited and its subsidiaries are committed to sustainable business operations with adherence to the Environmental, Social and Governance (ESG) principles. The Company strives for creating a balance between business growth and community and environmental development through its Corporate Social Responsibility (CSR) in- and after-process activities. Since its inception, Banpu Power has always upheld the business credo: “an industry will be strong only when it is developed in tandem with social and environmental responsibility” while emphasizing community engagement, respect for human rights, energy conservation, environmental care, and employee engagement in community development.



Banpu Power ensures that its entire production process is operated with **“care and responsibility”** to all stakeholders and complies with laws, regulations, and international standards. The Company is also committed to ethical conduct and good governance whilst being a good corporate citizen in all locations where it operates.



The Company focuses on developing surrounding communities and society to respond to the actual needs of the communities and foster community **“engagement”** to improve their quality of life for better infrastructure, public utilities, career opportunities, education, as well as preserving the local culture and traditions.



In addition to community development initiatives, the Company’s CSR activities emphasize promoting **“education and learning”** for children and youths to lay a solid foundation for the sustainable development of society and the nation.

Social and Environmental Responsibility Activities in the Past Year China

Banpu Investment (China) Ltd. (BIC), a subsidiary of Banpu Power in China, has been promoting and supporting a wide range of activities, including social and community development, environmental preservation, and investment promotion in the provinces where the Company operates in accordance with the Chinese government’s policy. These activities not only strengthen the relationship between the two countries but are also aligned with Banpu group’s corporate social responsibility policy and the Company’s commitment to be a good corporate citizen in every location it operates. BIC’s eco-friendly operations, which satisfy community needs, well reflect its commitment to social responsibility. BIC has continuously provided support and assistance to communities surrounding its power plants through the following activities:



Disaster Relief:

In July 2021, there was heavy rainfall in Henan Province that led to severe floods and caused over 100 deaths. Therefore, BIC employees raised a relief fund of CNY 44,538.88 for the Henan Charity Foundation to help the flood victims.

In October 2021, Shanxi Province was hit by deadly floods, which caused huge losses to people’s lives and property. BIC employees raised a fund of CNY 36,888 to help relieve the affected people and restore damaged areas.

Educational Development:

BIC’s headquarters and Luannan power plant have continued their support for children with physical disabilities at Luannan-Banpu Special Education School for 14 consecutive years. In 2021, they provided computers and student uniforms worth CNY 50,000 in total to support educational development and improve the students’ quality of life. Luannan power plant and the Luannan county government also started a scholarship program to provide financial support to underprivileged students at the amount of CNY 50,000 each year.

Sports Development:

In 2021, Zhengding power plant provided CNY 150,000 to the Zhengding National Table Tennis Training Center to support the training and competitions of table tennis athletes from Banpu Fitness Club (formerly Banpu Table Tennis Club). Zhengding power plant has continued its support for the Club for 18 consecutive years.

Community Development:

Zhengding Charity Foundation

In 2021, BIC joined hands with Zhengding County Government to establish Zhengding Charity Foundation with the objective to support the poor and disadvantaged people. Shijiazhuang Chengfeng Cogen Co., Ltd., a subsidiary of BIC, in its capacity of vice-chairman membership of the organization, donated CNY 20,000 in support to set up the foundation.



Project to Support Activities for the Elderly

Haoyuan solar power plant has been supporting senior citizens in the areas surrounding the power plant since 2017 to promote sustainable development in local communities and to improve the quality of life of the local residents. In 2021, the power plant supported 74 senior residents under this project.

Quality of Life and Community Economy Development

Tangshan Banpu Heat & Power Co., Ltd. donated CNY 30,000 to the Luannan County Rural Revitalization

project to support career development initiatives in Xiaoxuegezhuang in Luannan County in order to improve local people's quality of life and promote the community economy.

In addition, BIC's solar power plants have been supporting many development projects to promote the local economy and skills development for local people, which help increase employment in the areas. Until 2021, BIC's development projects have generated income of the local people up to CNY 1,286,600.

Thailand

BLCP Power Plant

BLCP power plant, which is operated by BLCP Power Company Limited - a Banpu Power's joint venture - has organized activities to promote understanding between the Company, communities, and government agencies. BLCP communicates information on operations and environmental quality and listens suggestions from the public on a quarterly basis. Major activities on social and community development as well as environmental conservation in 2021 are as follows:

Educational Development:

BLCP power plant has always placed importance on education as the key to capacity building of youths to help them become a major driving force for social and national development. BLCP has carried out the scholarship program to support education for underprivileged youth and promote youth capacity building over the last 20 years. In 2021, BLCP granted scholarships for students in 38 communities in the Maptaphut Town Municipality to extend educational opportunities for children of 14 groups of small-scale fishers and 13 schools in Rayong Province.



Environmental Conservation:



BLCP power plant takes great care of the environment and natural resources. It joined hands with the Forest Department, Rayong Province, Thailand Greenhouse Gas Management Organization (Public Organization), Community Forest Committee, and local administration organizations in Nong Bua Subdistrict, Ban Khai District, Rayong Province, to plant trees for the community forest project "Do Good Deeds with the Heart" to celebrate His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua's birthday anniversary. The troop forests covering 15 rais of land in the area of Nong Krub Community, Nong Bua Subdistrict, Ban Khai District, Rayong Province. BLCP power plant also sees the importance of the coexistence of marine life in marine ecosystems and conservation of marine endangered species, especially endangered sea turtles. In 2021, BLCP, in collaboration with the Marine and Coastal Resources Research Center, the Eastern Upper

Gulf of Thailand, Department of Marine and Coastal Resources in Rayong Province, provided THB 60,000 to Marine Endangered Species Veterinary Hospital, Rayong Province to support food and medical expenses for sea turtles, living in around the area of Man Nai Island, Rayong Province.

Social and Community Development Activities:

BLCP power plant has been organizing social and community development activities, focusing on promoting occupation and community enterprises. The activities are, for example, the promotion of small-scale fisheries under the "Green Mussel Farming Using Hanging Method" project, the promotion of organic farming by Khot Hin-Khao Phai community enterprise in Rayong Province to produce processed herbal products, and the capacity development project for electrical engineering technicians to improve production capacity and equip technical personnel with the capabilities required in Rayong. Apart from that, in 2021, BLCP power plant continued the "BLCP Works by Heart and Cares for Society"



project to deliver essential medical equipment and supplies to local public health agencies in order to help curb the spread of COVID-19 and to support the work of medical personnel. The power plant also donated "Community Partnership's Survival Bags" to help relieve the hardship of the people testing positive for the coronavirus in the Maptaphut Town Municipality, Rayong Province, who underwent Home Quarantine (HQ) to prevent the spread of the virus.



Lao PDR

HPC Power Plant

HPC power plant is operated by Hongsa Power Company Limited (HPC), a Banpu Power's joint venture in Lao PDR. Since the beginning of the COVID-19 outbreak, HPC has provided assistance and support to the Lao people to help fight the pandemic. In 2021, HPC power plant provided financial aid worth THB 2,500,000 in total to local and central government agencies in Lao PDR to support the implementation of the COVID-19 prevention and control measures in Muang Nguen and Hongsa Districts, Sainyabuli Province.



4. Management's Discussion and Analysis (MD&A) and Financial Ratio

Management's Discussion and Analysis

1. Management Discussion and Analysis

Banpu Power continues to accelerate its portfolio transformation through new investment in power plant development located in various countries especially with high efficiency, low emissions (HELE) technologies. During 2021, the Company expanded its equity capacity equivalent in both thermal power plants and renewables by 541 MW in the high-growth countries and entered wholesale electricity market with advanced trading system and mechanism.

The Company reported its 2021 net profit of THB 3,127 million including the FX translation gain of THB 374 million due to weakening of the Thai currency against US Dollar. HPC operated with high efficiency and continue to provide firm share of profit. The Company had additional profit from Nakoso IGCC in Japan and Temple I CCGT in the United States of America. Its EBITDA was reported at THB 3,487 million.

The revenue for 2021 was reported at THB 6,784 million, increased by 23% compared to last year. This derived from 3 Combined Heat and Power (CHP) plants in China for THB 6,112 million. Although CHP plants experienced high domestic coal cost over the year, the Company has mitigated this risk by counter measures such as implementing centralized coal procurement system, negotiating with its counterparty to raise steam selling price to reflect the higher coal cost, proactively optimize the plant operation mode to protect bottom line, and carefully manage its coal inventory to run the plant with smooth operation and be able to provide electricity and steam to serve industrial customers and residential customers efficiently. Moreover, there was additional revenue from Temple I of THB 673 million, the Company started to recognize Temple I revenue since November 2021 onwards.

The share of profit from associates and joint ventures was reported at THB 2,974 million, from HPC power plant equivalent to THB 3,612 million, increased by 12% from last year. It operated with high Equivalent Availability Factor (EAF) at 85%, resulting from an effective maintenance plan for the power plant. BLC power plant reported its share of profit of THB 215 million included impact from deferred tax and unrealized FX translation loss of THB 552 million. Nakoso power plant reported its share of profit of THB 210 million which started to recognize profit since Q2/2021. Although Shanxi Lu Guang (SLG) power plant in China has started its electricity generation dispatch, it experienced a challenge for the high coal price, resulting in its share of loss of THB 542 million. For renewable and energy technology business invested through Banpu NEXT has reported its share of loss of THB 521 million mainly from energy trading business due to the market situation.

Banpu Power will continue its journey of sustainable development by enhancing the efficiency of its existing power plants to generate stable cash flow as well as seeking new investment opportunity through its synergy among Banpu group in order to optimize its invested asset value. Besides, the Company will focus to expand more in clean energy business and develop its existing business to meet future energy demand. The Company will also seek the investment opportunities in the high-growth potential regions with government policy support to achieve its capacity target of 5,300 MW within 2025 as planned.

2 Group Performance Analysis

The analysis and explanation performance for the year ended 31 December 2021 and 2020:

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

Consolidated financial performance (Unit: Million Baht)	Y2021	Y2020	Change	
			Amount	%
Sales	6,784	5,506	1,278	23%
Cost of sales	(6,824)	(4,391)	(2,433)	55%
Gross profit	(40)	1,115	(1,155)	-104%
Administrative expenses	(1,103)	(946)	(157)	17%
Share of profit from an associate and joint ventures	2,974	3,565	(591)	-17%
Other Income	1,649	1,169	480	41%
Other financial costs	(249)	(243)	(6)	3%
Profit before income taxes	3,232	4,083	(851)	-21%
Income taxes	(57)	(300)	243	-81%
Profit for the year	3,174	3,783	(609)	-16%
Owners of the company	3,127	3,702	(575)	-16%
Non-controlling interests	47	81	(34)	-42%
Basic earnings per share (unit: Baht)	1.026	1.214	(0.188)	-15%

The group reported net profit for 2021 at THB 3,127 million, decreased by THB 575 million or 16 % compared to 2020. In 2021, the group recognized income and profit sharing from new power plant businesses invested during the year, which are Nakoso power plant in Japan, and Temple I gas-fired power plant in the U.S. Net with a decrease in profit sharing from BLC power plant from recognition of defer tax expense and unrealized loss on FX translation, and a decrease in profit sharing from SLG power plant that has already started commercial operation while encountered high coal cost situation.

Details of the group operating performance for 2021 were described as followings:

Sales, Cost of sales and Gross profit

Sales reported at THB 6,784 million, increased by THB 1,278 million or 23% compared to 2020. This was mainly from higher steam sales and others from CHP plants in China of THB 824 million and from electricity sales from gas-fired power plant in the U.S. of THB 673 million, also the group did not consolidate income from solar power plant business in China and energy trading business in Japan in 2021 as a result from group restructuring since March 2020. Details were described as followings:

Items	Power Sold (GWh)		Steam & Others Sold (Million Tonnes)		Average Power Tariff (RMB/GWh)		Average Steam & Others Price (RMB/Tonne)	
	Y2021	Y2020	Y2021	Y2020	Y2021	Y2020	Y2021	Y2020
Zhending CHP	312.68	414.85	0.30	0.44	0.34	0.34	150.81	115.05
Luannan CHP	537.65	708.75	2.28	1.39	0.35	0.34	120.10	106.27
Zouping CHP	328.73	439.60	1.75	2.34	0.43	0.42	164.92	91.71
Total CHP Power Plants	1,179.07	1,563.20	4.33	4.17	0.37	0.36	140.38	99.04
Gas Fired Power Plant	417.23	-	-	-	-	-	-	-
Solar Power Plants	-	47.47	-	-	-	0.83	-	-

Combined Heat and Power (CHP) plants in China: Increase THB 824 million

An increase of sales from CHP plants compared to 2020 was derived from:

1. An increase of THB 967 million from steam sales and others. This was a result of an increase of steam sales of 0.16 million tonne, and an average price of steam sales per tonne also increased by RMB 41.34. An average price of steam per tonne was RMB 140.38 (2020: RMB 99.04).
2. A decrease of THB 656 million from power sales volume 384.13 GWh, was from plant optimization to manage higher coal cost situation. An average power tariff was RMB 0.37 per kWh (2020: RMB 0.36 per kWh).
3. The effects of foreign exchange rate translation of THB 513 million due to a depreciation of THB currency against RMB currency compared to 2020. This impacts to higher revenue in THB currency when converting from revenue in RMB currency. Average exchange rate of RMB/THB in 2021 was THB 4.9665 (2020: THB 4.5385).

Gas-Fired Power Plant in the U.S. THB 673 million

Sales from gas-fired power plant business was THB 673 million from investment for business expansion in the U.S. during 4Q/2021.

Solar Power Plants in China

Sales decreased from 2020 of THB 90 million due to change in type of investment from group restructuring since March 2020, that changed profit recognition from consolidating net profits from solar power plant business as subsidiaries, to be taking profit sharing as an associate.

Energy Trading in Japan

Sales decreased from 2020 of THB 129 million due to change in type of investment from group restructuring since March 2020, that changed profit recognition from consolidating net profits from energy trading in Japan as subsidiaries, to be taking profit sharing as an associate.

Cost of sales: Increase 55%

Cost of sales was THB 6,824 million, increased by THB 2,433 million compared to 2020 from:

1. CHP plants in China that cost of sales increased by THB 1,884 million from:
 - An increase in coal cost THB 1,661 million was from a higher average coal cost of RMB 370 per tonne. Average coal cost was RMB 942 per tonne (2020: RMB 572 per tonne) or increased by 65 % compared to 2020. Whereas production was decrease by 0.15 million tonne compared to 2020.
 - The effects of foreign exchange rate translation of THB 223 million. This impacted to higher cost of sales in THB currency when converting from cost of sales in RMB currency. Average exchange rate of RMB/THB in 2021 was THB 4.9665 (2020: THB 4.5385).

2. Gas-fired power plant in the U.S. that cost of sales increased by THB 711 million from new investment for business expansion in the U.S.
3. Solar power plant in China and energy trading business in Japan that cost of sales was decreased by THB 48 million and THB 114 million, respectively from changes in type of investment according to the Group investment restructuring resulted in unable to consolidate cost of sales since March 2020.

Gross profit: Decrease 104%

Gross loss was THB 40 million, or decreased by THB 1,155 million compared to 2020 was from:

1. A decrease in operating performance from CHP plants in China THB 1,060 million. This was a result from higher coal cost as market price, also the lower power sales volume from CHP plants in China due to plant optimization to as a counter measure against higher coal cost situation.
2. A decrease in operating performance from gas-fired power plant business in the U.S. of THB 39 million aligned with seasonal power consumption demand in Texas and warmer climate.
3. A decrease from change in investment type from group investment restructuring of solar power plant business in China and energy trading business in Japan, total of THB 56 million.

Administrative expenses: Increase 17%

Administrative expenses of THB 1,103 million, increased by THB 157 million compared to 2020 was mainly from the employee expense and from professional and consulting fees related to business expansion in Japan and the U.S.

Items (Unit: Million Baht)	Profit (loss) sharing		Increase/(Decrease)	
	Y2021	Y2020	Amount	%
BLCP	215	543	(328)	-60%
HPC & PFMC	3,612	3,223	389	12%
SLG	(542)	76	(618)	-812%
Holding Company for Solar Power in Japan	-	21	(21)	-100%
Holding Company for Nakoso Power Plant	210	-	210	100%
Banpu NEXT	(521)	(290)	(231)	80%
Holding Company for Solar Power in Indonesia	(0)	(8)	8	0%
Total	2,974	3,565	(591)	-17%

Share of profit from joint and ventures associates: Decrease 17 %

Profit sharing from joint ventures and an associate was THB 2,974 million, decreased by THB 591 million compared to 2020 was a net result of:

1. A decrease in profit sharing from BLCP of THB 328 million. This was from deferred tax expense recognition and impact from foreign exchange conversion for accounting purpose of THB 231 million, whereas a decrease in operating performance of THB 97 million in accordance with revenue structure under long term power purchase agreement.
2. An increase in profit sharing from HPC power plant and Phu Fai Mining Company Limited (PFMC) total of THB 389 million, was from gain on exchange rate of THB 371 million and from an increase in operating performance of THB 18 million.
3. A higher recognition of loss sharing from SLG power plant of THB 618 million caused by higher coal cost.
4. A decrease in profit sharing from investment in power plant associate in Japan of THB 21 million from change in investment type according to group investment restructuring.
5. An increase in profit sharing from Nakoso power plant, a joint venture in Japan of THB 210 million that start recognition since Q2/2021.
6. An increase in loss sharing from investment in renewable power and energy technology business of THB 231 million from operating performance of energy trading business in Japan.
7. A decrease in loss sharing from an associate in Indonesia of THB 8 million.

Other income

Other income of THB 1,649 million was comprised of:

1. Interest income of THB 381 million.
2. Management fee income of THB 203 million, mainly was fees charged to related companies and joint ventures.
3. Pipeline connecting fee income charged to new steam customers of CHP plants in China of THB 128 million.
4. Subsidy income from Chinese government of THB 138 million.
5. Net gain on derivatives of THB 241 million that was unrealized gain on fair value from natural gas swap contract and electricity swap contract.
6. Net gain on exchange rate of THB 374 million was mostly from unrealized gain on exchange rate from USD currency loans at the end of the year caused by a depreciation of THB currency against USD currency compared to 2020. Average exchange rate of USD/THB for 2021 was THB 31.9771 (2020: USD/THB 31.2937).
7. Other income of THB 184 million consisted of ash & slag sales from CHP plants of THB 80 million, and others of THB 104 million.

Interest expenses and finance cost: Increase 3%

Interest expenses and finance cost of THB 249 million, increased by THB 6 million compared to 2020, primarily from additions of loan from financial institutions during the year.

Corporate income tax: Decrease 81%

Corporate income tax of THB 57 million, decreased by THB 243 million compared to 2020. This comprised of:

1. A decrease in corporate income tax of THB 267 million, mainly from a decrease in operating profit from CHP plant businesses in China.
2. An increase in deferred income tax liability of THB 24 million from taxable expense from Nakoso power plant and gas-fired power plant in the U.S.

Net profit for the year ended 31 December 2021 reported at THB 3,127 million, decreased by THB 575 million.

Basic Earnings per Share reported at THB 1.026 (2020: THB 1.214)

3. Statement of Consolidated Financial Position

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

Items (Unit: Million Baht)	Financial Position		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Assets	74,867	49,563	25,304	51%
Liabilities	25,287	7,585	17,702	233%
Equity	49,580	41,978	7,602	18%

- 3.1 Total assets of THB 74,867 million, an increase of THB 25,304 million or 51% compared to the 31 December 2020 was mainly described as follows:

Financial Position (Unit: Million Baht)	Assets		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Cash and cash equivalents	2,635	2,169	466	21%
Financial assets	530	343	187	54%
Trade accounts receivable and note receivables	1,311	927	384	41%
Fuel and Spare parts & supplies, net	1,186	505	681	135%
Current portion of dividend receivables from related parties	125	150	(25)	-17%
Other current assets	4,095	3,424	671	20%
Total current assets	9,883	7,519	2,364	31%
Dividend receivables from related parties	239	289	(50)	-17%
Investments in an associate and joint ventures	33,766	26,639	7,127	27%

Financial Position (Unit: Million Baht)	Assets		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Property, plant and equipment, net	23,811	8,001	15,810	198%
Right of use assets, net	631	569	62	11%
Other non current assets	6,537	6,546	(9)	0%
Total non current assets	64,984	42,044	22,940	55%
Total assets	74,867	49,563	25,304	51%

- Cash and cash equivalents of THB 2,635 million, increased by THB 466 million or 21% (Explanation in no. 4 Statement of Consolidated Cash Flows).
- Financial assets measured at fair value through profit or loss of THB 530 million, increased by THB 187 million or 54%. This was from an additional of THB 1,874 million during the year; net with redemption of THB 1,742 million and gain on exchange rate translation at the end of the year of THB 55 million.
- Account receivable of THB 1,311 million, increased by THB 384 million or 41%. This was mainly from an increase in sales from CHP plants of THB 250 million, steam sales during Q4/2021 and gas-fired power plant of THB 134 million.
- Fuel and spare parts, net of THB 1,186 million, increased by THB 681 million or 135%. This was from investment in gas-fired power plant business in the U.S. of THB 310 million and increase from CHP plants in China of THB 371 million caused by higher coal cost compared to 2020.
- Other current assets of THB 4,095 million, increased by THB 671 million or 20% was mainly from:
 1. An increase in prepaid expenses from investment in gas-fired power plant business in the U.S. of THB 187 million.
 2. An increase in accrued interest income from related parties of THB 377 million. This was from recognition of interest income during the year of THB 381 million offset with cash receives from settlement of THB 58 million and gain on foreign exchange rate translation at the end of year of THB 54 million.
 3. An increase in prepaid tax from CHP plants in China of THB 185 million.
 4. A decrease in loan to related party of THB 91 million. This was a net result of reclassification from non-current portion of THB 341 million, cash receives from settlement of THB 745 million and gain on foreign exchange rate translation at the end of year THB 313 million.
 5. An increase in other current assets of THB 13 million

- Current and non-current portions of dividend receivables from related parties totaling of THB 364 million, decrease by 75 million, from dividend receivables from the joint venture during the year.

Dividend receivables from related parties (Unit: Million Baht)	Financial Position		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Current portion of dividend receivables from related parties	125	150	(25)	-
Dividend receivables from related parties	239	289	(50)	-
Total	364	439	(75)	-

- Investment in joint ventures and associates of THB 33,766 million, increased by THB 7,127 million or 27%. This was from a recognition of profit sharing from joint ventures and an associate THB 2,974 million, new investment in Nakoso power plant, a joint venture in Japan of THB 2,445 million, and new investment in an associate in renewable and energy technology of THB 236 million to support investment in solar power plant business in Australia. This included gain on foreign exchange rate translation at the end of year THB 1,913 million, and the recognition share of other comprehensive income from joint ventures and associates of THB 427 million, including dividend declaration during the year of THB 862 million, and from sales of investment of THB 6 million.
- Net property plant and equipment of THB 23,811 million, increased by THB 15,810 million or 198% was from additions from investment in gas-fired power plant in the U.S. of THB 15,207 million and additions of machinery and equipment of CHP plants THB 146 million, gain on foreign exchange rate translation at the end of year THB 1,010 million; net with disposals THB 11 million and depreciation charges THB 542 million.
- Right-of-used assets of THB 631 million, increased by THB 62 million or 11%, was a result from additions of THB 21 million, gain on foreign exchange rate translation at the end of year 76 million, net with amortization of THB 35 million.
- Other non-current assets of THB 6,537 million, decreased by THB 9 million was mainly from:
 1. A decrease in loan to related parties of THB 262 million from reclassification to current portion THB 341 million net with gain on foreign exchange rate translation at the end of year of THB 104 million and cash receives from loan settlement of THB 25 million.
 2. An increase from investment in gas-fired power plant in the U.S. of THB 167 million.
 3. An increase in deferred tax assets of THB 58 million, caused by the effects from foreign exchange rate translation at the end of year due to a depreciation of THB currency against RMB currency.
 4. An increase in other assets of THB 28 million.

3.2 Total liabilities of THB 25,287 million, increased by THB 17,702 million or 233% compared to total liabilities as of 31 December 2020 with details mainly described as follows:

Financial Position (Unit: Million Baht)	Liabilities		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Short-term loans from financial institutions	6,551	1,454	5,097	351%
Trade accounts payable	331	170	161	95%
Current portion of long-term loans from financial institutions	1,439	951	488	51%
Current portion of lease liabilities	13	12	1	8%
Other current liabilities	2,634	1,480	1,153	78%
Total current liabilities	10,968	4,067	6,901	170%
Long-term loans from financial institutions, net	9,253	3,481	5,772	166%
Lease liabilities	18	8	10	135%
Other non current liabilities	5,048	29	5,019	17053%
Total non-current liabilities	14,319	3,518	10,801	307%
Total liabilities	25,287	7,585	17,702	233%

- Short-term loans from financial institutions of THB 6,551 million, increased by THB 5,097 million or 351% was from a net result of additional loans THB 9,185 million and repayment THB 4,196 million. Also, there was the effects of foreign exchange rate translation at the end of year THB 108 million on loan in RMB currency due to a depreciation of THB currency against RMB currency. Average exchange rate of RMB/THB as of 31 December 2021 was THB 5.2507 (31 Dec 2020: THB 4.6187). Average exchange rate of USD/THB as of 31 December 2021 was THB 33.4199 (31 Dec 2020: THB 30.0371).
- Current portion of long-term loans from financial institutions of THB 1,439 million, increased by THB 488 million or 51%. This was a net result of reclassification from non-current portion THB 1,409 million (including net front end fee), repayment THB 971 million and from the effects of foreign exchange rate translation on RMB loan at the end of year was THB 50 million.
- Other current liabilities of THB 2,634 million, increase by THB 1,153 million or 78% was mainly from:
 1. An increase in investment in gas-fired power plant in the U.S. of THB 729 million that was mainly from accrued expense others THB 445 million and property taxes payable THB 122 million.
 2. An increase in advance received from steam residential customers of CHP plants in China of THB 82 million.
 3. An increase from amount due to related party of THB 324 million, comprised of coal purchase payable THB 262 million, accrued interest expense THB 43 million, accrued management fee THB 4 million and advance receive THB 15 million.
 4. An increase from other current liabilities of THB 18 million.

- Long-term loans from financial institutions of THB 9,253 million, increase by THB 5,772 million or 166%, was from additional loan THB 7,127 million (including net front end fee), net with reclassification to current portion THB 1,409 million and the effect of foreign exchange rate translation at the end of year THB 54 million on RMB loan and USD loan from a depreciation of THB currency against RMB currency and USD currency.
- Other non-current liability total of THB 5,048 million, increased by THB 5,019 million was from investment in gas-fired power plant in the U.S. of THB 4,994 million that was mainly from loan from related party, and an increase from other non-current assets of THB 25 million.

3.3 Shareholders' equity of THB 49,580 million, an increase of THB 7,602 million or 18% compared to shareholders' equity as of 31 December 2021 was due to:

Financial Position (Unit: Million Baht)	Equity		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Owners of the parent	45,636	41,109	4,527	11%
Non-controlling interests	3,944	869	3,075	354%
Total equity	49,580	41,978	7,602	18%

- An increase of THB 3,127 million from net profits for 2021.
- An increase of THB 903 million from cashflows hedge reserves.
- An increase of THB 2,951 million from gain on foreign exchange translation of subsidiaries and joint ventures' financial statements.
- An increase of THB 3,075 million from non-controlling interests from investment in the U.S. THB 2,907 million and profits THB 168 million.
- A decrease of THB 1,981 million from dividend paid.
- A decrease of THB 439 million from the change in fair value of hedged financial instruments.
- A decrease of THB 34 million from remeasurement of post-employment benefit.

Net debt to equity ratio as of 31 December 2021 from consolidated financial positions was 0.28 times (31 December 2020: 0.07 time)

4. Statements of Consolidated Cash Flows

Statement of consolidated cash flows for the year ended 31 December 2021 reported an increase of net cash flows from 31 December 2020 total of THB 466 million (included the effect from exchange rate translation gain of THB 112 million). The consolidated cash flows were as follows:

Cash flow (Unit: Million Baht)	Consolidated
Net cash used in operating activities	(368)
Net cash used in investing activities	(16,053)
Net cash receipts from financing activities	16,774
Net increase in cash and cash equivalents	354
Exchange differences on cash and cash equivalents	112
Cash and cash equivalents at beginning of the period	2,169
Cash and cash equivalents at end of the period	2,635

4.1 Net cash outflows from operating activities of THB 368 million comprised of:

- Collection from sales of power and steam THB 5,535 million.
- Payment to suppliers and contractors THB 5,649 million.
- Payment of interest expense THB 165 million.
- Payment of corporate income tax THB 89 million.

4.2 Net cash outflows from investing activities of THB 16,053 million comprised of:

- Receipts of dividends from joint ventures and others THB 937 million.
- Receipts from interest income THB 58 million.
- Receipts from financial assets THB 1,742 million.
- Receipts from restricted deposits at bank THB 138 million.
- Receipts from loan to related party THB 770 million.
- Payments for machine, equipment, and project in progress in China THB 216 million.
- Payments for investment in gas-fired power plant for business expansion in the U.S. THB 14,790 million.
- Payments for investment in Nakoso power plant, a joint venture in Japan, and renewable and Energy technology business of 2,679 million.
- Payments for financial assets THB 1,874 million.
- Payment for restricted deposits at bank THB 139 million.

4.3 Net cash inflows from financing activities of THB 16,774 million comprised of:

- Receipts from short-term and long-term loans from financial institutions THB 16,307 million.
- Repayments of short-term and long-term loans from financial institutions THB 5,167 million.
- Receipts from long-term loans from related party THB 4,721 million.
- Receipts from invest in subsidiaries from non-controlling interests THB 2,907 million.
- Payment for lease liabilities THB 13 million.
- Dividend paid to shareholders THB 1,981 million.

Financial Ratios

	Ending 31 December 2021	Ending 31 December 2020	Ending 31 December 2019
Liquidity Ratio			
Current Liquidity Ratio	0.90	1.85	2.32
Quick Ratio	0.49	0.97	2.04
Cash Flow Liquidity Ratio	(0.02)	0.27	(0.04)
Accounts Receivable Turnover Ratio	3.77	4.27	4.47
Average Collection Period	95.38	84.24	80.53
Inventory Turnover Ratio	8.07	9.42	10.20
Average Inventory Period	44.61	38.21	35.29
Accounts Payable Turnover Ratio	27.24	15.50	8.48
Payment Period	13.22	23.22	42.47
Cash Cycle	126.77	99.22	73.35
Profitability Ratio			
Gross Profit Margin	(0.59)	20.25	18.96
Operating Profit Margin	49.65	87.40	52.71
Other Profit Margin	39.25	46.24	42.28
Cash to Profit Margin	(0.03)	0.22	(0.05)
Net Profit Margin	28.00	36.16	30.13
Return on Equity Ratio	6.83	9.05	7.33
Efficiency Ratio			
Return on Total Assets Ratio	5.03	7.53	5.92
Return on Fixed Assets Ratio	23.31	41.26	29.69
Asset Turnover Ratio	0.18	0.21	0.20
Financial Policy Ratio			
Debt to Equity Ratio	0.51	0.18	0.23
Net Debt to Net Equity Ratio	0.28	0.07	0.08
Interest Coverage Ratio	(0.69)	4.55	(0.56)
Dividend Payout Ratio	63.35	49.40	66.80

5. General Information and Other Important Information

Other References



Name and Address of Other References

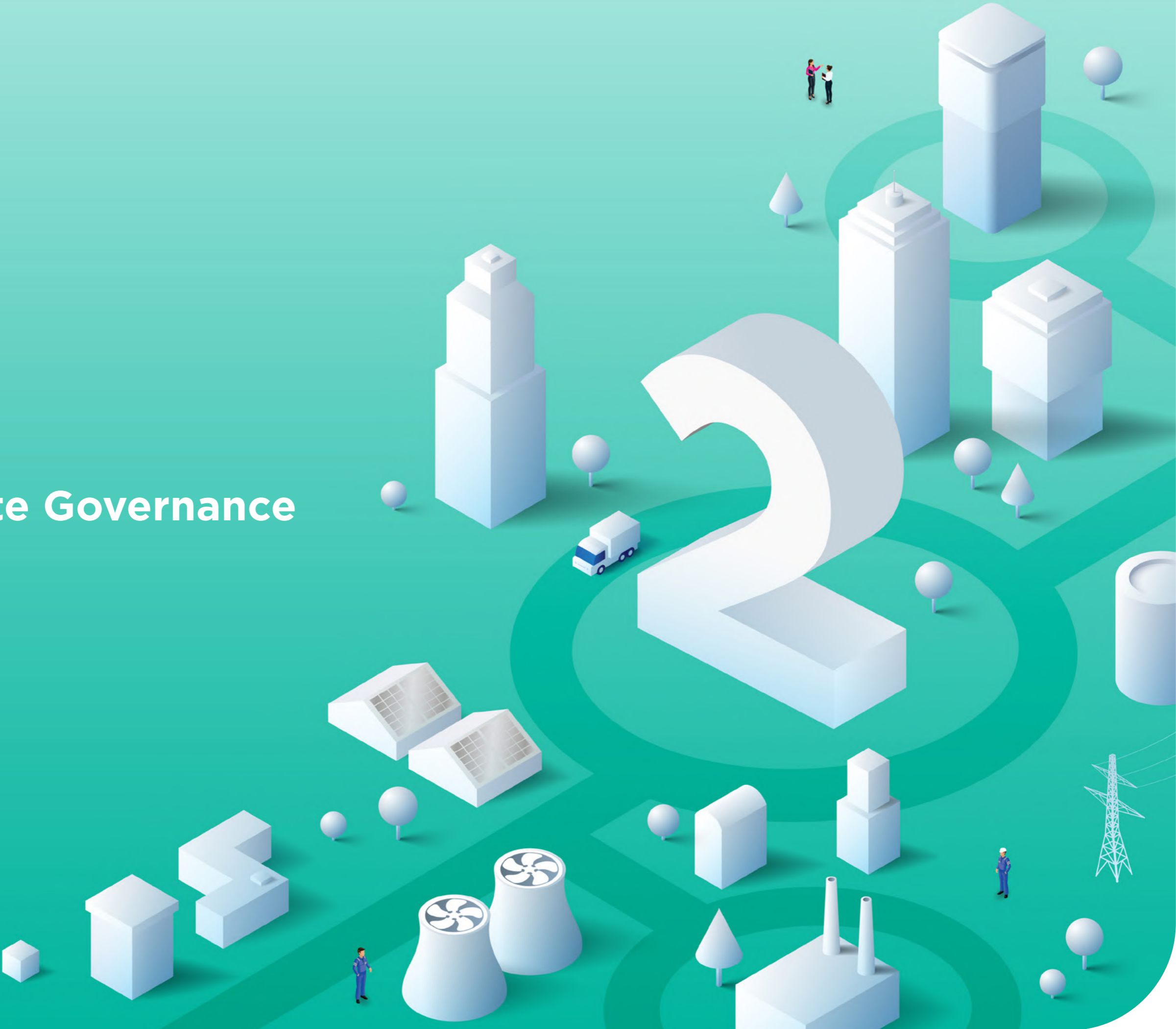
- Ordinary Share Registrar** Thailand Securities Depository Company Limited
93, Ratchadapisek Road, Din Daeng, Din Daeng, Bangkok 10400
Tel. +66 2009 9999
- Auditor** Ms. Rodjanart Banyatananusard
Authorized Auditor No. 8435
15th Floor, Bangkok City Tower
179/74-80 South Sathorn Road, Thung Maha Mek, Sathorn, Bangkok 10120
Tel. +66 2844 1000
- Financial Advisor** -None-
- Advisor or Manager under Management Agreement** The Company did not hire any advisors or managers under any permanent management agreement. Advisors, including financial advisors, were hired on a case-by-case basis as necessary to support its operations from time to time. The Company's management is mainly supervised by the Board of Directors.
- Financial Institutions Regularly in Contact** The Company is regularly in contact with around 30 local and international commercial banks and financial institutions.
- Issuance of Other Securities** -None-

Legal Disputes

- There are no legal disputes.-



Corporate Governance



1. Corporate Governance Policy

Overview of Corporate Governance Policy and Code of Conduct Handbook

The Board of Directors is committed to the principles of systematic management and good corporate governance. Accordingly, in 2015 the Board issued the Corporate Governance Policy and the Code of Conduct in written form in Thai and English versions. The Board of Directors delegated the Corporate Governance and Nomination Committee to annually review the policy to align with the business environment and comply with laws, rules, and regulations of the Stock Exchange of Thailand (SET) and the Office of Securities and Exchange Commission (SEC). Consistent with international standard practices, the Policy and Handbook are the complete reference and guidelines for all directors, executives, and employees.

In 2019, Banpu Power Public Company Limited developed and updated the essence of the Corporate Governance Policy and the Code of Conduct Handbook by compiling all written policies and practices the Company adheres to in one book. The updates were aligned with the SEC's Corporate Governance Code for Listed Companies (CG Code) 2017. The Company regarded the Corporate Governance Policy as a principle and the Code of Conduct as practice guidelines, thus putting them in the same book for easy access and convenience reasons. The amended version is presented in Thai, English, and Chinese so that all directors, executives, and employees can fully understand and comply with the ethical business conduct to achieve the business goal while maintaining ethical standards for the benefit of all stakeholders, shareholders, the Company, and society.

In 2021, the Company amended the Corporate Governance Policy and Code of Conduct by adding the regulation governing the CEO holding directorship in other companies and the regulations on blackout periods and reporting on the changes in shareholding of the directors and the management. For further information on the Corporate Governance Policy and Code of Conduct Handbook, please visit the Company's website.

[Corporate Governance Policy and Code of Conduct](#)

Communication of Corporate Governance Policy

Prioritizing compliance with the Corporate Governance Policy and the Code of Conduct, in 2021, the Company set out an action plan to reinforce corporate culture and positive attitudes toward corporate governance. To develop a better understanding and promote practices, the Company communicated the action plan through a wide range of activities as follows:

1. Training on Corporate Governance Principles

The Company regularly organizes training on corporate governance principles and introduces the Code of Conduct as part of the new employee orientation program.

2. CG Be My Guest Activity

"CG Be My Guest" is an internal communication event featuring share-and-learn sessions by executives and employees who have integrated CG practice into their works. There were also case studies from news about consequences of violations of Corporate Governance and Anti-Corruptions policies through VDO Podcasts on the Friday Morning's News Talk Channel and via emails sent directly to employees. These activities raised employees' understanding of CG principles and helped prevent non-compliance to the Corporate Governance Policy and Code of Conduct.



3. CG Day 2021

"CG Day 2021" was organized to cultivate and foster employees' awareness of ethical business conduct and adherence to integrity. In 2021, the Corporate Governance Department invited Mr. Chanin Vongkusolkit, Director of Banpu Power Public Company Limited, to share his perspectives on CG and corporate management in the COVID-19 era.

Furthermore, employees were encouraged to join the infographic contest on "Anti-Corruption Policy" and "Whistleblower Policy" topics to promote understanding of corporate governance principles and practice of the Corporate Governance Policy and Code of Conduct.



4. Communication of CG Policy and Related Practices

The Company continued the implementation of the No Gift Policy – not accepting and offering gifts, hospitality, or other forms of benefits. It also communicated the policy to directors, executives, employees, and stakeholders to encourage actual practice.



5. Anti-Corruption

The Company conducted a corruption risk assessment and prepared mitigation measures for 2021, which covered risks in all businesses in every country where it has invested, including its subsidiaries and joint ventures. The results and measures were reported to the Risk Management Committee.

In addition, the Company has cultivated an ethical business culture through one of the corporate values: "Adhere to Integrity and Ethics." It has monitored the implementation of the Corporate Governance Policy and the Code of Conduct and measured the effectiveness based on the results from employee engagement and corporate culture survey in 2021, which used the corporate value "Committed" as an indicator. The overall evaluation results classified according to employee level and work location were satisfactory. For further information, please see "the Anti-Corruption Policy" on the Company's website.

[Anti-Corruption Policy](#)

Awards and Recognitions on Corporate Governance

Due to its commitment to driving balanced growth and creating value for all stakeholders, Banpu Power received awards and recognitions in 2021 as follows:

• Excellent Corporate Governance Scoring



Banpu Power Public Company Limited was ranked one of the top 268 Listed Companies with Excellent Corporate Governance Scoring, according to the Corporate Governance Report of Thai Listed Companies 2021 (CGR 2021). The report was developed by the Thai Institute of Directors Association (IOD), with support from the Stock Exchange of Thailand (SET). This recognition reflects the Company's commitment to sustainability and its achievement in the Environmental, Social, and Governance (ESG) operations, which contributes to sustainable growth, favorable long-term returns for shareholders, and sustainable value for all stakeholders.

• Thailand Sustainability Investment (THSI)



On 4 October 2021, Banpu Power was listed on the Thailand Sustainability Investment (THSI) 2021 in the Resources group for the 4th consecutive year by the Stock Exchange of Thailand, reaffirming its continued commitments to ESG.

• SET Sustainability Excellence Award











Banpu Power received the Rising Star Sustainability Awards in SET Awards 2021 – Sustainability Excellence in the group of the SET-listed firms with a market capitalization of THB 30,000-100,000 million, organized by the Stock Exchange of Thailand and Money and Banking Magazine on 3 November 2021. The awards are granted to listed companies with excellent sustainability performance in accordance with sustainable development principles.



In addition, the Company was certified as a member of Thailand's Private Sector Collective Action Coalition Against Corruption (CAC) in November 2019 with a validity period of three years.

Policy and Practices on the Board of Directors, Shareholders, and Stakeholders

The Board of Directors prescribed the Corporate Governance Policy as a practical guideline for the Board of Directors, executives, and employees, in alignment with the Office of the Securities and Exchange Commission (SEC)'s Corporate Governance Code for Listed Companies 2017, which comprises eight principles as follows:

 <p>Principle 1 Establish Clear Leadership Role and Responsibilities of the Board</p>	 <p>Principle 5 Nurture Innovation and Responsible Business</p>
 <p>Principle 2 Define Objectives that Promote Sustainable Value Creation</p>	 <p>Principle 6 Strengthen Effective Risk Management and Internal Control</p>
 <p>Principle 3 Strengthen Board Effectiveness</p>	 <p>Principle 7 Ensure Disclosure and Financial Integrity</p>
 <p>Principle 4 Ensure Effective CEO and People Management</p>	 <p>Principle 8 Ensure Engagement and Communication with Shareholders</p>

Principle 1 Establish Clear Leadership Role and Responsibilities of the Board

The Board of Directors explicitly set forth duties and responsibilities of the Board in “The Practices for the Board of Directors of Banpu Power Public Company Limited B.E. 2558,” which was amended in 2018 and 2019 to re-align duties and responsibilities and accommodate changes in business environments, regulations, rules, and corporate governance guidelines. For further information, please see the “Anti-Corruption Policy” on the Company’s website.

Anti-Corruption Policy

The Board of Directors understands and recognizes its roles and responsibilities as a leader steering the organization. The Board has a duty to formulate the Company’s business strategy and policies, with responsibility, prudence, and integrity for the best interests of the Company in accordance with the Environmental, Social, and Governance (ESG) principles. The Board of Directors’ duties and responsibilities are as follows:

1. The Board of Directors plays a pivotal role in determining the Company’s vision and mission, which is the Company’s major goal to achieve a sustainable business. The Board supervises business operations and monitors annual performance against the goals. It also approves the financial Key Performance Indicators (KPIs) and action plans and regularly monitors the management’s performance to ensure progress as planned. In addition, the Board reviews the Company’s vision and mission at least once every five years to ensure that the Company achieves the targets of sustainable development goals as planned.
2. The Board appointed and entrusted a Chief Executive Officer with responsibilities to govern business management, as well as develop and implement strategies. The Chief Executive Officer cascades management authorities to

senior management in business units in Thailand and abroad in accordance with a delegation of authority matrix.

3. The Board of Directors prioritizes business operations that can create substantial benefits for shareholders and adheres to the principles of good corporate governance. The Board established the Corporate Governance Policy and the Code of Conduct, which explicitly prescribes the Company’s vision and mission, its business credo, values, and practices for the convenience of directors, executives, and employees. Employees are clearly advised on what they should do or refrain from, and they are expected to acknowledge and conform to the Company’s standard practices for operations concerning employees, shareholders, customers, trading partners, creditors, competitors, and wider society.

The Company requires directors, executives, and all employees to acknowledge, understand and comply with the Company’s policies and standard practices outlined in the Code of Conduct. All employees have to sign an acknowledgment form and comply with the Corporate Governance Policy and the Code of Conduct Handbook, which is published on the Company’s website. A wide range of activities has been carried out to create better understanding and raise awareness among employees, both locally and abroad, of the importance of compliance with the Code of Conduct Handbook.

Besides the standard practices stipulated in the Code of Conduct, the management and employees collaboratively promote the corporate culture “Banpu Heart,” which comprises three shared values: Passionate, Innovative, and Committed to foster corporate culture and values for all employees both in Thailand and overseas.

Principle 2 Define Objectives that Promote Sustainable Value Creation

Based on the Board of Directors’ guidance, the management formulated and presented to the Board the business direction, a long-term strategic plan, an action plan and budget, and an annual workforce plan. The Board openly shared opinions and discussed with the management to reach a mutual agreement before approval.

On 2 October 2021, the Board of Directors and the management discussed and reviewed the business approach and strategic plan for the years 2021 - 2025 to ensure that the plan responds to the rapidly-changing business environment. There were short- and long-term assessments of business risks, climate change risk, and cybersecurity risk, and preparations to ensure business continuity under multiple future scenarios. The Board of Director’s meeting No. 12/2021 approved in principle the Company’s strategic plan and business approach. Furthermore, the Company monitored the implementation of the plan and included it on the agenda of monthly Board meetings, in which the Board would provide comments or suggestions for improvement where necessary.

Principle 3 Strengthen Board Effectiveness

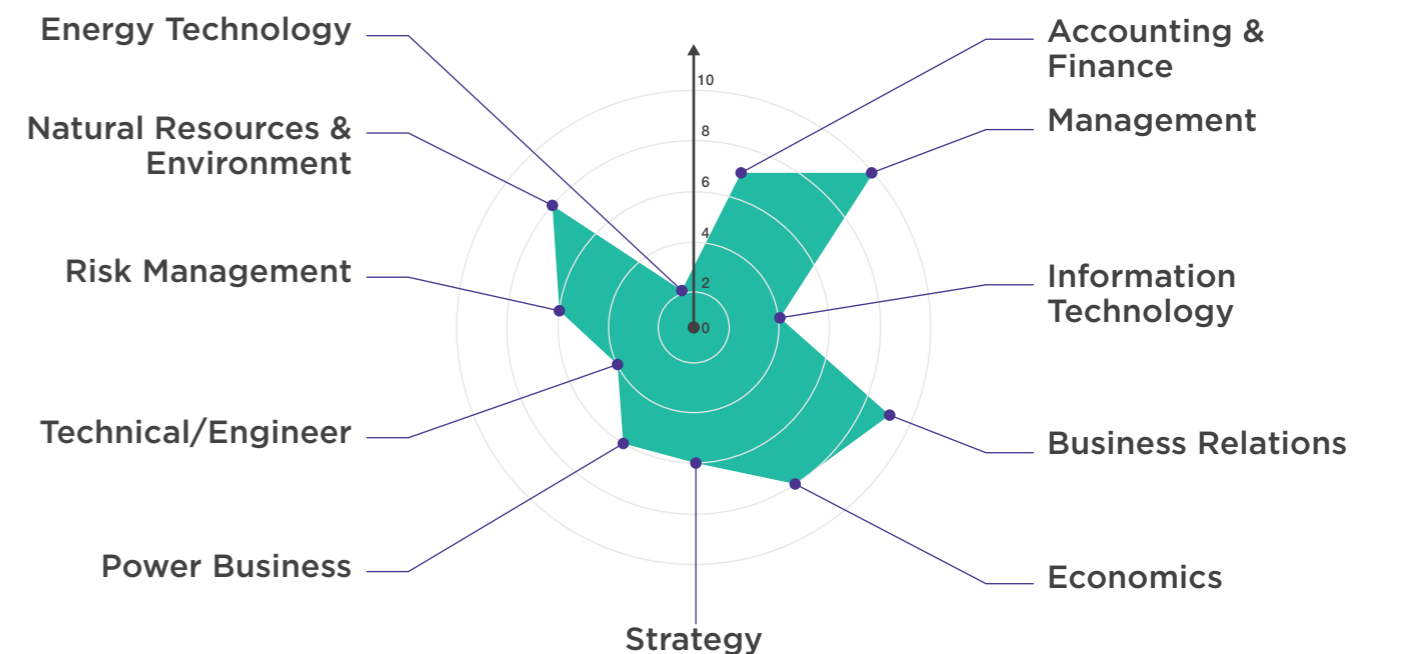
Determining and Reviewing the Composition of the Board of Directors

The Board of Directors ensures that the composition of the Board of Directors, in terms of the number of directors, the proportion of independent directors, diverse qualifications, and specialized qualifications of individual directors, is appropriate and beneficial to the Company’s business operations. It also considered setting up sub-committees to assist the Board’s management.

Composition of the Board of Directors



Board Skill Matrix



Nomination and Appointment of Directors, Sub-Committee Members, Chief Executive Officer, and Senior Executives

Nomination and Appointment of Directors and the Top Executives

The Corporate Governance and Nomination Committee is responsible for nominating candidates to replace the directors retiring by rotation or whose office became vacant on other grounds with due process and procedure as follows:

- 1) Review the structure and the composition of the Board in order to strengthen the Board of Directors as a whole
- 2) Review general and specific qualifications, qualifications of independent directors, and set additional criteria for candidate screening and nomination regarding the conditions and requirements of the Company and in compliance with the SET's rules and regulations
- 3) Following the screening process, the Corporate Governance and Nomination Committee will nominate the candidate to the Board of Directors for approval and proposal to the Annual General Meeting of Shareholders (AGM) for approval of the appointment.

In the case of nominating candidates to replace the directors retiring by rotation or to fill vacancies, the Corporate Governance and Nomination Committee nominates the qualified candidates and allows retail shareholders to nominate qualified candidates for director positions via the Company's website within the specified duration of time and under stated conditions. All the candidates will then undergo a nomination process, in which knowledge, capability, experience, general qualifications, and specific qualifications promoting an appropriate board skill matrix, as well as considering the collaborative function of the Board as a whole. The number of candidates nominated must be twice more than the vacancies and approved by the Board. The shareholder's meeting will approve the appointment of directors, both in cases of new appointment and re-appointment, with the majority votes of the total shareholders attending the meeting. The voting is carried out for each individual director.

For the nomination of executives, the Corporate Governance and Nomination Committee semi-annually monitor succession planning covering the CEO, COO, and senior executive officers to ensure that the Company has an explicit succession plan to prepare knowledgeable and highly competent executives to fill critical positions in the future.

Nomination of Independent Directors

As of 31 December 2021, the Company's independent directors, who made up 40% of the Board, were as follows:

1. Assoc. Prof. Dr. Naris Chaiyasoot
2. Mr. Yokporn Tantisawetrat
3. Prof. Dr. Bundhit Eua-arporn
4. Prof. Dr. Patchanita Thamyongkit

Independent directors are regarded as an important mechanism of good corporate governance. For the benefit of the Company and shareholders, there should be sufficient independent directors to balance the Board's decision-making process and share opinions independently under no influence of any person. The independent director serves a maximum of three terms or nine years.

Banpu Power defined the qualifications of "Independent Directors" in the Practices for the Board of Directors in accordance with the Notification of the Capital Market Supervisory Board No. TorChor. 39/2559 regarding the qualifications of independent directors as follows:

1. Holding no more than 1% of the total voting shares of Banpu Power, parent company, subsidiary, associate company, major shareholder or controlling person of Banpu Power, including shares held by the connected persons of such independent director;
2. Neither being nor having been an executive director, employee, staff, advisor earning a regular monthly salary or the controlling person of Banpu Power, its parent company, subsidiary, associate company, same-level subsidiary, major shareholder or controlling person, unless the foregoing status has ended for at least two years prior to the date of filing the application with the Office of Securities and Exchange Commission (SEC). In this regard, such prohibited characteristics shall exclude the case where an independent director used to be a government official or an advisor of a governmental agency, which is a major shareholder or the controlling person of Banpu Power;

3. Not being a person who is related by blood or legal registration as father, mother, spouse, sibling, and child, including the spouse of the executives' child, major shareholder, controlling person or person to be nominated as director, executive, or controlling person of Banpu Power or its subsidiary;
4. Neither having nor having had a business relationship with Banpu Power, its parent company, subsidiary, associate company, major shareholder or controlling person in a manner that may interfere with independent discretion, which includes not being or having been a significant shareholder or the controlling person of any person having a business relationship with Banpu Power, its parent company, subsidiary, associate company, major shareholder or controlling person unless such foregoing relationships have ended for at least two years prior to the date of filing the application with the SEC Office;

The business relationship under Paragraph 1 shall include normal business transactions, rental or lease of real estate, transactions related to assets or services or granting or receipt of financial assistance through receiving or extending loan, guarantee, providing assets as collateral, and any other similar actions, which result in Banpu Power or the counterparty being subject to indebtedness payable to the other party in an amount starting from 3% of the net tangible assets of Banpu Power or from THB 20 million or more, whichever amount is lower. In this regard, the calculation of such indebtedness shall be in accordance with the method for calculating the value of related party transactions under the Notification of the Capital Market Supervisory Board Re: Rules on Execution of Related Party Transactions, mutatis mutandis. In any case, the consideration of such indebtedness shall include the indebtedness incurred during the period of one year to the date of establishing the business relationship with the related person;

5. Neither being nor having been an auditor of Banpu Power, its parent company, subsidiary, associate company, major shareholder, or controlling person, and not being a significant shareholder, controlling person, or partner of the audit firm which employs the auditor of Banpu Power, its parent company, subsidiary, associate company, major shareholder, or controlling person, unless the foregoing relationship has ended for not less than two years

prior to the date of filing the application with the SEC Office;

6. Neither being nor having been a provider of professional services, which includes serving as a legal advisor or financial advisor being paid with a service fee of more than THB 2 million per year by Banpu Power, its parent company, subsidiary, associated company, major shareholder, or controlling person, and not being a significant shareholder, controlling person, or partner of such provider of professional services, unless the foregoing relationship has ended for not less than two years prior to the date of filing the application with the SEC Office;
7. Not being a director who is appointed as the representative of directors of Banpu Power, major shareholder, or shareholder who is a connected person of a major shareholder;
8. Not undertaking any business of the same nature and in significant competition with the business of Banpu Power or its subsidiary, or not being a significant partner in a partnership, or an executive director, employee, staff, advisor earning a regular monthly salary or holding more than 1% of the voting shares of another company that undertakes a business of the same nature and in significant competition with the business of Banpu Power or its subsidiary;
9. Not having any other characteristics that cause the inability to express independent opinions on the business operation of Banpu Power.

After being appointed as an independent director with the qualifications under (1) to (9), the independent director may be entrusted by the Board of Directors to participate in collective decision making on the business operations of Banpu Power, its parent company, subsidiary, associate company, same-level subsidiary, major shareholder or controlling person.

In the case where the person appointed by Banpu Power as an independent director has or used to have a business relationship or provision of professional services at a value exceeding the specified amount under (4) or (6), Banpu Power shall be granted an exemption from such prohibition of having or having had a business relationship or provision of professional services at such excessive value, provided that Banpu Power has obtained an opinion of the Board of Directors indicating that after consideration in accordance with the

principle in Section 89/7 of the Securities and Exchange Act, the appointment of such person does not affect the performance of duties and provision of independent opinions and that the following information has also been disclosed in the notice calling the shareholders' meeting under the agenda for the appointment of independent directors:

- 1) The nature of the business relationship or professional services that deems such person unqualified pursuant to the regulations
- 2) The reason and necessity for retaining or appointing such a person as an independent director
- 3) The opinion of Banpu Power's Board of Directors on the nomination to appoint such person as an independent director

For the purpose of (5) and (6), the term "partner" means a person designated by an audit firm or a provider of professional services to sign on the audit report or the professional service report (as the case may be) on behalf of such juristic person.

General Rules for Appointing Members of the Company's Sub-Committees

1. The composition and qualifications of the Audit Committee shall meet the requirements of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET).
2. The chairman of each sub-committee shall be an independent director.

Performance Evaluation of the Board of Directors

The Company requires that the Board of Directors, Sub-Committees, and individual directors evaluate their performance in compliance with standard criteria and procedures set by the Stock Exchange of Thailand as follows:

- The evaluation form for the Board of Directors consists of questions related to the Board's operations in six major categories, namely:
 - (1) The structure and qualifications of the Board
 - (2) Roles, duties, and responsibilities of the Board
 - (3) Board meetings
 - (4) Duties of the Board
 - (5) Relationship with the management
 - (6) Self-development of directors and leadership development

3. Each director shall be a committee member in no more than two sub-committees.
4. Any committee members who serve on two sub-committees shall be the chairman of only one committee.

General Rules for Appointment of the Chief Executive Officer

The Board of Directors entrusted the Corporate Governance and Nomination Committee with the recruitment and nomination of qualified CEO candidate to be approved by the Board based on the following criteria:

1. Qualifications, business knowledge, expertise, and experience of the candidate shall meet the criteria set by the Corporate Governance and Nomination Committee.
2. The CEO and the Chairman of the Board of Directors shall not be the same person.
3. The division in authority and responsibilities of the CEO and the Chairman of the Board of Directors should be clearly defined to create a balance between corporate management and governance.
4. The Board of Directors determines the scope of authority and performance goals of the CEO and evaluates the CEO's performance annually.
5. The CEO evaluates the performance of the lower-ranked executive officers based on goals and assessment criteria linked to the Company's strategic and annual plans in order to determine appropriate remuneration and incentives.

- The evaluation form for the three sub-committees, namely, the Audit Committee, the Compensation Committee, and the Corporate Governance and Nomination Committee, consists of items in three categories:
 - (1) The structure and qualifications of the sub-committees
 - (2) Meeting of the sub-committees
 - (3) Roles, duties, and responsibilities of sub-committees according to their charters
- The evaluation form for individual directors consists of three major categories, as follows:
 - (1) Composition and qualifications of directors
 - (2) Meeting of directors
 - (3) Roles, duties, and responsibilities of directors

The Board of Directors has established the performance evaluation procedures of the full Board, sub-committees, and individual directors as follows:

- (1) The Board of Directors approved the performance evaluation form for the full Board, sub-committees, and individual directors, including the standard rating scale as follows:

0	=	Strongly disagree or no action on that matter
1	=	Disagree or little action on that matter
2	=	Agree or moderate action on that matter
3	=	Pretty much agree or good action on that matter
4	=	Strongly agree or excellent action on that matter
N/A	=	Not available

The scoring rubric for performance quality is as follows:

Average scores below 2.49: Need improvement

Average scores 2.50-3.49: Fair

Average scores 3.50-3.99: Good

Average scores 4.00-4.49: Very good

Average scores 4.50-5.00: Excellent

- (2) The performance of the full Board, sub-committees, and individual directors are subject to evaluation on an annual basis. The evaluation period was from 1 January-31 December 2021, and the evaluation was carried out between 1 and 31 January 2022.
- (3) The Company Secretary summarized and reported the full Board evaluation results to the Corporate Governance and Nomination Committee for consideration and provision of recommendations on efficiency improvement.
- (4) The Corporate Governance and Nomination Committee reported the annual evaluation results and recommendations on efficiency improvement to the Board of Directors.

The overall evaluation results are detailed below:

Board of Directors	Average Scores	Evaluation Results
Full Board	4.75 Out of 5	Excellent
The Audit Committee	4.86 Out of 5	Excellent
The Compensation Committee	4.89 Out of 5	Excellent
The Corporate Governance and Nomination Committee	4.79 Out of 5	Excellent
Individual Directors	4.69 Out of 5	Excellent

Capacity Development of Directors and Senior Executives

The SEC's Corporate Governance Code for Listed Companies (CG Code) 2017 prescribed that "The Board should ensure that all directors understand their roles and responsibilities as well as the nature of the business, and the Board should support each director to enhance their essential skills and knowledge for their roles on the Board and sub-committees."

Thus, the Board organizes an orientation session for new directors so that they are aware of what Banpu Power expects from them. Through orientation, the directors learn about their roles and responsibilities, Banpu Power's Corporate Governance Policy and practices, as well as the Company's business and operations. These activities are carried out to prepare them thoroughly for their role as Banpu Power's directors. In addition, the Company has the policy to expand all directors' horizons on such topics as corporate governance, industrial outlook, technology businesses, and innovations to improve the Board's performance. In 2021, directors attended seminars and training programs, as shown in the following table:

Name of Director	Training Program/Seminar	Institution	Date
1. Assoc. Prof. Dr. Naris Chaiyasoot Chairman of the Board of Directors/Chairman of the Corporate Governance and Nomination Committee/Member of the Audit Committee/Independent Director	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
2. Mr. Yokporn Tantisawetrat Chairman of the Audit Committee/Independent Director	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021
	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
3. Prof. Dr. Bundhit Eua-arporn Chairman of the Compensation Committee/Member of the Audit Committee/Independent Director	Cybersecurity Update and Awareness	Banpu group	17 November 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
4. Prof. Dr. Patchanita Thamyongkit Member of the Corporate Governance and Nomination Committee/Member of the Audit Committee/Independent Director	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	Risk Management Program for Corporate Leaders (RCL)#23/2021	Thai Institute of Directors (IOD)	23 April 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	Virtual Power Plant	Banpu group	19 May 2021
5. Mr. Chanin Vongkusolkit Member of the Corporate Governance and Nomination Committee/Non-Executive Director	Advanced Audit Committee Program (AACP) #40/2021	Thai Institute of Directors (IOD)	25 May 2021
	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	Cybersecurity Update and Awareness	Banpu group	17 November 2021
6. Mr. Metee Auapinyakul Member of the Compensation Committee/Non-Executive Director	New Energy Outlook 2020	BloomberNEF (BNEF)	6 January 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
7. Ms. Somruedee Chaimongkol Member of the Compensation Committee/Executive Director	Innovation Ecosystem	Ricoh Singapore, Allsense Technology and the Chulalongkorn School of Integrated Innovation	1 November 2021
	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	Hydrogen Business	Banpu group	18 August 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021
8. Mr. Rawi Corsiri Member of the Corporate Governance and Nomination Committee/Non-Executive Director	Corporate Transformation - The Traps	Banpu group	22 March 2021
	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021
9. Mr. Voravudhi Linananda Executive Director	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	Hydrogen Business	Banpu group	18 August 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
10. Dr. Kirana Limpaphayom Executive Director/Chief Executive Officer	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	Hydrogen Business	Banpu group	18 August 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021

Name of Director	Training Program/Seminar	Institution	Date
6. Mr. Metee Auapinyakul Member of the Compensation Committee/Non-Executive Director	Corporate Transformation - The Traps	Banpu group	22 March 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	Innovation Ecosystem	Ricoh Singapore, Allsense Technology and the Chulalongkorn School of Integrated Innovation	1 November 2021
7. Ms. Somruedee Chaimongkol Member of the Compensation Committee/Executive Director	Cybersecurity Update and Awareness	Banpu group	17 November 2021
	New Energy Outlook 2020	BloomberNEF (BNEF)	6 January 2021
	Corporate Transformation - The Traps	Banpu group	22 March 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	Hydrogen Business	Banpu group	18 August 2021
	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
8. Mr. Rawi Corsiri Member of the Corporate Governance and Nomination Committee/Non-Executive Director	Innovation Ecosystem	Ricoh Singapore, Allsense Technology and the Chulalongkorn School of Integrated Innovation	1 November 2021
	Cybersecurity Update and Awareness	Banpu group	17 November 2021
	Corporate Transformation - The Traps	Banpu group	22 March 2021
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	Hydrogen Business	Banpu group	18 August 2021
9. Mr. Voravudhi Linananda Executive Director	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
	Energy Transition towards Net-zero	Banpu group and KPMG	25 October 2021
	Hydrogen Business	Banpu group	18 August 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
10. Dr. Kirana Limpaphayom Executive Director/Chief Executive Officer	Hydrogen Business	Banpu group	18 August 2021
	Carbon Neutral	Banpu Power Public Company Limited	2 October 2021
	Virtual Power Plant	Banpu group	19 May 2021
	Hydrogen Market	Banpu group and Wood Mackenzie	11 May 2021
	PDPA Virtual Sharing	Banpu group and Tilleke & Gibbins	10 May 2021

Principle 4 Ensure Effective CEO and People Management

Succession Planning Policy

The Board of Directors has a succession plan for the CEO and senior executives in place to ensure that there will be knowledgeable and competent executives to fill critical positions in the future. The CEO is invited to report to the succession plan to the Corporate Governance and Nomination Committee twice a year and report to the Board once a year.

In 2021, the Corporate Governance and Nomination Committee nominated a female independent director, Prof. Dr. Patchanita Thamyongkit, who is knowledgeable, competent, and has relevant qualifications to the Company's business direction. The 2021 Annual General Meeting of Shareholders approved the appointment of Prof. Dr. Patchanita Thamyongkit as an independent director on 2 April 2021.

Furthermore, the Charter of the Corporate Governance and Nomination Committee stipulated the Committee's duty to ensure that the Company has leadership development plans for senior executives (vice president level and higher) to prepare candidates for a senior leadership role (vice president level and higher) in replacement of those who retire, resign, or are unable to perform duties.

Principle 5 Nurture Innovation and Responsible Business

The Company strives to create a sustainable balance with adherence to corporate governance principles and risk management. International standards are integrated with sustainable development strategies covering Environmental, Social, and Governance (ESG) aspects to elevate the Company's competitiveness and create value for all stakeholders through a 2-level management system as follows:

- Strategic Integration of Sustainability: The Board of Directors reviews sustainability risks and suggests appropriate mitigation measures for the CEO to implement.
- Operational Integration of Sustainability: The Sustainable Development Committee oversees, monitors, and evaluates the sustainability performance as well as determines and reviews policies that support sustainable development.

The Company annually sets sustainability indicators and short-term and long-term performance goals for both the management and employees. Engagement in sustainable development integrated with the corporate value "Committed" has been inculcated in all Banpu Power's employees in all countries where it operates. Management processes and business performance are regularly disclosed to stakeholders through appropriate channels.

The Company highlights innovation as a shared value in the corporate culture to promote knowledge sharing and bolster business by focusing on knowledge and technology management in support of sustainable growth and efficient resources management through a wide range of activities as follows:

- Establish infrastructure that allows and supports everyone to suggest ideas for improvement of the Company's processes and technologies
- Support activities on innovation to continuously enhance the Company's productivity

- Cultivate an innovative culture in the Company by creating motivations and atmosphere that support creative and innovative processes
- Develop specific training programs or projects to enhance creative thinking skills by including innovation topics in relevant training programs
- Create infrastructure and promote innovation creation while focusing on future trends and development of products, services, processes, or tools which can quickly and effectively respond to future demands

Roles of Stakeholders

Banpu Power is committed to maintaining fairness for all stakeholders and has set forth a policy toward stakeholders in the Corporate Governance Policy based on collaboration between the Company and its stakeholders, namely shareholders, employees, customers, business partners, creditors, government agencies, communities where the Company operates,

and wider society. The practices were prescribed in the Code of Conduct for the directors, executives, and employees to comply with on the basis of fair and equitable distribution of benefits. Important guidelines pertain to conflicts of interest, the responsibility to shareholders, and policies on the treatment of employees, customers, business partners, creditors, competitors, and wider society. It is considered the duty and responsibility of directors, executives, and all employees to acknowledge, understand, and strictly comply with the guidelines in order to ensure that all stakeholders are well treated and their rights protected.

Since 2015, Banpu Power has put in place the Whistleblower Policy and whistleblower protection as a mechanism to allow stakeholders to effectively and responsibly file complaints about any wrongdoing against corporate governance and the code of conduct. All complaint information is treated with strict confidentiality. Any employees who have witnessed illicit conduct or other actions infringing on the Company's regulations and the code of conduct can report on such acts under full protection. The policy also governs:

- maintaining the confidentiality of complaints to ensure stakeholders that their complaints will be seriously responded to, and sincere complaints will not result in any harms to the whistleblowers;
- protection of whistleblowers by ensuring that the Company will not unfairly treat whistleblowers who are employees, hired and contract workers by any means, such as position or job description or location transfer, job suspension, threatening, harassment, termination of a work contract, or other unfair treatments.

Regarding the whistleblower channels, employees and the concerned public can submit complaints via four channels:

- Sending complaint letters to the Secretary of the Corporate Governance and Nomination Committee, Banpu Power Public Company Limited, 26th Floor, Thanapoom Tower, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400
- Banpu Power's website: <https://www.banpupower.com/corporate-governance/whistleblowing/filing-complaints/>
- Internal website: <http://portal.banpu.co.th> (BPP Whistleblower)
- Email: GNCchairman@banpupower.co.th and/or bpp_comsec@banpupower.co.th

The Company regularly monitors possible complaints and reports to the Corporate Governance and Nomination Committee on a quarterly basis and to the Board of Directors on an annual basis. In 2021, there were no reports of complaints through any channels.

Apart from that, the Company announced the Standard Practice Manual for Accepting and Offering of Gifts, Hospitality, or Other Similar Forms of Reward and informed shareholders, investors, customers, business partners, and all stakeholders via the Company's website. The Company requires registration of gifts in the database system for which the Board members, executives, staff, and subsidiaries must understand and comply with, in accordance with the Anti-Corruption Policy. The Company stipulated the practice of giving and receiving bribery, gifts, and business entertainment in its Code of Conduct as follows:

No. 3.4 Giving and Receiving Bribery

- 1) Executives and staff are prohibited from demanding or receiving any benefits from trading partners, contractors, suppliers, advisors, and those with whom the Company is doing business.
- 2) Executives and staff are strictly prohibited from offering any benefit to government officers, customers, labor unions, or any other external parties in an attempt to persuade them to commit a fraudulent action.

No. 3.5 Gifts, Gratuities, and Business Entertainment

- 1) Executives and staff should refrain from giving gifts or gratuities to or receiving them from any trading partner or others with whom the Company is doing business. Gifts given or received during festive occasions are excluded from this requirement, provided that they have an appropriate value and are not related to any business commitment.
- 2) Executives and staff should refrain from giving or receiving unusually lavish entertainment to or from those with whom the Company is doing business.

Employees

Recognizing that human capital is the most important asset driving business success, Banpu Power has put in its Code of Conduct, a policy and practices towards employees to ensure fair treatment to employees of all nationalities and languages, including gaining equal access to a career opportunity, remunerations, appointments, transfers, capacity-building and safe workplace environment for their lives and properties.

The Company announced the HR Philosophy in the management and development of human resources based on three principles:

1. Principle of equitability
2. Performance-based principle
3. Competency-based principle

To deal with business changes and the global economy, the Company takes responsibility in developing employees to embrace changes with adaptability, flexibility, mobility, positive creativity, and professionalism beyond the chain of command. That is, Banpu Power focuses on creating “professional employees” who are equitably treated and provided with equal opportunities, regardless of nationality, race, language, and gender. The Company strictly adheres to a shared vision and goals for all operations, creating harmonious collaboration among all members who are bonded together with the corporate culture, “Banpu Heart.”

The Company also established the policies for human resource management as follows:

- 1) **Recruitment & Selection Policy:** Banpu Power’s HR management focuses on equitability from the recruitment process that emphasizes recruiting professional employees based on work experience, regardless of gender, age, race, nationality, or religion. The Company’s current workforce, both in Thailand and abroad, is diverse in race, religion, language, culture, age, knowledge, perspective, and work experience. Furthermore, the Company prioritizes local employment and will consider employment of persons outside of local areas only when local talents are not available.
- 2) **Compensation Management Policy:** The Company maintains a remuneration policy that is fair to the employees and consistent with the Company’s performance both in the short and long terms. It is also committed to fair compensation in all forms, namely salary, welfare, and other benefits, including health insurance, provident fund, and flexible benefit. To ensure fairness and competitiveness with the job market, the Company deploys an internal standard compensation management system. The Company has set up a Compensation Committee and a Job Evaluation Committee to ensure transparent compensation management. Banpu Power’s compensation structure is comparable with those of leading companies and can compete in the job market. The

Company regularly surveys the Consumers’ Price Index and economic conditions that may affect employees and wages of leading companies.

- 3) **Training & Development Policy:** To align with its business strategy and goals, Banpu Power has established a policy to provide training and capacity development of employees at all levels and allocated a budget for such activities. Other than on-the-job training, there are other capacity development activities such as in-house workshops and external training, e-learning, and knowledge sharing with executives.

Apart from that, Banpu Power has put in place adequate and appropriate occupational health, safety, and environmental measures to prevent fatalities from accidents and workplace injuries and illnesses.

In 2021, the Company adopted Banpu People Value Proposition as a guiding principle to enhance efficiency in human resources management and strengthen employee capacity and agile working. In addition, the Company took care of employees by reviewing and updating policies and regulations. It also initiated relief measures for employees during the emergency or the COVID-19 pandemic to align with relevant laws that have been changed, such as the labor law, and social and environmental changes affecting the work styles as follows:

- The Company launched 100% Work Anywhere Policy, which allows employees to choose the working time and working style they prefer so that they can work from office, work from home, or from anywhere as long as they are able to achieve their work targets.
- The Company carefully formulated an internship program for intern students to gain full experience while receiving payment. The intern students also get a chance to attend training programs such as giving a presentation skills, English skills, or financial planning to prepare them for their future career.
- The Company employed new graduates according to government projects to reduce the unemployment rate and increase job positions for recent graduates.
- The Company hired disabled masseurs to support the employment of persons with disabilities, including donating money directly to disability foundations or hiring persons with disabilities through government agencies to work in the communities.

- In taking care of employees, the Company set a welfare committee as a channel for employees to submit complaints to propose to management’s consideration. In addition, the employees are allowed to file complaints directly with the supervisor or HR Department. They can also file complaints via online channels if they do not want to reveal their identities when reporting some issues, such as workplace anxiety, conflicts with team members or the team leader, untransparent conduct, and sexual harassment. The Company has established procedures for investigating complaints and imposing disciplinary penalties as stipulated in the Company’s work rules.
- In times of emergency, for instance, flooding, fires, and plagues, the Company has prepared urgent measures to support its employees in the form of allowances, temporary shelters, and procurement of survival kits and vaccines as appropriate.

Customers

Banpu Power strives to find ways to satisfy customer needs more effectively and efficiently. A policy and practices for customer service were stipulated as its Code of Conduct to honor promises made to customers. The Company delivers quality goods and services that match or are higher than the customer’s expectations at a fair price. It provides accurate, timely, and sufficient information as well as strictly observes the terms and conditions agreed with the customers. A grievance process was set up for customers to file complaints regarding the quality, volume, and safety of goods and services. Apart from that, the Company provides advice on how to effectively use its goods and services for the customer’s best interests.

As the Company supplies electricity to government customers, it is fully aware of the importance of nurturing relationships with local government agencies on the basis of mutual benefits and building trust in local communities. The Company has been supporting community activities; thus, it is trusted by local governments and communities as a reliable and stable energy provider. Additionally, the Company underlines its duty to protect customers’ confidential information, refrain from exploiting customers’ information, and comply with applicable local laws.

Business Partners/Creditors

Banpu Power has set a policy and practices to equitably and fairly treat its business partners and/or creditors by acting in the best interest of the Company. This is pursued based on fair and equitable distribution of benefits of both parties. The Company shall avoid situations that could result in conflicts of interest, strictly comply with contractual obligations, and provide accurate information and report. In addition, the resolution to any problem must be considered based on mutual business relations. The recommended practices are as follows:

- 1) The Company shall not demand, receive, or pay any improper benefits to its business partners and/or creditors.
- 2) Should it become known that bribes have been demanded, or payment of any improper benefit has occurred, then full information will be disclosed to the business partners and/or creditors involved, and the Company shall collaborate with the parties concerned to resolve the problem on a fair and timely basis.
- 3) The Company shall strictly comply with all the terms and conditions agreed upon in a transaction. In the event that any particular condition cannot be met, the Company will inform any creditor(s) concerned beforehand and seek a mutually acceptable solution.

Banpu Power Public Company Limited is a subsidiary company of Banpu Public Company Limited; therefore, the Company follows Banpu’s procurement policy and international-standard procurement protocols, which align with the Corporate Governance Policy and the Code of Conduct. The Company also set up the Procurement Committee to authorize selections of sellers and service providers based on such criteria as product quality, the scope of services, technical specifications, commercial details and conditions, and terms of payment.

Competitors

The Company stipulated a policy and practices for treating competitors in the Code of Conduct in compliance with international practices and the legal framework for business competition. Banpu Power will not fraudulently infringe upon or seek to obtain the trade secrets of any competitors. The Company is also committed to fair business conduct by complying with the guidelines prescribed in its Code of Conduct. In the past year, Banpu Power had no disputes with competitors.

Community and Society

Banpu Power adheres to the policy to create benefit for the economy and society while balancing business growth and community, society, and environmental development. It is the Company's policy to be a good corporate citizen and to fully comply with all relevant laws and regulations. The Company is dedicated to improving the quality of society through its own activities or through collaboration with the communities, the government, or non-governmental organizations.

Furthermore, the Company has implemented the Sustainable Development Policy to align its standards with the global standards for such activities as climate

change report and the formulation of guidelines for safety, occupational health, and environment management to achieve efficiency. The guidelines also cover the management of risk resulting from the Company's operations, which may affect employees, business partners, society, the environment, and the communities in which the Company has business operations.

Banpu Power has continuously carried out various Corporate Social Responsibility (CSR) programs to support the activities that help improve society. The Company always allocated part of its earnings for CSR activities at the local and corporate levels, including CSR programs in countries where Banpu Power has operations.

Communication Channels with Banpu Power

Stakeholders may submit their opinions through the following channels:

Headquarters:	26 th Floor, Thanapoom Tower, 1550 New Phetchburi Road, Makkasan, Ratchathewi, Bangkok 10400
Telephone:	+66 2007 6000
Fax:	+66 2007 6060
Website:	www.banpupower.com
Company Secretary:	Email: bpp_comsec@banpupower.co.th
Investor Relations:	Email: investor_relations@banpupower.co.th

Principle 6 Strengthen Effective Risk Management and Internal Control

Risk Management Policy

The Board of Directors places importance on comprehensive risk management covering risk factors relating to vision, goals, business strategies, finance, production, and other operations while taking risk likelihood and levels of impacts into account. The Board has set clear measures for risk management and ensures that there are people accountable for risk management. In addition, the Board has established measures for reporting, monitoring, and evaluating risk management.

The Risk Management Committee was set up by the Board to prepare and submit a risk management plan and report performance to the Audit Committee as well as the Board on a quarterly basis. The Committee reviews the risk management system and evaluates the performance at least once a year and whenever the risk level changes. The Risk Management Committee consists of the following members:

Chief Executive Officer (CEO) ¹	Chairman of the Risk Management Committee
Chief Operating Officer (COO)	Member of the Risk Management Committee
Head of Finance and Strategy (CFO)	Member of the Risk Management Committee
Head of Business and Project Development	Member of the Risk Management Committee
Head of Engineering	Member of the Risk Management Committee
Head of Corporate Services	Member of the Risk Management Committee
Head of Company Secretary	Member of the Risk Management Committee
Head of Internal Audit	Member of the Risk Management Committee
Head of Asset Management	Member and Secretary of the Risk Management Committee

Internal Control System and Internal Audit

The Board of Directors has set up an internal control system that covers all aspects of Banpu Power's businesses, ranging from accounting and finance, administration, asset management, operational management, and compliance with related laws, rules, and regulations. The Board has also established sufficient and effective checks and balances mechanism to protect shareholders' equities and Banpu Power's assets. Moreover, the Board has determined that the Internal Audit Department works independently and reports directly to the Audit Committee to ensure that the internal control system and internal audit are the key mechanisms to drive the Company's business to sustainable growth. The Internal Audit Department audits the internal control of key operational processes and work systems covering business units and supporting units. The Department also provides consultancy and suggestions about internal control system and risk management to improve the Company's operational excellence to accommodate business growth amid changing economy.

Principle 7 Ensure Disclosure and Financial Integrity

Conflict of Interest

Banpu Power stresses the importance of its policy to prohibit directors, executives, and employees from misuse of position for personal gain. As stipulated in the Corporate Governance Policy and the Code of Conduct Handbook, directors, executives, and employees are to avoid connected transactions that could lead to a conflict of interest with the Company. If necessary, the transactions are to be conducted fairly and at arm's length, and directors, executives, or employees having an interest in the transactions must not be involved in the approval process. If any transaction is considered connected under the SET's notification and the Capital Market Supervisory Board's notification, all rules, procedures, and the disclosure of connected information of listed companies must be strictly complied with.

The Board of Directors also prohibits directors, executives, or employees from using any opportunity or information acquired from their position for personal benefit or to compete with the Company or related business. Nor are they allowed to use insider information to sell or buy shares. If an executive or employee involving in a special project of which the information has not yet been disclosed to the public; or that it is under negotiation where the project's information has to be kept confidential

as it could influence the share price, the executive or employee are to sign a confidentiality agreement until the information is disclosed to the SET and the SEC.

In 2018, Banpu Power announced the Market Sensitive Information Policy and practices on handling confidential information, which potentially affects the stock exchange. It is the duty of directors, executives, employees, consultants, and subsidiary companies to understand and comply with the policy and practices as follows:

¹ Banpu Power's Chief Executive Officer shall serve as an ex officio member of the Board of Directors according to the Practices for the Board of Directors of Banpu Power Public Company Limited B.E. 2558, Amendment No. 2 B.E. 2562.

- 1) Establish an internal control system to prevent the leak of confidential information.
- 2) Cultivate a culture of information safety through constant communication to raise awareness of relevant persons of their duty to protect confidential information.
- 3) Limit the number of persons who have access to confidential information based on a need-to-know basis. Set up an information access control system for contract parties and service persons.
- 4) Exercise extreme caution when receiving and sending information to and from third parties, being aware of one's duties in using and controlling confidential information.
- 5) Establish an appropriate information technology and control system.

Disclosure of Information to Investors

The Board of Directors oversees the disclosure of information and its transparency to ensure that both financial and non-financial information relating to the Company's business and performance is disclosed in a complete, accurate, sufficient, regular, and timely manner. Moreover, the information must reflect the Company's actual performance and its true financial status, as well as its business future, while strictly complying with the laws, rules, and regulations relating to information disclosure of both the SEC and the SET. Besides, Banpu Power also communicates with shareholders and investors through other channels. The Investor Relations Department directly communicates with shareholders, investors, and securities analysts both in Thailand and abroad, while the Corporate Communications Department discloses corporate information to shareholders, investors, and the public through the local and international press in an equitable and timely manner.

In 2021, Banpu Power organized the following activities to disclose information to international investors, institutional investors, small investors, securities analysts, and the press:

No.	Information Disclosure and Presentation	Time(s)
1	International Road Show via Virtual Meeting	6
2	Local Road Show via Virtual Meeting	7
3	Quarterly and Annual Analyst Meeting	4
4	Opportunity Day for listed companies to release quarterly performance to investors	4
5	Company visit by local and international investors	2
6	Information provision to investors via conference call	5
7	Interview with executive officers	20
8	Press conference on the Company's performance	2
9	Press release on the Company's performance and business strategies	8

The Company also discloses its information and news via the Company's website: www.banpupower.com to provide equal and equitable access for all stakeholders. Interested parties may contact or make inquiries to the Company's Investor Relations Department via Telephone: +66 2007 6000, Fax: +66 2007 6060, or Email: investor_relations@banpupower.co.th.

The Board of Directors' Report

The Board of Directors is responsible for Banpu Power's and its subsidiaries' consolidated financial statements and the financial information that appears in the Company's Annual Report. The financial statements are prepared under the Generally Accepted Accounting Principles (GAAP) in Thailand, where an appropriate accounting policy has been selected and implemented. The Audit Committee and auditors jointly review the accounting policy to ensure it remains practical. While preparing the financial statements, the Board of Directors insists that the working team carefully exercise its discretion and that important information is adequately disclosed in the notes to the financial statements.

The Board entrusted the Audit Committee with the responsibility to supervise the quality of financial statements and the internal control system and to ensure that any opinions of the Audit Committee on these issues have been included in its report, which is also included in this Annual Report.

The Board of Directors considered that the financial statements of the Company and its subsidiaries as of 31 December 2021 are accurate, complete, sufficient, and reliable.

Policy on the Use of Internal Information

The Company places great importance on information disclosure and transparency and has formulated a policy on information disclosure, transparency in financial statements, and corresponding policy implementation in Banpu Power's Corporate Governance Policy. This is to ensure that financial and non-financial information about the Company's businesses and operating results are disclosed to shareholders, investors, securities analysts, and the general public in an accurate, complete, sufficient, reliable, and timely manner. The Board of Directors is committed to strict compliance with laws and regulations regarding information disclosure and transparency. Sales or purchases of shares by any director or executive, according to the SEC's notification, are duly reported to the Company Secretary Department. Changes in securities holding of directors or executives are also subject to be reported to the Board of Directors' meeting on a monthly basis. In addition, directors and executives must disclose their holding of the Company's securities on the date they were appointed, including those of their spouses and minor children who are non sui juris as well as connected persons.

The Company prescribed the rule for the use of internal information under the "Disciplinary Action" section applied to employees at all levels, that any employee who fails to comply or violates the set disciplinary requirements is considered to have breached the Company's rules and is subject to disciplinary penalties according to the nature of the offense. It is stated that anyone "disclosing the Company's confidential information with an intention to destroy its reputation, credibility or products, resulting in a financial loss or a

loss in a business opportunity to the Company" may be subject to severe punishment up to dismissal. In 2021, there were no reports of insider trading violations or non-compliance with the SET's and the SEC's rules and regulations on the securities exchange.

The Company stipulated preventive measures for internal information security as practices in the Code of Conduct under the section "Conflict of Interests and Keeping Confidential Corporate Information especially the Use of Company's Internal Information". Measures against leakage of internal information have been put in place to supervise the use of the Company's internal information. It is the responsibility of the Company's directors, executives, and employees to keep corporate information strictly confidential, especially internal information not yet disclosed to the public or any data or information that may affect the business of the Company or its share price. Directors shall follow the guidelines set forth in the Practices for the Board of Directors of Banpu Power Public Company Limited B.E. 2558 (Amendment No. 2 B.E. 2562) and the Code of Conduct Handbook as follows:

1. Directors, executives, and employees must not use the information they receive from their directorship or employment for personal benefit or for conducting business or other activities in competition with the Company.
2. Directors must not use internal information in trading the Company's shares or disclose internal information to any third party for the benefits of trading the Company's shares.
3. Business secrets must not be disclosed to any third party, especially to competitors even after a director, executive, or employee has left the Company.

4. Directors and executive officers, as defined by the Securities and Exchange Commission (SEC), or any persons who know inside information which may influence the share price are prohibited from trading the Company's shares during blackout period set by the Company as follows:

Directors and executive officers (including their spouses and minor children who are non sui juris) or any persons who know inside information which may influence the share price are prohibited from trading the Company's shares within one month before information in the financial statements or other information which may influence the Company's share price, and until after 24 hours after the information is made public.

5. Directors and executives, as defined by the Securities and Exchange Commission, shall report on their shareholding and its change with the method regulated by the Securities and Exchange Commission.

Additionally, the Company stipulated in the Corporate Governance Policy that directors, executives, and employees shall not exploit their position for personal gain. They must avoid connected transactions that could lead to a conflict of interest with the Company. If necessary, the transactions are to be conducted fairly and at arm's length. Directors, executives, or employees having an interest in the transactions shall not be involved in the approval process. According to the SET's and the Capital Market Supervisory Board's notification, all rules, procedures, and the disclosure of connected information applied to listed companies must be strictly complied with if the transaction is

considered a connected transaction. In addition, the Practices of the Board of Directors stipulates a guideline for directors to follow if they have access to non-public information. The Company also notifies directors and executives of a blackout period of 30 days prior to the disclosure of the financial statements.

To develop the control system for the use of internal information, the Company hired Banpu Plc. to install the Information Technology (IT) system to supervise the use of Company information. For example, systems are in place to prevent access to information from the third party and to limit employees' information access levels according to their roles and responsibilities. The system also prevents unauthorized changes, duplication, or deletion of protected information. In the case where a director, executive or employee participates in a special task using information that has not yet been disclosed publicly, is under negotiation or subject to internal control given its possible influence on the Company's share price, such executive and employee must sign a Confidentiality Agreement with the Company. The Agreement shall remain in effect until the information is disclosed to the public or relevant regulatory authorities.

Directors and executive officers shall report their holding of the Company's securities upon appointment and report on any changes in securities holding by themselves, spouses, minor children who are non sui juris, and connected persons. They must also file a report on any changes in their securities holding to the Board meeting on a regular basis. In 2021, there were no violations of or non-compliance with regulations prohibiting insider trading and asset trading pursuant to the SEC's and SET's regulations.

Principle 8 Ensure Engagement and Communication with Shareholders

Shareholder's Rights

The Board of Directors stresses the importance of rights and equality between shareholders and institutional investors. It is clearly specified in the Corporate Governance Policy that shareholders are entitled to receive share certificates, transfer shares, and acquire adequate information in a timely fashion and a format conducive to decision making. Shareholders are also entitled to attend a meeting, cast their votes at shareholders' meetings to deliberate over Banpu Power's important policies, elect and remove directors, approve appointments of auditors and receive their shares of profit.

At each shareholders' meeting, the Board of Directors facilitates shareholders by furnishing them with complete, clear, sufficient, and timely information. The Board encourages shareholders to attend the meeting and cast their votes or to appoint an individual or an independent director as their proxy to cast votes on their behalf in case they could not attend. Moreover, shareholders are allowed to equally express opinions, seek explanations, or pose questions.

In 2021, the Company also informed the SET to notify minor shareholders about the opportunities to propose agenda items to be included in the Annual General Meeting of Shareholders (AGM) and to nominate candidates to be considered for the director positions from 1 - 30 December 2020. The procedures and methods for considering proposals were clearly stated on the Company's website. In the 2021 AGM, no shareholder proposed additional agenda items or nominated candidates for director positions.

The 2021 Annual General Meeting of Shareholders (AGM) was convened online on 2 April 2021 at 09.30 hours via an e-meeting platform with full attendance of nine directors or 100% of all directors. Four out of nine directors attended the meeting via the Cisco WebEx Meeting platform. The meeting protocol complied with the Emergency Decree on Electronic Meetings, B.E. 2563, which came into effect on 19 April 2020. Banpu Power assigned the Thailand Securities Depository Co., Ltd., its share registrar, to send out an invitation letter to shareholders in advance and post it on the Company's website 30 days prior to the meeting date. The minutes of the 2021 AGM was also posted on the Company's website 14 days after the meeting took place so that the shareholders could propose amendments if they found the minutes to be inaccurate within the 30-day period after the minutes were posted on the Company's website.

Equitable Treatment of Shareholders

The 2021 AGM during the COVID-19 Pandemic

Given the ongoing COVID-19 pandemic in Thailand, the Board of Directors was concerned about the health and safety of its shareholders and decided to organize the 2021 Annual General Meeting of Shareholders (AGM) via an e-meeting platform in compliance with the Emergency Decree on Electronic Meetings. The e-meeting was open for shareholders to register at 07.30 hours.

The Board of Directors has the policy to engage shareholders in a decision-making process and to ensure that shareholders receive comprehensive and adequate information in a timely fashion for such a process. As such, Banpu Power sent out an invitation letter for the meeting together with supporting documents for each agenda item to shareholders prior to the meeting. Opinions of the Board of Directors also accompany each agenda item.

In 2021 AGM, nine directors attended the meeting, including the Chairman of the Audit Committee, the Chairman of the Corporate Governance and Nomination Committee, and the Chairman of the Compensation Committee. Senior management, the auditor, and independent observers from a law firm also attended the meeting. The Chairman of the Meeting provided every shareholder an equal opportunity to examine the Company's operations and present questions in each agenda item. The Chairman also encouraged shareholders to express their opinions and make inquiries about the Company's operations.

The Board of Directors has the policy to treat all shareholders equitably by disseminating complete, precise, adequate, and timely information to them via the channels of the Stock Exchange of Thailand (SET) and the Company's website.

[SET Notifications](#)

Compliance with Other Corporate Governance Principles

The Board of Directors aspired to maintain good corporate governance to ensure transparent and efficient operations as well as the responsibility to all stakeholders. Banpu Power’s Board of Directors is fully aware of its role and duty to comply with the SEC’s Corporate Governance Code for Listed Companies (CG Code) 2017. The Board has considered and reviewed the application of the principles outlined in the CG Code 2017 to the Company’s business context, and summarized the principles the Company did not yet comply with but will further adopt and apply as appropriate, with details and practices as follows:

- All members of the Nomination Committee are independent directors.

The Company’s practice: The Corporate Governance and Nomination Committee currently consists of four members, namely two independent directors, and two non-executive directors. The Chairman of the Corporate Governance and Nomination Committee is an independent director. The Committee is qualified, knowledgeable, and competent in corporate governance and nomination. However, the Board of Directors has clearly set in the Charter of the Board about the roles and duties of the members of the Corporate Governance and Nomination Committee, covering all aspects of corporate governance and nomination.
- The majority members of the Compensation Committee are independent directors (more than 50%).

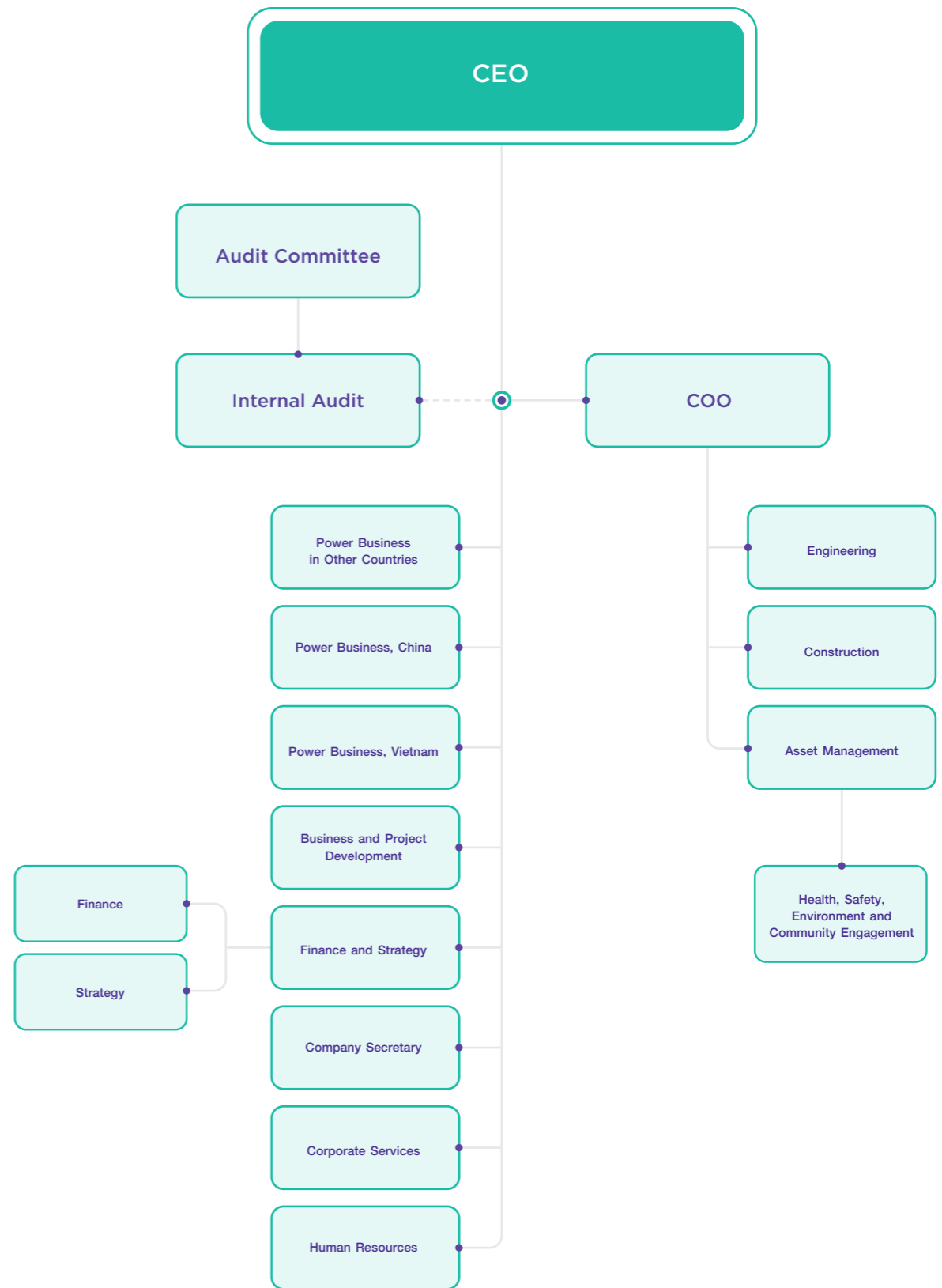
The Company’s practice: Currently, the Compensation Committee consists of three members, namely one independent director, one non-executive director, and one executive director. The Chairman of the Compensation Committee is an independent director. The Committee is qualified, knowledgeable, and competent in compensation matters in accordance with the duties and responsibilities of the Compensation Committee stipulated by the Board in the Charter of the Compensation Committee.
- The Board should appoint an external consultant to facilitate a board evaluation at least once every three years, and evaluation results should be disclosed in the annual report.

The Company’s practice: Banpu Power has annual performance evaluations of the full Board, sub-committees, and individual directors. The Company started the evaluation in 2017 using the evaluation forms prepared in accordance with the Stock Exchange of Thailand (SET)’s standards. The Corporate Governance and Nomination Committee considered the practice and decided to conduct the performance evaluation internally.

2. Corporate Governance Structure and Details of the Board of Directors, Sub-Committees, the Management, Employees, and Others

Corporate Governance Structure

As of 31 December 2021



Structure of the Board of Directors

The Company's management structure as of 31 December 2021 consists of the Board of Directors and management. The Board of Directors consists of independent directors, non-executive directors, and executive directors. Independent directors account for 40% of the Board membership.

The Board also requires that the Chairman of the Board of Directors, Chairman of the Audit Committee, Chairman of the Corporate Governance and Nomination Committee, Chairman of the Compensation Committee, and all directors in the Audit Committee be independent directors.

The Board of Directors consists of:

1. Assoc. Prof. Dr. Naris Chaiyasoot	Chairman of the Board of Directors/ Independent Director
2. Mr. Chanin Vongkusolkrit	Director
3. Mr. Metee Auapinyakul	Director
4. Mr. Rawi Corsiri	Director
5. Mr. Yokporn Tantisawetrat	Independent Director
6. Prof. Dr. Bundhit Eua-arporn	Independent Director
7. Prof. Dr. Patchanita Thamyongkit	Independent Director
8. Mrs. Somruedee Chaimongkol	Director
9. Mr. Voravudhi Linananda	Director
10. Dr. Kirana Limpaphayom	Director/Chief Executive Officer

Board Composition

As of 31 December 2021, the structure of the Board of Directors consists of independent directors, non-executive directors, and executive directors. Among the ten board members, four are independent directors, who account for 40% of the Board.

Independent directors, who account for 40% of the Board, are as follows:

1. Mr. Yokporn Tantisawetrat	Independent Director
2. Assoc. Prof. Dr. Naris Chaiyasoot	Independent Director
3. Prof. Dr. Bundhit Eua-arporn	Independent Director
4. Prof. Dr. Patchanita Thamyongkit	Independent Director

Banpu Power defined the qualifications of "Independent Directors" according to the requirements of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET), as stipulated in the Notification of the Capital Market Supervisory Board No. TorChor.39/2559, dated 16 November B.E. 2559. The Company places importance on building the Board diversity using the Board skill matrix to cover skills, experiences, knowledge, and specialization that benefit the Company. The nomination of directors does not discriminate on the grounds of gender, age, race, nationality, or religion to increase the opportunity to nominate suitable candidates for the Company's business operations.

Authorized Signatory Directors on Behalf of the Company

Any two of the following six board members, namely Mr. Chanin Vongkusolkrit, Mrs. Somruedee Chaimongkol, Dr. Kirana Limpaphayom, Mr. Voravudhi Linananda, Mr. Metee Auapinyakul, or Mr. Rawi Corsiri, are authorized to jointly sign on a document affixed with the Company's seal.

Authority and Responsibilities of the Board of Directors

The Board of Directors is accountable to shareholders for the Company's business operations and supervision of the management to accomplish the goals and maximize shareholders' value. The Board also has a duty to ensure ethical conduct and benefits to all stakeholders.

The Board of Directors has a duty to comply with the laws, objectives and regulations of the Company and with resolutions of the shareholders' meetings. It shall perform duties with integrity and act in the interests of shareholders for both short and long terms. The Board also complies with rules and regulations of the Stock Exchange of Thailand (SET), the Office of the Securities and Exchange Commission (SEC) and the Capital Market Supervisory Board established according to the Securities and Exchange Act, B.E. 2535 as amended by the SEC Act (No.5), B.E. 2559.

To ensure compliance with the Practices, the Board entrusted the Chief Executive Officer with the duty to supervise the Company's business operations and corporate governance.

The Board also formulated the Audit Committee Charter, the Corporate Governance and Nomination Committee Charter, and the Compensation Committee Charter as guidelines for these Sub-Committees.

The Board organizes an orientation session for new directors to make them realize what the Company expects from them about their roles and responsibilities, the Company's corporate governance policy and practices, business and operations, and risk management. In addition, they have the opportunity to visit different operational units. After attending the orientation, the new directors will be equipped for their new roles as directors.

The Board formulated the "Practices for the Board of Directors B.E. 2558 Amendment No.2 B.E. 2562," which details definitions, composition, and criteria of the Board, directors' qualifications, terms of office and vacancies, duties and responsibilities of the Board as well as meetings and voting procedures. In pursuance of the corporate governance of the Company, subsidiaries, and associated companies, in addition to any other action taken in compliance with the laws, the Company's objectives, the Articles of Association, and the resolutions of the shareholders' meeting.

The Board of Directors has a duty and responsibility to consider and approve the following matters:

1. The Company's policies, strategic plans, action plans, and annual budget
2. Monthly and quarterly operating results reports compared against the Company's plan, budget, and business outlook in the following period of the year
3. Invest in a project worth more than THB 1,500 million
4. Investment which exceeds the approved budget by 15% and costs more than THB 1,000 million
5. Purchase and disposal of assets, acquisitions, and the participation in joint venture projects, which are not conflicting with the SEC's and SET's rules, for an amount that exceeds the CEO's authority
6. Transactions which could materially affect the Company's financial status, liabilities, business strategy and/or reputation
7. Entering into a contract either unrelated to the ordinary course of business or related and materially significant
8. Parts of a connected transaction between Banpu Power, its subsidiaries or affiliates, and related individuals according to the Securities and Exchange Act B.E. 2535 (As amended)
9. Any transaction which may cause the Debt-to-Equity Ratio of the Company's consolidated balance sheets to exceed 2:1
10. Payment of an interim dividend
11. Net borrowing which exceeds the amount stated in a budget of more than THB 5,000 million
12. Changes in policies and practices with material implications to accounting, risk management, and financial reserves
13. Significant changes in financial and management control system
14. Determination and review of authorization granted to CEO
15. Appointment of CEO, EO, COO, and CFO
16. Approval of salary structure, salary increase budget, other benefits or formula to adjust other remuneration packages of executives and employees
17. Nomination, appointment, and termination of directors and the Company Secretary or the Secretary to the Board of Directors

18. Authorization given to Chairman of the Board of Directors, CEO or any director, and amendments to such authorization
19. Appointment and delegation of duties of sub-committees
20. Establishing and supervising management in accordance with the principles of good corporate governance; promoting ethics and morals and compliance with the Corporate Governance Policy and the Code of Conduct Handbook and the Anti-Corruption Policy
21. Appointment and supervision of directors or executives who are directors of subsidiaries and affiliated companies
22. Registration of a new company and dissolving a company
23. Review of the Company's vision and mission at least once every five years
24. Directors have a duty to keep corporate information strictly confidential, especially the internal information not to be disclosed to the public or the information that may affect its business or share prices. Directors must follow the following practices:
 - In case the information is a report based on an accounting period such as on operating results, financial statements, and an annual report, directors must refrain from trading Banpu Power's shares no less than 30 days prior to the information disclosure to the public.
 - In case the information is a report of Banpu Power's action in a particular situation, such as acquisition/disposal of assets, connected transactions, joint venture/cancellation of joint venture, capital increase/capital reduction, issuance of new securities, repurchase of own shares, payment or non-payment of dividend or incidents that affect Banpu Power's share price, directors shall refrain from trading the Company's shares from the period he/she learns of the information to the day Banpu Power discloses the information to the public.
25. Amendment of the Board of Directors' scope of authorization as described in Clause 1 - 24.

In 2021, the Board of Directors convened 12 meetings with full attendance and all agenda items covered.

Checks and Balances of Non-Executive Directors

The Board of Directors ensures that the proportion of its existing directors is appropriate to the Company's size. At present, Banpu Power's Board of Directors consists of ten members. Three members are executive directors: three are non-executive directors, and four are independent directors, which account for 40% of the Board. In 2021, the Corporate Governance and Nomination Committee reviewed the composition of the Board with regards to the proportion of non-executive directors and independent directors and concluded that the composition of the Board of Directors was appropriate.

Consolidation or Segregation of Office

The Board of Directors requires that the roles of Chairman and Chief Executive Officer should be held by separate individuals. Their roles, responsibilities, and authorities are clearly separated to achieve a balance between management and good corporate governance.

The Chairman of the Board monitors the administration of the management, provides suggestions and assistance, yet does not interfere with the routine management, which is the duty of the Chief Executive Officer within the scope of the authority entrusted by the Board. The Chairman of the Board shall convene and chair the Board of Directors meetings, chair the shareholders' meetings, and determine the agenda for Board meetings together with the Chief Executive Officer. In the case of an equality of votes in a Board of Directors' meeting, the Chair of the meeting shall give the casting vote.

The present Chairman of the Board is an independent director who possesses strong leadership. The Chairman monitors directors' independence at meetings and their full adherence to the principles of good corporate governance without being influenced by the management.

Scope of Authority and Responsibilities of Chairman of the Board of Directors

- 1) To abide by the objectives, the Company's rules, and resolutions of the shareholder's meetings as well as the Public Limited Companies Act B.E. 2535, the Securities and Exchange Act B.E. 2535, and any other relevant laws that particularly stipulate the duties of Chairman of the Board of Directors

- 2) To preside over the Board of Directors' meetings, shareholder's meetings, and manage such meetings according to the Company's rules, relevant laws, and corporate good governance practices
- 3) To promote, develop, and oversee the performance of the Board to ensure integrity, adherence to the principles of good corporate governance

Scope of Authority and Responsibility of the Chief Executive Officer

The Board of Directors sets operational goals for the CEO and evaluates his performance annually to determine compensation for the CEO. The CEO then evaluates the performance of executive officers and senior executive officers in descending order of rank in light of the goals and evaluation criteria linked closely with the Company's strategic plan and the CEO's annual operating plan and operational goals. This information is used to set appropriate and attractive compensation packages and incentives.

Regulations Governing Holding Directorship in Other Companies

To ensure that directors can devote sufficient time to carrying out their duties and responsibilities in the Company, directors shall not hold the director position of more than five listed companies. The rule is set forth in Article 5.1 Paragraph (5) under the Section: Qualifications of Directors in the Practices for the Board of Directors B.E. 2558, Banpu Power Public Company Limited, Amendment No. 2 B.E. 2562.

In 2021, the Board of Directors established the explicit policy and practices for the Chairman of the Board

and the Chief Executive Officer regarding holding directorship positions in other companies, both in terms of positions and the number of companies they are allowed to hold. The Corporate Governance Policy and Code of Conduct Handbook was amended accordingly with a paragraph added to Article 4.5 Chairman of the Board and the Chief Executive Officer: "Holding directorship position in other company, other than group companies, CEO must get an approval from the Board of Directors."

Sub-committees

The Board of Directors established three sub-committees, namely, the Audit Committee, the Corporate Governance and Nomination Committee, and the Compensation Committee

The Audit Committee consists of four independent directors as follows:

- | | |
|--------------------------------------|---------------------------------|
| 1. Mr. Yokporn Tantisawetrat | Chairman of the Audit Committee |
| 2. Assoc. Prof. Dr. Naris Chaiyasoot | Member |
| 3. Prof. Dr. Bundhit Eua-arporn | Member |
| 4. Prof. Dr. Patchanita Thamyongkit | Member |

The Audit Committee's term of office is three years from the date of the Annual General Meeting of Shareholders in 2021 to the date of the Annual General Meeting of Shareholders in 2024, except for Prof. Dr. Patchanita Thamyongkit, whose term of office is three years, from 30 April 2021 (Appointed date) to the date of the Annual General Meeting of Shareholders in 2024. All members of the Audit Committee have the expertise, experience, and a strong understanding of accounting and finance, and Mr. Yokporn Tantisawetrat is a committee member who has sufficient expertise and experience to review the accuracy and credibility of the Company's financial statements.

The Audit Committee Meeting No. 7/2018 held on 9 November 2018 appointed Ms. Orawan Phunamsarp as the Head of the Internal Audit and the Secretary to the Audit Committee, effective from 1 December 2018. Ms. Orawan has over 15 years of professional experience in internal audit with international standards and a good understanding of the Company's business operations and activities.

The Audit Committee is accountable to the Board of Directors within the scope of responsibilities entrusted by the Board of Directors as follows:

1. To review the Company's financial reporting process to ensure that it is accurate, creditable, and adequate
2. To review the Company's internal control system and internal audit system to ensure that they are appropriate and effective
3. To ensure that the Company has duly complied with the law on securities and exchange, the Stock Exchange of Thailand's (SET) regulations of, and the laws relating to the Company's business
4. To consider, select, nominate an independent person to be the Company's auditor or dismissal of the auditor, and propose such person's remuneration, as well as to attend a non-management meeting with an auditor at least once a year
5. To review the connected transactions or the transactions that may lead to conflicts of interests, to ensure that they are in compliance with the laws and the SET's regulations, and are reasonable and for the highest benefit of the Company
6. To prepare, and to disclose in the Company's annual report, and Audit Committee's report which must be signed by the Chairman of the Audit Committee and consist of at least the following information:
 - (a) an opinion on the accuracy, completeness, and creditability of the Company's financial report
 - (b) an opinion on the adequacy of the Company's internal control system
 - (c) an opinion on the compliance with the law on securities and exchange, the SET's regulations, and the laws relating to the Company's business
 - (d) an opinion on the suitability of an auditor
 - (e) an opinion on the transactions that may lead to conflicts of interests
 - (f) the number of the Audit Committee meetings, and the attendance of such meetings by each committee member
 - (g) an opinion or overview comment received by the Audit Committee from its performance of duties in accordance with the charter
 - (h) other transactions which, according to the Audit Committee's opinion, should be known to the shareholders and general investors, subject to the scope of duties and responsibilities entrusted by the Company's Board of Directors
7. To audit cases informed by the Company's external auditor when he/she discovers any suspicious circumstance that the director, manager, or any person responsible for the Company's operation commits an offense, which is specified under the Securities and Exchange Act (No. 5) B.E. 2559 and report the result of preliminary inspection to the Office of the Securities and Exchange Commission (SEC) and the external auditor within 30 days since the informed date
8. To continue the Risk Management Committee's duty in reviewing and monitoring the management of significant risks, including cybersecurity risk and other IT-related risks, for the whole organization
9. To determine an internal audit unit's independence, and express opinions regarding the operation plan and operation results, budgeting, and workforce of the Internal Audit Division, as well as to approve the appointment, transfer, and dismissal of the Head of Internal Audit Division
10. To revise the Audit Committee Charter at least once a year
11. To review and approve the Internal Audit Charter
12. To invite executive officers or supervisors to attend its meeting for clarification purposes or to submit relevant documents, based on the scope of its authority
13. To obtain appropriate consultations from the independent specialist relating to its scope of duties and responsibilities with the Company's expenses

14. To review and ensure that the Company has duly complied with Anti-Corruption Policy
15. To submit a performance report to the Board of Directors at least once a year
16. To perform any other tasks as assigned by the Board of Directors upon the Audit Committee's consent

In 2021, the Audit Committee convened nine times, all of which were quorate and with all agenda items covered. For more information, please visit the Company's website:

https://www.banpupower.com/wp-content/uploads/2021/10/BPP-AC-Charter-Amendment-no.5_EN.pdf.

The Corporate Governance and Nomination Committee consists of four members, namely, two executive directors and two independent directors. The Chairman of the Corporate Governance and Nomination Committee is an independent director.

- | | | |
|----|-----------------------------------|---|
| 1. | Assoc. Prof. Dr. Naris Chaiyasoot | Chairman of the Corporate Governance and Nomination Committee |
| 2. | Mr. Chanin Vongkusolkit | Member |
| 3. | Mr. Rawi Corsiri | Member |
| 4. | Prof. Dr. Patchanita Thamyongkit | Member |

The Corporate Governance and Nomination Committee's term of office is three years, from August 2021 to August 2024, except for Prof. Dr. Patchanita Thamyongkit, whose term of office is three years, from 30 April 2021 (Appointed date) to 29 April 2024.

The Corporate Governance and Nomination Committee has two major duties. Firstly, it reviews the Corporate Governance Policy and the Code of Conduct and monitors compliance with the policy and practices within Banpu Power's Code of Conduct. Secondly, it nominates Directors, Chief Executive Officer, and Executive Officers as well as monitors succession planning in order to nominate qualified persons to fill senior management positions (Vice President level and higher) and propose to the Board of Directors' meeting for approval or to the shareholders' meeting for approval, as the case may be, with the following details:

1. To consider and review whether the Company's Corporate Governance Policy and its Code of Conduct are appropriate and adequate and to regularly update the Corporate Governance Policy
2. To monitor and supervise directors and staff's compliance with the Corporate Governance Policy and the Code of Conduct so that it is in line with those determined by the Board of Directors and to arrange a system where Banpu Power can receive grievance with regards to the Corporate Governance and Code of Conduct from stakeholders
3. To review the structure and components of the Board of Directors, to monitor the term of office of its directors, Chief Executive Officer, and Executive Officers, and to prepare a succession plan of senior executives (starting from Vice President and over)
4. To determine the director's qualifications in line with business strategy and the nomination process by taking into consideration board diversity in terms of skills, experience, gender, and knowledge and competency that correspond with the Company's strategy
5. To recruit and nominate persons as Directors, Chief Executive Officer, and Executive Officers when the term is due or whenever there is a vacancy, or other executive positions as entrusted by the Board
6. To suggest measures for performance evaluation of individual director and the Board of Directors as a group; to participate in the annual evaluation, summarize the evaluation results and report to the Board of Directors as well as monitor the results for improving performance efficiency and enhancing competency of the Company's directors
7. To review and recommend an amendment to the Corporate Governance and Nomination Committee's scope of work, duties and responsibilities to respond to changing circumstances
8. To submit a performance report to the Board of Directors at least once a year

9. To perform any other tasks as assigned by the Board of Director. To ensure that the Corporate Governance and Nomination Committee performs its duties efficiently, the Committee shall conduct the following tasks:
 - 9.1 Within the scope of its authority, the Committee shall invite management or function heads to attend its meeting for clarification or submission of relevant documents.
 - 9.2 The Committee shall hire consultants or organize other activities relating to its duties and responsibilities with the Company's expenses.

In 2021, the Corporate Governance and Nomination Committee convened five meetings with full attendance and all agenda clearly predefined. Further details are available on the Company's website:

https://www.banpupower.com/wp-content/uploads/2021/01/subcommittees_catagory_2_13a57830e89feb454a796a5dd10c9592.pdf

The Compensation Committee consists of three members, namely, an independent director, a non-executive director, and an executive director.

- | | |
|---------------------------------|--|
| 1. Prof. Dr. Bundhit Eua-arporn | Chairman of the Compensation Committee |
| 2. Mrs. Somruedee Chaimongkol | Member |
| 3. Mr. Metee Auapinyakul | Member |

The Compensation Committee's duties are to provide recommendations related to compensation management to the Board of Directors for approval or submission to the shareholders' meeting, as the case may be, which are as follows:

1. To recommend compensation practices and payment of compensation and other fringe benefits to the Board of Directors and Sub-Committees appointed by the Board of Directors
2. To consider and recommend compensation rates and other benefits by taking the duties and responsibilities of the Chief Executive Officer into consideration and review performance evaluation criteria to determine the right annual remuneration
3. To review a compensation structure, compensation rules and regulations as stated in Clause 1 and 2 to suit the person's duties and responsibilities, Banpu Power's operating results and market conditions
4. To review overall budgets for a salary increase, annual bonus payments and provisions of other staff's benefits
5. To review and recommend an amendment to the Committee's scope of work, duties and responsibilities to respond to changing circumstances
6. To submit a performance report to the Board of directors at least once a year
7. To perform any other tasks as assigned by the Board of Directors

In 2021, the Compensation Committee convened four meetings, with full attendance and all agenda items covered. Further details are available on the Company's website:

https://www.banpupower.com/wp-content/uploads/2021/01/subcommittees_catagory_3_0bc6d2ca16c86fd52f67c24d2f8180c.pdf

Meetings of the Board of Directors

The Board of Directors convenes at least once a month, with meeting dates scheduled in advance for the whole year. Any additional meetings may be held if necessary. At the meeting, there are clear meeting agenda items. A complete set of supporting documents is sent to the Board of Directors at least seven days in advance of the meeting to allow the Board an opportunity to properly review the agenda before the meeting. During the meeting, all directors may openly voice their opinions. The Chairman of the Board must summarize views and board resolutions. If any director has a conflict of interest in a matter being considered by the Board, the director is not eligible to cast a vote. The Company allows the meetings to be held online via electronic media complying with the applicable laws of Thailand.

Minutes of all the meetings are recorded in written form and after approval are signed by the Chairman of the Board and the Company Secretary. Records of the meetings are kept as hard copies and scanned electronic files to facilitate quick reference for directors or related persons. These also include other documents attached to a particular agenda. All are kept secure for reference for at least five years with a safeguard system to prevent any alteration and other risks of catastrophe.

Meetings of the Board of Directors and Voting Procedure

The Company set the Board of Directors' meeting and voting procedures as follows: "no less than half of all directors must attend the meeting to form a quorum, and to agree on a resolution there must be no less than 2/3 of all directors" (The Practices for the Board of Directors of Banpu Power Public Company Limited B.E. 2558 Amendment No.2 B.E. 2562).

Meetings of the Non-Executive Directors

The Company held a non-executive directors' meeting (NED meeting) on 2 October 2021, between 10.30-12.00 hrs., with full attendance of seven non-executive directors. During the meeting, all directors were allowed to propose interesting issues outside of the general agenda of the Board of Directors' meeting and voice their opinions or provide useful recommendations about collaboration with the management. The directors also worked together to develop a management approach to achieve the Company's targets as planned and a succession plan for senior management positions.

Summary of Directors' Meetings

In 2021, the Board of Directors and Sub-Committees convened meetings as detailed in the following table:

Name	Title	Terms of Office	2021 Meeting Attendance					
			BOD 12 meetings	AC 9 meetings	CC 4 meetings	GNC 5 meetings	AGM 1 meeting	NED 1 meeting
1. Assoc. Prof. Dr. Naris Chaiyasoot	Chairman of the Board of Directors/Chairman of the Corporate Governance and Nomination Committee/ Member of the Audit Committee	AGM 2020 - AGM 2023	12/12	8/9	-	5/5	1/1	1/1
2. Mr. Yokporn Tantisawetrat	Independent Director/ Chairman of the Audit Committee	AGM 2021 - AGM 2024	12/12	9/9	-	-	1/1	1/1
3. Prof. Dr. Bundhit Eua-arporn	Independent Director/ Chairman of the Compensation Committee/ Member of the Audit Committee	AGM 2021 - AGM 2024	12/12	7/9	4/4	-	1/1	1/1
4. Prof. Dr. Patchanita Thamyongkit	Independent Director/ Member of the Corporate Governance and Nomination Committee/ Member of the Audit Committee	AGM 2021 - AGM 2024	9/9 ¹	7/7 ²	-	3/3 ³	-	1/1
5. Mr. Chanin Vongkusolkrit	Non-Executive Director/ Member of the Corporate Governance and Nomination Committee	AGM 2019 - AGM 2022	12/12	-	-	5/5	1/1	1/1
6. Mr. Metee Auapinyakul	Non-Executive Director/ Member of the Compensation Committee	AGM 2021 - AGM 2024	12/12	-	4/4	-	1/1	1/1
7. Mrs. Somruedee Chaimongkol	Executive Director/ Member of the Compensation Committee	AGM 2020 - AGM 2023	12/12	-	4/4	-	1/1	-
8. Mr. Rawi Corsiri	Non-Executive Director/ Member of the Corporate Governance and Nomination Committee	AGM 2019 - AGM 2022	12/12	-	-	5/5	1/1	1/1
9. Mr. Voravudhi Linananda	Executive Director	AGM 2019 - AGM 2022	12/12	-	-	-	1/1	-
10. Dr. Kirana Limpaphayom	Executive Director/ Chief Executive Officer	AGM 2020 - AGM 2023	12/12	-	-	-	1/1	-

¹Appointed as director by the 2021 Annual General Meeting of Shareholders on 2 April 2021

²Appointed as member of the Audit Committee by the Board of Directors' Meeting No.4/2564 on 30 April 2021

³Appointed as member of the Corporate Governance and Nomination Committee by the Board of Directors' Meeting No.4/2564 on 30 April 2021

Notes: BOD stands for the Board of Directors' Meeting. AC stands for the Audit Committee's Meeting.
CC stands for the Compensation Committee's Meeting. GNC stands for the Corporate Governance and Nomination Committee's Meeting.
AGM stands for the Annual General Meeting of Shareholders. NED stands for the Non-Executive Directors' Meeting.

Remuneration of the Board of Directors

The Board of Directors delegated the Compensation Committee to review the remuneration structure and system and the appropriate remuneration for the Company's directors and senior management. It is prescribed as a policy that remuneration must be appropriate to roles, duties, and responsibilities and competitive in the job market and business. Executive remuneration is determined based on individual performance to be an incentive for effective performance.

Remuneration of the Board of Directors consists of monthly salary and meeting allowance paid for each meeting attendance. Annual gratuity will be linked to the dividend paid out to shareholders, and the payment of the Board of Directors' remuneration must be approved by the shareholders' meeting.

The Compensation Committee reviewed and determined remuneration of the Board of Directors based on the Board's duties and responsibilities benchmarked against those in other publicly-listed companies of similar industries and businesses in Thailand. The consideration process was transparent and to build confidence for shareholders. The remuneration of the Board of Directors was approved by the Board meeting and the 2021 Annual General Meeting of Shareholders as detailed below:

Remuneration Structure	2021
Remuneration of the Board of Directors	
1. Monthly remuneration (THB/month)	
• Chairman of the Board of Directors	52,000
• Other directors	40,000
2. Meeting allowance for the Board of Directors paid for each meeting attendance (THB/meeting)	
• Chairman of the Board of Directors	52,000
• Non-Executive Directors	40,000
Meeting allowance for the Audit Committee paid for each meeting attendance (THB/meeting)	
• Chairman of the Audit Committee	31,200
• Member of the Audit Committee	24,000
Meeting allowance for the Corporate Governance and Nomination Committee and the Compensation Committee paid for each meeting attendance (THB/meeting)	
• Chairman of Corporate Governance and Nomination Committee and Chairman of the Compensation Committee	26,000
• Member of Corporate Governance and Nomination Committee and Member of the Compensation Committee	20,000

Remuneration in Cash for the Year Ended 31 December 2021

Total cash remuneration of the Board of Directors in the forms of monthly compensation, meeting allowance, and annual remuneration amounted to THB 12,775,217.91, the details of which are as follows:

Name/ Position	Monthly Allowance and Meeting Allowance Paid for Each Meeting Attendance for Directors	Meeting Allowance for the Audit Committee	Meeting Allowance for the Compensation Committee	Meeting Allowance for the Corporate Governance and Nomination Committee	Directors' Gratuity*	Total Remuneration
1. Assoc. Prof. Dr. Naris Chaiyasoot Chairman of the Board of Directors/Chairman of the Corporate Governance and Nomination Committee/Member of the Audit Committee/Independent Director	936,000.00	192,000.00	-	130,000.00	1,578,109.45	2,836,109.45
2. Mr. Yokporn Tantisawetrat Chairman of the Audit Committee/Independent Director	720,000.00	280,800.00	-	-	1,213,930.35	2,214,730.35
3. Prof. Dr. Bundhit Eua-arporn Chairman of the Compensation Committee/Member of the Audit Committee/Independent Director	700,000.00	168,000.00	104,000.00	-	1,213,930.35	2,185,930.35
4. Prof. Dr. Patchanita Thamyongkit** Member of the Corporate Governance and Nomination Committee/Member of the Audit Committee/Independent Director	540,000.00	168,000.00	-	60,000.00	910,447.76	1,678,447.76
5. Mr. Chanin Vongkusolkit Member of the Corporate Governance and Nomination Committee/Non-Executive Director	700,000.00	-	-	100,000.00	-	800,000.00
6. Mr. Metee Auapinyakul Member of the Compensation Committee/Non-Executive Director	720,000.00	-	80,000.00	-	-	800,000.00
7. Mrs. Somruedee Chaimongkol Member of the Compensation Committee/Executive Director	480,000.00	-	-	-	-	480,000.00
8. Mr. Rawi Corsiri Member of the Corporate Governance and Nomination Committee/Non-Executive Director	720,000.00	-	-	100,000.00	-	820,000.00
9. Mr. Voravudhi Linananda Executive Director	480,000.00	-	-	-	-	480,000.00
10. Dr. Kirana Limpaphayom Executive Director/ Chief Executive Officer	480,000.00	-	-	-	-	480,000.00
Total						12,775,217.91

Notes: *Gratuity for four directors in 2021 amounting THB 4,916,417.91 needs to be approved by the 2022 Annual General Meeting of Shareholders since the directors appointed by major shareholders and executive directors manifested an intent not to accept the gratuity.
**Prof. Dr. Patchanita Thamyongkit was appointed as a Board member by the 2021 Annual General Meeting of Shareholders on 2 April 2021.

In addition to the above remuneration, each director received other benefits, including an annual medical check-up fee of THB 50,000 and fees for attending seminars held by the Thai Institute of Directors (IOD) and other related institutions as regulated by the Company.

Details of the Management

The management consists of:

- Dr. Kirana Limpaphayom Chief Executive Officer
- Mr. Praphan Likitwacharakorn Chief Operating Officer
- Miss Benjamas Suratanakavikul Chief Financial Officer
- Mr. Padungsak Thanakij Senior Vice President – Power Business, Vietnam
- Mr. Pilun Pochanart Senior Vice President – Power Business, China

Remuneration of the Management

Cash remuneration of the Company's executives in the form of salary and bonus is rewarded based on performance against the pre-determined key performance indicators and individual achievement.

Unit: THB	Number of Executives	2021	Number of Executives	2020
Total Salaries	5	41,290,128.00	5	33,928,566.00
Total Bonuses	5	15,217,800.00	5	4,928,400.00
Total		56,507,928.00		38,856,966.00

Notes: In 2021, there were five executives, namely, 1. Dr. Kirana Limpaphayom, 2. Mr. Praphan Likitwacharakorn, 3. Ms. Benjamas Suratanakavikul, 4. Mr. Padungsak Thanakit, and 5. Mr. Pilun Pochanart.

In 2020, there were five executives, namely, 1. Dr. Kirana Limpaphayom, 2. Mr. Praphan Likitwacharakorn, 3. Ms. Benjamas Suratanakavikul, 4. Mr. Padungsak Thanakit, and 5. Mr. Pilun Pochanart.

Other Remunerations

- Contribution to Provident Fund

Details of the Company's contribution to the provident fund for executives are as follows:

Unit: THB	Number of Executives	2021	Number of Executives	2020
Contribution to the provident fund	5	972,390.00	5	1,241,352.00

- The Employee Stock Option Plan for Directors and Employees of the Company and its subsidiaries (BPP-ESOP)

The 2017 Annual General Meeting of Shareholders on 3 April 2017 approved the issue and offering of newly issued ordinary shares of the Company under the Employee Stock Option Plan for Directors and Employees of the Company and its subsidiaries (BPP-ESOP). The shareholders meeting also approved the allocation of the newly issued shares in the amount of not exceeding 30,000,000 shares, with a par value of THB 10 per share under such ESOP Plan. 18,300,000 shares, or 61% of the ESOP Plan, were allocated to the directors and employees of the Company and its subsidiaries as a reward for their performance and continued dedication to driving the growth of the Company. Moreover, the meeting approved the allocation of 11,700,000 shares, or 39% of the ESOP Plan, which the Compensation Committee would consider and allocate these shares as appropriate. In 2018 and 2019, the Compensation Committee approved the allocation of 2,200,000 BPP-ESOP shares to the directors and employees of the Company and its subsidiaries. In sum, a total of 20,500,000 shares were issued; there remain 9,500,000 unallocated BPP-ESOP shares.

The Company set the first date for the exercise of rights to buy ordinary shares on 19 October 2017, and the latest date so far was on 19 October 2021. Through five years of the program, exercises of right to buy ordinary shares were equal to 2,340,000 shares. There remain 27,660,000 shares for right exercise under the BPP-ESOP program.

Shareholdings of the Board of Directors and Management

In compliance with Article 89/1/4 of the Securities and Exchange Act (No. 4) B.E. 2551 and the Notification of Capital Market Supervisory Board TorChor. 2/2552, RE: Reporting of Interests of Directors, Executives and Related Persons, directors shall report their shareholdings in Banpu Power Public Company Limited held by themselves, their spouses and minor children to the Board of Directors' meeting on a monthly basis. As of 31 December 2021, shareholdings of directors and executives are as follows:

Name	Ordinary Share (Share)		
	31 Dec 2021	31 Dec 2020	+ / (-)
1) Assoc. Prof. Dr. Naris Chaiyasoot	-	-	-
Spouse/Minor child	-	-	-
2) Mr. Yokporn Tantisawetrat	60,000	60,000	-
Spouse/Minor child	-	-	-
3) Prof. Dr. Bundhit Eua-arporn	80,000	80,000	-
Spouse/Minor child	-	-	-
4) Prof. Dr. Patchanita Thamyongkit	-	N/A	-
5) Mr. Chanin Vongkusolkit	35,711	1,005,711	(970,000)
Spouse/Minor child	330,000	330,000	-
6) Mr. Metee Auapinyakul	431,500	431,500	-
Spouse/Minor child	33,400	33,400	-
7) Mrs. Somruedee Chaimongkol	1,792,179	1,792,179	-
Spouse/Minor child	-	-	-
8) Mr. Rawi Corsiri	60,000	60,000	-
Spouse/Minor child	62,142	62,142	-
9) Mr. Voravudhi Linananda	100,000	100,000	-
Spouse/Minor child	1,100	1,100	-
10) Dr. Kirana Limpaphayom	N/A	120,000	-
Spouse/Minor child	N/A	13,036	-
11) Ms. Benjamas Suratanakavikul	N/A	-	-
12) Mr. Padungsak Thanakij	N/A	23,000	-
Spouse/Minor child	N/A	-	-
13) Mr. Pilun Pochanart	N/A	1,514	-
Spouse/Minor child	N/A	1,552	-
14) Mr. Praphan Likitwacharakorn	-	-	-
Spouse/Minor child	-	-	-

Information about Employees

(1) Total employees of Banpu Power and its subsidiaries as of 31 December 2021.

Country	Number of Employees (Persons)
Thailand	27
China	918
Total	945

(2) Remuneration of Employees

2.1 In 2021, the total cash remuneration of Banpu Power's and its subsidiaries' employees in Thailand, China, Japan, and Vietnam, including salaries and bonuses, amounted to THB 860,553,104.93.

Unit: THB	2021	2020
Salaries	668,288,725.76	604,521,995.42
Bonuses	192,264,379.17	36,361,071.59
Total	860,553,104.93	640,883,067.01

2.2 Other Remunerations

In 2021, Banpu Power's and its subsidiaries' contributions to the provident fund for their employees in Thailand, China, Japan and Vietnam amounted to THB 26,486,030.42.

Unit: THB	2021	2020
Contribution to Provident Fund	26,486,030.42	23,772,233.45

(3) Significant labor disputes over the last three years

-None-

Human Resource Management

Banpu Power Public Company Limited has adopted a strong human resource management policy and corporate culture from its major shareholder – Banpu Public Company Limited, an internationally renowned company with almost four decades of professionalism. The Company considers “employees” as the most valuable asset and the key to sustainable business growth. That is why the Company’s human resource management has put the employee at the core of all processes. Banpu Power has managed its human resources in all countries, which are diverse in terms of race, language, culture, age, expertise, perspective, and work experience to create a happy work environment and highest efficiency while generating sustainable value to stakeholders.

Human Resource Management Approach

Banpu Power is committed to aligning its human resource management with the Company’s vision while embracing an agile way of working in accordance with its long-term business strategy. In 2021, the Banpu group still maintained the “Banpu People Value Proposition” management approach as the core of human resource management to effectively fit into the new context and internalize the “One Banpu, One Goal” concept in employees in all business groups and countries. It has also adhered to the three fundamental management principles: equitability, performance base, and competency base.

The Company is also determined to develop the workforce’s potentials to work in harmony, with high agility and adaptability. It also embraces different perspectives and is willing to innovate, which will drive the Company toward being a power-generating company for the sustainable world, friendly to the community and the environment.

In 2021, Banpu Power implemented four human resource strategies as follows:

1. Continuous Improvement of Workforce Capability in All Countries



People Capability Development Policy

Banpu Power has attached great importance to workforce development, sharing of knowledge, expertise, and innovations in integrated energy operations through continuous collaboration with Banpu group to drive rapid business growth and strengthen long-term competitive advantage. In 2021, the Company adapted the human resource development to fit the circumstances and embraced a new working trend – a flexible workplace – by promoting online self-learning. Moreover, it elevated



An online training organized to enhance employees’ commercial mindset skills comprehensive workforce development in all host countries to facilitate Banpu group’s long-term growth. The Company focused on improving every critical

process, namely building Banpu Global Talent Pool to prepare for international expansion, planning a company-wide workforce strategy, implementing suitable Learning Solution Design for each business and job position, developing Personalized Learning Programs for key positions, and creating accurate Learning and Development Measurement on shaping new behaviors and empirical measurement of business impacts.

In addition, the Company has continued to design and develop training programs for executives and employees at all levels to encourage continuous learning through Learning Application Project (LAP). The project enhances the application of knowledge gained to real work situations and broadening such knowledge through the design thinking process, which regards human beings as the crux of development. Participants practiced creative thinking and innovative thinking to reskill and upskill themselves so that they become more agile and are able to thrive sustainably in alignment with the Company’s business direction.



Continuous Succession Planning and High Potential Management

One of the Company’s workforce planning and management strategies to achieve fast and agile working is Succession Planning and High Potential Management to mobilize sustainable business operations in response to Banpu Power’s rapid business expansion. In 2021, the Company and the Succession Plan Committee selected and constantly monitored the development of the potential successors for senior executive roles. Each successor is expected to have an Individual Development Program (IDP). The Company also recruited new employees and executives to enhance the succession plan for all countries, which is subject to monitoring and assessment to ensure that the succession plan is aligned with the corporate strategy.

To facilitate future growth and business expansion overseas, in 2021, Banpu Power launched a Leadership Pipeline Development project aiming to improve the readiness of mid-level and higher executives. They will be fully equipped in people management, operation management and the ability to grow as the Company’s future leaders. The candidate selection process systematically incorporates assessments of leadership capability and leadership characteristics to raise the candidates’ awareness of their strengths and areas for improvement. The Personalized Learning Program will also prepare them for their future leadership roles both in Thailand and abroad. Furthermore, the Company enriches high potential employees with business knowledge, analytical thinking skills, and managerial skills through cross-functional and cross-country working as well as job rotation. Their progress is monitored against the personalized learning program on a quarterly basis.



Strong Corporate Culture, Comprising “Passionate, Innovative, and Committed,” Which Unites All Banpu People toward “One Banpu, One Goal”

The core principle of Banpu Power’s human resource management is to continually build a strong corporate culture to leverage Banpu group’s power of diversity in creating innovations and sustainable business growth. “Banpu Heart” is the corporate culture all Banpu group’s and Banpu Power’s executives and employees have always upheld in all areas of operation. “Banpu Heart” consists of three shared values: Passionate, Innovative, and Committed.

Banpu Power has put “Banpu Heart” at the heart of all operations and all processes involved by employees in each host country, such as recruitment of new employees, orientation, performance evaluation, job promotion, an annual survey on corporate culture, and employee engagement. Also, the Company has organized various activities to encourage

employees to understand and apply the “10 Designed Behaviors” in everyday work and use these behaviors to drive Banpu group’s and Banpu Power’s business goals.

In 2021, the Company moved more activities online to accommodate changes and continually strengthen the corporate culture. The activities included the orientations of new employees using mobile apps and a fun introduction of the corporate culture to employees in each country using gamification. Employees were encouraged to think innovatively, strengthen innovative culture, and be “open to any opinions.” They were also allowed to present their ideas for innovation and better performance.

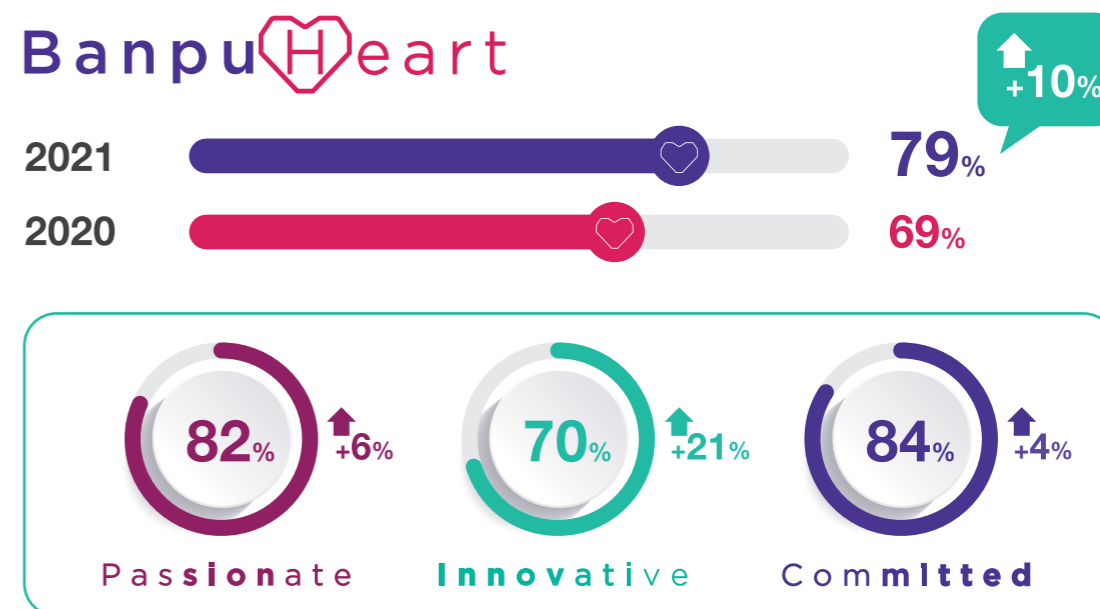


<p>Recruitment</p> <p>Design “Culture-Fit Assessment” to screen appropriate candidates</p>	<p>Orientation</p> <p>Organize new employee orientation on “Banpu Heart” corporate culture via mobile apps</p>	<p>Capacity Building</p> <p>Strengthen corporate culture through various activities adaptable to changing situations</p>	<p>Performance Assessment</p> <p>Integrate “Banpu Heart” as part of performance assessment</p>
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In 2021, Banpu Power conducted a survey on the corporate culture “Banpu Heart” to measure levels of employee engagement and alignment of employee behaviors with the corporate culture in order to accurately reflect “Banpu Heart,” as employees are considered one of the key internal customers or stakeholders of the Company.

The 2021 survey results showed that employee behavior alignment with Banpu Heart reached 79%, increasing by 10% from the previous year. Meanwhile, the employee engagement level was 69%. This reflects the Company’s commitment to strongly embed the corporate culture in employee behaviors, being able to consistently maintain the satisfactory employee engagement level.

Alignment Level of Employee Behaviors with Banpu Power’s Corporate Culture in 2021



Banpu Power’s Employee Engagement Levels in 2021



2. Agility-Oriented Organizational Structure

Banpu Power regularly reviews and restructures its organization to strengthen the business in collaboration with Banpu group. In 2021, Banpu Power still maintained the “Product Based Organization Structure,” decentralizing management authority of power business executives in each country to help increase agility in diversely competitive conditions. The decentralized structure simultaneously strengthens management and creates synergies between power businesses in different countries to support Banpu group’s business ecosystem.

Other Significant Information

The Appointed Person to Directly Supervise Accounting

Ms. Benjamas Suratanakavikul, the Chief Financial Officer, has been appointed as the person directly supervising accounting of the Company. For further details and qualifications of the person supervising accounting, please visit the Company’s website: <https://www.banpupower.com/about-banpu/management-team/?lang=EN>.

Company Secretary

The Board of Directors appointed Ms. Thassanee Passarapark as Company Secretary, effective from 1 January 2019, with authority and responsibilities as stipulated in the Securities and Exchange Act (No. 5), B.E. 2559, an amendment of the Securities and Exchange Act, B.E. 2535. The Company Secretary is responsible for organizing meetings for the Board of Directors and shareholders, ensuring compliance with the meetings’ resolutions, and advising the Board on rules and regulations with which it must comply. Additionally, the Company Secretary is

responsible for preparing and keeping the register of directors, Board meeting invitation letters, Board meeting minutes, Banpu Power Annual Report, invitation letters to attend the shareholders' meeting and records of its minutes, the report on conflict of interests of directors or executive officers and other duties required by the Office of the Securities and Exchange Commission, Thailand, the Capital Market Supervisory Board and the Stock Exchange of Thailand. For further details and qualifications of the Company Secretary, please visit the Company's website: https://www.banpupower.com/wp-content/uploads/2022/02/Profile_COMSEC_EN.pdf.

Head of Internal Audit Division

The Audit Committee appointed Ms. Orawan Phunamsarp as Head of Internal Audit and Secretary of the Audit Committee, effective from 1 December 2018, to supervise the Company's internal audit division. For further details and qualifications of the Head of Internal Audit, please visit the Company's website:

https://www.banpupower.com/wp-content/uploads/2022/02/Profile_IA_EN.pdf.

Investor Relations

The Investor Relations Department discloses information through the Company's website: <https://www.banpupower.com/investor-relations/> to ensure inclusive and equitable access to information for all stakeholders. Interested parties may contact or make inquiries to the Company's Investor Relations via Phone: +66 2077 6000, via Fax: +66 2007 6060, or via Email: investor_relations@banpupower.co.th.

Auditors

The Audit Committee considered the selection of auditors from PricewaterhouseCoopers ABAS Limited (PwC) based on Banpu Power's evaluation criteria, including their independence, quality and standard of operation, and auditors' qualifications in line with the Stock Exchange of Thailand's regulations. The Audit Committee proposed the following individuals from PricewaterhouseCoopers ABAS Limited (PwC) as auditors for the annual accounting period for the year ended 31 December 2021:

- | | | |
|----|---------------------------------|---|
| 1. | Ms. Rodjanart Banyatananusard | CPA, License No. 8435;
The auditor who signs the Company's financial statements and/or |
| 2. | Ms. Amornrat Permpoonwattanasuk | CPA, License No. 4599; and/or |
| 3. | Mr. Pongthavee Ratanakoses | CPA, License No. 7795; and/or |
| 4. | Mr. Boonrueng Lerdwisewit | CPA License No. 6552. |

Use of Auditors Unconnected with the Company's Auditors

In accordance with Clause 18 (6)(b) of the Notification of Capital Market Supervisory Board TorChor. 28/2551, Application for and Approval of Offer for Sale of Newly Issued Shares, the financial budget of subsidiaries and affiliate companies must be audited and reviewed by (1) Banpu Power's auditors except that such auditors cannot perform auditing in accordance with the laws and regulations in the countries where such company is located, or (2) the local auditors from the audit office that belongs to the same network as the audit office of Banpu Power's auditors. Both audit offices must be full members of the particular network. In 2021, all the Company's core business subsidiaries and affiliate companies appointed auditors of the same network of PricewaterhouseCoopersABAS Limited (PwC) to be the Company's auditors.

Audit Fees

1. Audit Fees

In 2021, Banpu Power paid the audit fees in the total amount of THB 1,737,961 to PricewaterhouseCoopers ABAS Limited (PwC) for auditing the Company's and its subsidiaries' accounts and consolidated financial statements. In accordance with the standards of information disclosure about persons and enterprises connected with the auditors and the auditing office, it is clarified that those persons and enterprises have no connection with the Company and subsidiaries.

2. Non-Audit Fees

In 2021, the Company paid non-audit service fees for PricewaterhouseCoopers ABAS Limited (PwC) of THB 68,516, excluding out-of-pocket expenses, such as domestic travel expenses, telephone bills, postage and stamp charges, copy service fees, which shall not exceed 5% of the total audit fees.

3. Corporate Governance Performance

Summary of the Board Performance in 2021

In 2021, the Board of Directors played a pivotal role in establishing policies and strategies to enhance competitiveness, cultivate the corporate culture and values, and increase the effectiveness and sufficiency of the internal control and risk management system. The Board also provided beneficial suggestions for business development as follows:

1. The Board reviewed and amended the Corporate Governance Policy and Code of Conduct Handbook regarding the CEO holding directorship in other companies and blackout periods and reporting changes in shareholding of the directors and the management.
2. The Board established Personal Data Protection Policy, stipulating clear criteria, mechanisms, and measures for overseeing and managing personal data. The policy is enforced on individuals identifiable by personal data and/or any individuals disclosing their personal data to the Company, including the Board, executives and employees at all levels, and business partners, as well as individuals participating in the activities involving personal data.
3. The Board amended the Charter of the Audit Committee and the Charter of the Corporate Governance and Nomination Committee to align their scope of duties with the SEC's Corporate Governance Code for Listed Companies (CG Code) 2017 and changing business climate to increase the Company's competitive advantage.
4. The Board considered four policies and practices relevant to the Environmental, Social, and Governance (ESG) as follows:
 - (1) Innovation Policy
 - (2) Waste Management Policy
 - (3) Information and Cyber Security Policy
 - (4) Stakeholder Engagement Standard Practice Manual
5. The Board reviewed an materiality assessment of sustainability of the Company to correspond with the extended scope of work, risks related to ESG, and trends of changes.
6. The Board oversaw risks related to business operations and risks related to ESG including impact from the climate change on a regular basis in every monthly and quarterly meeting.
7. The Board reviewed and approved investments according to the Greener & Smarter strategy, in response to the climate change, in High Efficiency, Low Emissions (HELE) and renewable power plant projects which include Nakoso IGCC, Temple I CCGT, solar and wind farms, and carbon capture to sell and reduce GHG emissions in Zhengding combined heat and power plant.
8. The Board reviewed the implementation of the SEC's CG Code 2017 to create sustainable value for the Company and reviewed the performance according to practices prescribed in the CG Code to ensure that the performance and development plan well suit the Company's business operations. For some parts of the CG Code that have not yet been applied to its business context, the Board has substituted them with other appropriate measures.

Nomination, Development, and Evaluation of the Board of Directors

Nomination, development, and evaluation of the Board of Directors are of utmost importance because the Board has a critical role in establishing strategies and business direction to achieve sustainable growth. The Company has disclosed information and details about the criteria and process of "Nomination and Appointment of Directors, Sub-Committee Members, Chief Executive Officers, and Senior Executives" on page 132, "Performance Evaluation of the Board of Directors" on page 134, and "Capacity Development for Directors and Senior Executives" on page 136.

Meetings of the Board of Directors

The Board of Directors convenes at least once a month with an annual board meeting schedule set in advance, and with special meetings as appropriate. Meeting agendas were clearly set, with complete meeting documents sent to directors seven days prior to meeting dates so that they have sufficient time to study relevant information before the meeting. During the meeting, all directors may openly voice their opinions, and the Chairman of the Board of Directors has a duty to summarize views and board resolutions. Any director having any potential conflict of interest in relation to a matter which is being considered shall leave the meeting room. In addition, meetings via electronic means are also permitted in compliance with the relevant state decree on electronic meetings.

Minutes of all meetings are recorded in written form, and after being approved, they are signed by the Chairman of the Board of Directors and the Company Secretary to certify their accuracy. Records of the meetings are kept as hard copies and scanned documents to facilitate quick reference for directors or related persons. These also include other documents attached to a particular agenda. All are maintained for reference for at least five years with a safeguard system to prevent any alteration and other risks from catastrophic events. Meeting attendance of the Board of Directors can be found on page 158.

Remuneration of the Board of Directors

The Board of Directors delegated the Compensation Committee to review the remuneration structure and payment system and the appropriate remuneration for the Company's directors and senior management. It is prescribed as a policy that remuneration must be appropriate to roles, duties, and responsibilities and competitive in the job market and business. Executive remuneration is determined based on individual performance to be an incentive for effective performance.

Remuneration of the Board of Directors consists of monthly compensation and meeting allowance paid for each attendance. Annual gratuity will be linked to the dividend paid out to shareholders, and the payment of the Board of Directors' remuneration must be approved by the shareholders' meeting. The remuneration of the Board of Directors can be found on page 159.

Corporate Governance of Subsidiaries and Affiliated Companies

The Company has a policy for governance and management of subsidiaries and affiliates ("**Governance Policy for Subsidiaries**") and Delegation of Authorities (DOA) to oversee the management and protect the benefits of the Company's investment.

To comply with laws and regulations on securities and securities exchange, and notifications, rules, orders, and regulations of the Securities and Exchange Commission (SEC), the Capital Market Supervisory Board, and the Stock Exchange of Thailand (SET), the Board of Directors of Banpu Power Public Company Limited considered and approved the governance policy for the Company, its subsidiaries, and affiliated companies. The policy requires Banpu Power, subsidiaries, and its affiliated companies to comply with rules stipulated by the Capital Market Supervisory Board, the SEC, related rules, notifications, orders, and the SET's regulations. These include the Notification of the Capital Market Supervisory Board No. TorChor. 28/2551 Re: Application for Approval and Granting of Approval for Offering of Newly Issued Shares (Codified), the Notification of the Capital Market Supervisory Board No. TorChor. 21/2551 Re: Rules on Connected Transactions and the Securities and Exchange Commission's notification Re: Disclosure of Information and Other Acts of Listed

Companies Concerning the Connected Transactions B.E. 2546 and the related notification (Codified) (“**Re: Rules on Connected Transactions**”) and the Notification of the Capital Market Supervisory Board No.TorChor. 20/2551 Re: Rules on Entering into Material Transactions Deemed as Acquisition or Disposal of Assets, and the SEC’s Notification Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Acquisition and Disposition of Assets B.E. 2547 and the related notification (Codified) (“**Re: Rules on Acquisition or Disposal of Assets**”).

“Subsidiary” and “affiliated company” herein refer to any subsidiary or affiliated company that engages in business as stipulated in Article 18/1, with the total value in compliance with Article 18 (2) of the Notification of the Capital Market Supervisory Board No. TorChor. 28/2551 Re: Application for Approval and Granting of Approval for Offering of Newly Issued Shares (Codified) and the Notification of the Securities and Exchange Commission No. KorChor. 17/2551 Re: Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities (Codified).

Internal Control Policy and Central Management Policy

The Board of Directors and the Management allow the Global Internal Audit and Compliance Department to work independently by submitting an internal audit report directly to the Audit Committee. The Unit is also required to report on the progress of internal audits to the Board of Directors on a quarterly basis. Management within each subsidiary is determined based on the Company’s investment equity. The Board of Directors has a duty to appoint an executive to serve as a director in each subsidiary to ensure alignment of the business direction with the Company’s policies and strategies. Director selection criteria are knowledge, capabilities relevant to the subsidiary’s business, work location (in case of an overseas subsidiary), health conditions, and readiness of the director. The list of directors in each subsidy is subject to review at least once a year.

Budget Policy

Investment budget preparation and implementation have to comply with the budget regulations of each subsidiary and be consistent with Banpu Power’s budget rules. Budget preparation and review must be completed within the deadline, and the corresponding information must be submitted according to the Company’s standard operation. The project investments, which cost more than THB 1,500 million and exceed the approved budget by 15%, shall be approved by the Board of Directors.

Corporate Governance and Compliance Monitoring

Reporting of Interests of Directors and Executives

In compliance with Section 89/1/4 of the Securities and Exchange Act (No. 4) B.E. 2551 and Capital Market Supervisory Board Notice No. TorJor. 2/2552 RE: Report on Interest of Directors, Executives, and Related Persons, the Board of Directors are required to report the securities of Banpu Power held by themselves, their spouses, and minor children who are not sui juris to the Board of Directors’ meeting on a monthly basis. The Board of Directors and the executives’ holding of Banpu Power’s securities as of 31 December 2021 are shown under the section “Shareholdings of the Board of Directors and Management” on page 162.

Anti-Corruption

Banpu Power has always upheld the principles of good corporate governance in its management, focusing on transparency, integrity, and ethics. It also underlines effective operations as well as responsibilities to society, the environment, and all stakeholders. There is a specific department in the organization which has a clear mission to supervise and monitor business operations to ensure compliance with laws and corporate governance principles.

The Company formulated the Anti-Corruption Policy in 2015 to combat corruption. The policy is under the supervision of the Corporate Governance and Nomination Committee and the Corporate Governance Division. The Company communicates the policy to employees through orientations of new employees and other activities. Complaints submitted via all complaint channels are gathered and reported to the Corporate Governance and Nomination Committee

as well as related departments for further action. The Company also established the Whistleblower Policy to protect whistleblowers and encourages whistleblowing against wrongdoings toward the Company and to other stakeholders. Complaint issues are brought to the Corporate Fraud Management Committee and subsequently submitted to senior management for consideration.

In 2018, the Company formulated practices based on the Anti-Corruption Policy regarding giving and receiving gifts, business entertainment, and other benefits. The Practices for the Board of Directors of Banpu Power Public Company Limited B.E. 2558 was amended by adding anti-corruption measures to the duties and responsibilities of the Board of Directors.

The Company expressed its intention to combat corruption as part of Thailand’s Private Sector Collective Action Coalition Against Corruption (CAC) in 2018 and applied for the certification to be a CAC member and was certified in the third quarter of 2019.

In 2019, Banpu Group developed a Supplier Code of Conduct for all companies to implement and comply with. It is regarded as a fundamental practice for the Company’s suppliers in operating business with adherence to environmental, social, and governance, as well as respect for human rights, pursuant to the Sustainable Supply Chain Policy.

The Company set up the Corporate Compliance Department to manage risks from operations that may infringe rules and regulations and to oversee legal compliance of all business units’ operations based on their activities, which are made into regulatory compliance checklists. The Corporate Compliance Department will review the checklists and prepare a compliant report semi-annually. All business units must stay up to date with legal and regulatory changes.

The Risk Management Department is responsible for business risk assessment, covering the strategic plan and annual action plans, and preparation of preventive measures and solutions. The Department also reviews the risks and reports the results to the Board of Directors on a quarterly basis.

In 2021, the Company organized training and communicated to employees about the Anti-Corruption Policy and practices as well as other related policies, such as the Corporate Governance Policy and the Code of Conduct Handbook, Anti-Corruption Policy, the Standard Practice Manual for Accepting and

Offering of Gifts, Hospitality, or Other Similar Forms of Reward. Employees can access the policies via internal communication channels and the Company’s website. The Company also sent out an open letter requesting our stakeholders to refrain from offering gifts to the Board of Directors, executive officers, and employees. In addition, the Company improved its Anti-Corruption Policy to align with the CAC’s approach, which has been revised. The Company also conducted a corruption risk assessment and prepared mitigative measures for 2021 to cover risks in all businesses in every country where it has invested, including subsidiaries and joint ventures, and presented them to the Risk Management Committee.

Internal Information Usage Control

In 2021, there were no reports of insider trading violations or non-compliance with the Stock Exchange of Thailand’s and the Office of the Securities and Exchange Commission’s rules and regulations on the securities exchange. Apart from that, the Board of Directors and executives had disclosed their holding of the Company’s securities on the date they were appointed and reported changes in securities, including those of their spouses and minor children as well as connected persons, to the Board of Directors’s meeting for acknowledgment on a monthly basis.

Whistleblowing and Corporate Governance Complaint Handling

The Company has created a communication channel and procedures for complaint handling, covering all groups of stakeholders, via the Company’s website under the Corporate Governance section. Complaints can be sent to the Chairman of the Corporate Governance and Nomination Committee at GNCchairman@banpupower.co.th and/or the Secretary of the Corporate Governance and Nomination Committee at bpp_comsec@banpupower.co.th. The Committee Secretary, who is a responsible person for complaint handling, will quarterly report the complaints to the Corporate Governance and Nomination Committee and annually submit a summary report to the Board of Directors. In 2021, there were no significant complaints on Corporate Governance from stakeholders.

Assessment of Material Sustainability Issues

The Board of Directors has performed sustainability operations by embracing the Environmental, Social, and Governance (ESG) concerns. So far, there have been changes in business operations and emerging risks that impact the Company's sustainability, for instance, cybersecurity risk, environmental compliance risk, and international standard practice. To cope with such risks and changes while maintaining sustainability, in 2021, the Company conducted an ESG materiality assessment to be used as a framework for future Key Performance Indicators (KPI). The ESG issues were assessed based on the following criteria:

- Levels of risk impact on the Company's business in terms of finance, operation, growth strategy, reputation, and legal compliance
- Levels of direct and indirect impacts on stakeholders
- Risk probability and likelihood

On 6 May 2021, the Board of Directors organized a workshop to assess the Company's ESG risk issues, and 12 out of 36 ESG issues were identified as material issues which may significantly impact the Company. The material ESG issues found are as follows:

a) Environmental

1. Climate Strategy and Greenhouse Gas Emissions
2. Electricity Generation
3. Air Emissions
4. Water-Related Risk

b) Social

5. Safety
6. Human Capital Development
7. Talent Attraction & Retention
8. Succession Planning

c) Governance

9. Business Continuity Management
10. Risk Management
11. Innovation
12. Process Improvement and Digital Transformation

Report of the Audit Committee 2021

The Audit Committee of Banpu Power Public Company Limited consists of four independent directors who are competent and have relevant experience in finance and accounting, economics, risk management, engineering, chemical science, and energy business as follows:

- 1) Mr. Yokporn Tantisawetrat Chairman of the Audit Committee
- 2) Assoc. Prof. Dr. Naris Chaiyasoot Member of the Audit Committee
- 3) Prof. Dr. Bundhit Eua-arporn Member of the Audit Committee
- 4) Prof. Dr. Patchanita Thamyongkit Member of the Audit Committee

Ms. Orawan Phunamsarp is the Head of Internal Audit and the Secretary to the Audit Committee.

The Audit Committee is fully aware of its duties and responsibilities stipulated in the Audit Committee Charter as well as other duties entrusted by the Board of Directors with independence and in compliance with the Best Practice Guidelines for Audit Committee and the regulations of the Stock Exchange of Thailand. The Audit Committee underlines compliance with the principles of good corporate governance, effective and efficient systems of risk management, as well as internal control and internal audit to create sustainable value for the organization based on the Three Lines Model¹.

In 2021, the Audit Committee convened nine times at which a quorum was established with the participation of the management, Internal Audit, and the external auditors on the related agenda. The Audit Committee also held a private meeting with the external auditors without the presence of the management. The results of the Audit Committee meetings were quarterly reported to the Board of Directors. The Audit Committee's main activities can be summarized as follows:

1. **Review of Financial Statements:** The Audit Committee reviewed Banpu Power's quarterly financial statements and the 2021 annual financial statements on major issues, including related party transactions, transactions with a possible conflict of interest, and the appropriateness of accounting policies. The Committee also reviewed material accounts, significant changes in accounting and adjustment, accounting estimates, the disclosure of notes to the financial statements, and the external auditor's observations from the review and audit of the financial statements. The Audit Committee received sufficient explications from external auditors, management, and related parties and ensured that the financial statements were prepared in compliance with laws and financial reporting standards. The disclosure of notes to the financial statements was accurate, sufficient, and timely for the benefit of investors and users of the financial statements.
2. **Review of Internal Control and Internal Audit:** The Audit Committee reviewed the internal control system together with the Internal Audit Division in the areas of operations, resource utilization, asset care, prevention or reduction of mistakes, damages, and corruption, reliability of financial reports, compliance with laws, regulations, and rules, improvement of the corporate governance process, risk management, internal control, and oversight of compliance with relevant regulations. It was emphasized on awareness-raising for employees to adhere to the air-tight internal control with prudence and carefulness. The Committee also considered the result of self-evaluation based on the Self Evaluation Form formulated by the Office of the Securities and Exchange Commission (SEC). Overall, the Audit Committee concluded that Banpu Power had an adequate, appropriate, and effective internal control system that covers the corporate level as well as activity level.

¹ This principle were renamed from Three Lines of Defense to Three Lines Model in July 2020.

Source : <https://global.theiia.org/about/about-internal-auditing/Pages/Three-Lines-Model.aspx#positionpaper>

The Audit Committee reviewed the Internal Audit Division operation by approving the annual audit plan and budget as well as evaluating the performance of the Head of Internal Audit and performance of the division as well as the internal audit service provider (Banpu Public Company Limited, according to the Management Service Agreement). Moreover, the Committee provided advice and followed up the audit results against the audit plan. The Committee stressed preventive audit measures and monitoring prompt corrective action of significant issues. Internal audit and follow-up results were regularly reported to the management. It was also reported to the Audit Committee on a quarterly basis. During the COVID-19 pandemic, the Company has adopted the remote audit protocol with the support of data analytics for more efficient internal auditing of subsidiaries and affiliated companies in Thailand and abroad.

3. **Review of Legal and Regulatory Compliance:** The Audit Committee reviewed the legal and regulatory compliance of Banpu Power's business operations and policies. The Corporate Compliance Department is responsible for auditing and monitoring legal and regulatory compliance and regularly report compliance issues and monitoring results to the management and the Audit Committee. In addition, the Company reported risk management and internal audit results covering key compliance risks. In 2021, the Company deployed Compliance Risk Management (C-RiM) application in overseeing compliance risk of the Company and its subsidiaries in each country via an online system, and Laws In-Hand application was used to monitor recent legal and regulatory updates in all countries where Banpu Power has business operations.
4. **Review of Related Party Transactions:** The Audit Committee reviewed related party transactions or transactions that may cause conflicts of interest between the Company, its subsidiaries, and other related parties based on the arm's length principle. That is to ensure that the transactions were carried out at fair value for the best interest of the Company and stakeholders and did not involve a transfer of interest. The transactions must also be fair and reasonable in compliance with the laws and regulations of the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC).
5. **Governance of Risk Management System:** The Audit Committee reviewed the efficiency and effectiveness of the risk management process and monitored key risks that may have posed threats to the Company's business operations. The Committee quarterly monitored the progress of the management of key risks and changing situations affecting the operations. The Committee also established mitigation measures, emphasizing systematic and sustainable management which timely responds to rapidly changing business environment and trends. Policy on risk management was explicitly stipulated in writing in the Risk Management Policy and the Charter of Risk Management Committee, which was approved by the Board of Directors. The Committee convened regular meetings to assess risks. The Risk Management Policy was communicated to all units of Banpu Power, including its subsidiaries and joint ventures, so they could efficiently manage and mitigate risks.
6. **The Appointment of the External Auditor and Determination of the Audit Fee for 2022:** The Audit Committee considered the selection of external auditors based on Banpu Power's evaluation criteria which included independence, timeliness, quality, professional standard, and reasonable audit fees. As a result, the external auditors' qualifications met the Stock Exchange of Thailand's requirements. For 2022, the Audit Committee proposed the appointment of auditors to the Board of Directors for consideration and submission to the 2022 Annual General Meeting of Shareholders for approval. The following individuals were nominated:
 - 1) Ms. Rodjanart Banyatananusard CPA, License No. 8435; and/or
 - 2) Ms. Amornrat Permpoonwattanasuk CPA, License No. 4599; and/or
 - 3) Mr. Pongthavee Ratanakoses CPA, License No. 7795; and/or
 - 4) Mr. Boonrueng Lerdwisewit CPA License No. 6552.

These CPAs of PricewaterhouseCoopers ABAS Limited (PwC) were appointed as the external auditors of Banpu Power for 2022. The Company also approved the audit fees for 2022. One of these individuals was assigned to conduct his/her audit and to provide opinions on the financial statements of Banpu Power. In case these appointed auditors are unable to perform their duties, PricewaterhouseCoopers ABAS Limited (PwC) shall appoint other of its CPAs as the external auditors of Banpu Power.

In summary, in 2021, the Audit Committee independently performed its duties and responsibilities set forth in the Audit Committee Charter which was approved by the Board of Directors, based on their knowledge, capabilities, and prudent consideration for the equitable benefit of the stakeholders. The Audit Committee is certain that Banpu Power's financial statements were completed and were consistent with generally accepted accounting standards and principles, and there was adequate information disclosure. Banpu Power's business conduct was in line with a sound corporate governance policy, and the Company had an appropriate risk management system as well as effective and adequate internal control and internal audit systems. In addition, Banpu Power properly complied with existing laws and regulations relevant to its business operations.

On behalf of the Audit Committee



(Mr. Yokporn Tantisawetrat)
Chairman of the Audit Committee
Banpu Power Public Company Limited

Report of the Compensation Committee 2021

The Compensation Committee of Banpu Power Public Company Limited consists of three members: one is an independent director, one is a non-executive director, and another is an executive director who has knowledge, competence, skills, and experience in Thailand and abroad, thus being trusted and appointed as a director. The Compensation Committee consists of Prof. Dr. Bundhit Eua-arporn, Chairman of the Compensation Committee, and other two members, Mr. Metee Auapinyakul and Mrs. Somruedee Chaimongkol. According to the Compensation Committee Charter B.E. 2558 of Banpu Power Public Company Limited, the Compensation Committee has major duties as follows:

- 1) To recommend compensation guidelines, payment methods, and other benefits to the Board of Directors and Sub-Committees appointed by the Board of Directors
- 2) To consider and recommend the amounts of compensation and other benefits by taking into consideration the duties and responsibilities of the Chief Executive Officer and by reviewing evaluation criteria to determine the right total remuneration package
- 3) To review the remuneration structure, compensation rules, and regulations according to 1) and 2) to suit the person's duties and responsibilities, the Company's operating results, and market environments
- 4) To review the overall salary increase budget, annual bonus payments, and provisions of other fringe benefits of employees.
- 5) To review and propose recommendations to amend scopes of work, duties, and responsibilities of the Compensation Committee to respond to changing circumstances
- 6) To compile a performance report to be submitted to the Board of Directors at least once a year.

In 2021, the Compensation Committee convened four times, covering all agenda items presented by the Secretary of the Compensation Committee. After consideration, the Committee provided suggestions to the Board of Directors for further consideration and approval. Items from the past year's meeting can be summarized as follows:

- **Compensation and Benefits for Work**

In 2021, the Compensation Committee considered and suggested compensation of the Board of Directors, Sub-Committee Members, Chief Executive Officer, and all employees of every country based on their duties, responsibilities, performances in the past year, the Company's performance, key economic information, and compensation surveys of leading companies in Thailand and abroad. The Secretary of the Compensation Committee presented the relevant information to support the deliberations of the Compensation Committee. Considerations and recommendations on compensation were made thoroughly, carefully, and transparently. The compensation can provide motivation and incentive for individuals to perform duties at their full capability to create benefits and added value to the Company and shareholders for years to come.

- **Business Directions and Plan**

In 2021, the Compensation Committee participated in determining the Company's business operations to achieve fruitful results. The Committee considered and provided suggestions on the key performance indicators of the Chief Executive Officer, which appropriately reflected the Company's short- and long-term operational directions and could be put into practice for the benefits of internal and external stakeholders. Apart from that, the Committee considered the Chief Executive Officer's performance in the first and second halves of 2021 and provided recommendations on the matter to the Board of Directors.

- **Improvement of Work Processes**

In the past year, the Compensation Committee adjusted the deliberation period of annual salary increase and bonus payment for employees to be completed within 2021. The deliberation period of the Chief Executive Officer's compensation was similarly adjusted. The adjustments positively impacted employees' morale and motivated them to work at full capability in the following year.

- **Collaborative Work with Employees and Management**

In performing its duties, the Compensation Committee regularly invited relevant management to attend the meeting of the Committee on related agenda items to provide information and detailed explanation to support its decision making. Such practice not only contributed to accurate, precise, and timely decisions but also built good rapport between the Compensation Committee and the Company's management, creating a smooth workflow for both parties toward the same direction.

Apart from that, the Compensation Committee evaluated its own performance in the past years on qualifications and duties, and responsibilities and reported the results to the Board of Directors together with evaluation results of other Sub-Committees every six months.

In conclusion, the Compensation Committee, in 2021, fully performed its duties and responsibilities set forth in the Compensation Committee Charter B.E. 2558 of Banpu Power Public Company Limited, and as entrusted by the Board of Directors. The Committee regularly contributed positive opinions and suggestions to the management, the Board of Directors, and the stakeholders.

On behalf of the Compensation Committee



Prof. Dr. Bundhit Eua-arporn
Chairman of the Compensation Committee
Banpu Power Public Company Limited

Report of the Corporate Governance and Nomination Committee 2021

The Corporate Governance and Nomination Committee consists of Assoc. Prof. Dr. Naris Chaiyasoot, the Chairman of the Committee, and three members, namely Prof. Dr. Patchanita Thamyongkit, Mr. Chanin Vongkusolkrit, and Mr. Rawi Corsiri. The Committee independently performs duties to the full extent as entrusted by the Board of Directors, in compliance with principles and the Charter of the Corporate Governance and Nomination Committee as well as good governance principles prescribed in the SEC's Corporate Governance Code for Listed Companies (CG Code) 2017.

In 2021, the Corporate Governance and Nomination Committee convened five meetings with full attendance. The Committee summarized its performance in two main points as follows:

Good Corporate Governance and Code of Conduct

1. Promotion of Corporate Governance

- Preparing the 2021 annual work plan of the Corporate Governance and Nomination Committee to drive the implementation of the Corporate Governance Policy and monitor performance
- Preparing the 2021 performance evaluation forms for the Board of Directors, Sub-Committees, and individual directors, then conducted an evaluation and monitored improvements against the evaluation results
- Cultivating ethical conduct by establishing “Adherence to Integrity and Ethics” as one of the corporate values and a key performance indicator for all executive officers and employees
- Improving the essence of the Corporate Governance Policy and Code of Conduct to comply with the SEC's Corporate Governance Code for Listed Companies (CG Code) 2017. The improvements are in two areas as follows:
 - CEO Holding Directorship in Other Companies
 - Blackout Periods and Report on the Changes in Shareholding of the Directors and the Management
- Regularly organizing training on corporate governance principles and including the introduction of the Code of Conduct as part of the new employee orientation program
- Continuing the implantation of the No Gift Policy, which sets rules for accepting and offering gifts, hospitality, or other forms of benefits, and communicating the policy to directors, executives, employees, and stakeholders to encourage the actual practice
- Organizing the “CG Be My Guest” – an internal communication event featuring share-and-learn sessions by executives and employees who have integrated CG practice into their works. There were also case studies from news about consequences of violations of Corporate Governance and Anti-Corruption policies through VDO Podcasts on the Friday Morning's News Talk Channel and via emails sent directly to employees. These activities were aimed to create an understanding of CG principles among employees to prevent violations of the Corporate Governance Policy and the Code of Conduct.
- Organizing CG Day 2021 activity to raise employees' awareness of the significance of ethical business conduct and adherence to integrity. In 2021, the Corporate Governance Division invited Mr. Chanin Vongkusolkrit, Director of Banpu Power Public Company Limited, to share his perspectives on CG and corporate management in the COVID-19 era.
- Organizing and inviting employees to join the infographic contest on “Anti-Corruption Policy” and “Whistleblower Policy” to promote understanding of corporate governance principles and practice of the Corporate Governance Policy and Code of Conduct

- Conducting corruption risk assessment and preparing a list of mitigative measures for 2021 addressing all risks in every business in countries where Banpu Power has invested, including its subsidiaries and joint ventures

2. Complaint Handling

In 2021, there were no significant complaints on Corporate Governance from stakeholders. Regarding the whistleblower channels, employees and the concerned public can file their complaints via four channels:

- Letter to the Secretary of the Corporate Governance and Nomination Committee
Banpu Power Public Company Limited 26th Floor, Thanapoom Tower, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400
- Banpu Power's website: <https://www.banpupower.com/corporate-governance/whistleblowing/filing-complaints/>
- Internal Website: <http://portal.banpu.co.th> (BPP Whistleblower)
- Email: GNCchairman@banpupower.co.th and/or bpp_comsec@banpupower.co.th

3. Performance Evaluation of the Board of Directors

The Corporate Governance and Nomination Committee reviewed and approved the appropriateness of the approach and the evaluation forms used for the annual performance evaluation of the Board of Directors. The Board approved evaluation forms to be used for the annual performance evaluation of the full Board, sub-committees, and individual directors.

The Corporate Governance and Nomination Committee reported the annual evaluation results to the Board of Directors' Meeting. The Board of Directors' overall performance was “excellent”, with an average score of 4.75 out of 5. The Board acknowledged the evaluation results and recommendations, and directors also exchanged views in the Board of Directors' Meeting on ways to improve their performance for the best interests of the Company.

The evaluation results of the three Sub-Committees, namely, the Audit Committee, the Compensation Committee, and the Corporate Governance and Nomination Committee, revealed that their performances were “excellent” with an average score of 4.85 out of 5. Each sub-committee submitted its annual self-evaluation report to the Board of Directors as part of its annual performance report.

Besides, each of the directors performed self-evaluation, and the annual results indicated that their performances were “excellent”, with an average score of 4.69 out of 5. The directors acknowledged the results and recommendations and found the individual performance evaluation satisfactory. They exchanged views on how to enhance their performance for the best interests of the Company.

Nomination of Directors and Monitoring of Succession Plans

1. Nomination of directors to replace those retiring by rotation

In 2021, there were three directors who retired by rotation, namely:

1. Mr. Yokporn Tantisawetrat
2. Prof. Dr. Bundhit Eua-arporn
3. Mr. Metee Auapinyakul

After the Corporate Governance and Nomination Committee had reviewed the qualifications and performance of the three directors retiring by rotation, they then proposed their names to the Board of Directors to be nominated to the 2021 Annual General Meeting of Shareholders for consideration and approval of the re-election.

In addition, the Corporate Governance and Nomination Committee nominated a female independent director, Prof. Dr. Patchanita Thamyongkit, who is knowledgeable, competent, and has appropriate qualifications corresponding to the Company's business direction. The 2021 Annual General Meeting of Shareholders approved the appointment of Prof. Dr. Patchanita Thamyongkit on 2 April 2021.

The Corporate Governance and Nomination Committee also improved and prepared information on the Board Skill Matrix to align it with the Company's strategy and business direction.

2. Succession Planning

The Corporate Governance and Nomination Committee prioritizes the monitoring of succession planning for senior executives. In 2021, the Corporate Governance and Nomination Committee received progress reports on Banpu Power Public Company Limited's senior executive succession planning with a clear and comprehensive succession plan for each critical position.

On behalf of the Corporate Governance and
Nomination Committee



Assoc. Prof. Dr. Naris Chaiyasoot
Chairman of the Corporate Governance and
Nomination Committee
Banpu Power Public Company Limited

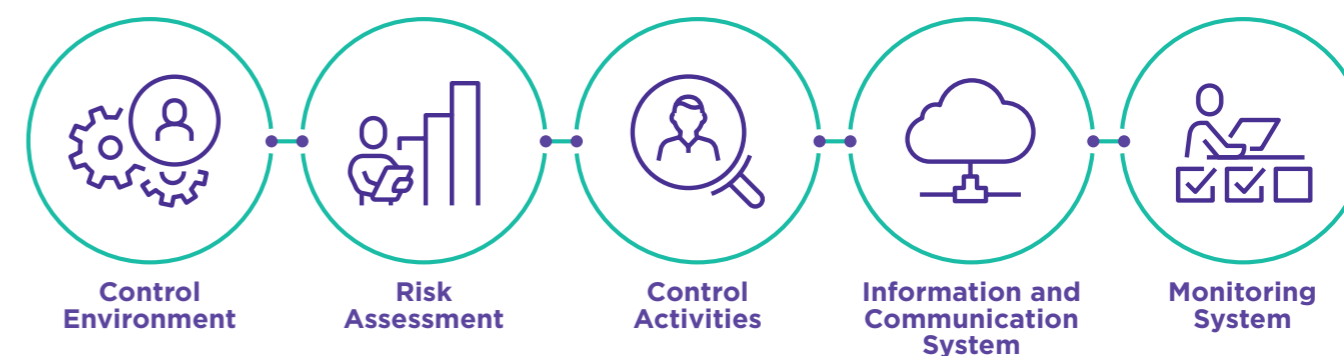
4. Internal Control and Connected Transactions

Internal Control

Banpu Power Public Company Limited has always prioritized internal control and risk management, emphasizing sufficiency and appropriateness of internal control in all major business activities in order to achieve business objectives and goals toward sustainable growth. The Board of Directors and executives embrace good governance and transparency in their management with a balanced organizational structure, clearly written policies and procedures, an effective risk management system, sufficient internal control system for major activities, a secure and efficient communication and data management system, and an appropriate monitoring system.

The Audit Committee works independently on reviewing and assessing the adequacy and appropriateness of the internal control system and the effectiveness of the audit process. The Committee reviewed the internal control sufficiency evaluation form prepared by the management on 18 January 2022 before submitting it to the Board of Directors for consideration. Moreover, the Committee oversees the internal control system through the operations of the Internal Audit Department and Risk Management Department, which cover Banpu Power's major business activities to ensure efficiency and effectiveness as well as full compliance with relevant policies, laws, and regulations. The Company also ensures that all related party transactions are transparent, and financial reports and related reports are accurate and reliable, which will enable the Company to achieve its mission and strategy.

The Board of Directors' Meeting, held on 28 January 2022, evaluated the adequacy of the internal control system using the form prepared by the management based on the Office of the Security Exchange Commission's evaluation form, which is aligned with international internal control standards of the Committee of Sponsoring Organizations of the Treadway Commission (COSO 2013). The COSO Integrated Framework for Internal Control consists of the control environment, risk assessment, control activities, information and communication, and monitoring activities. The overall evaluation indicated that the Company has a sufficient, appropriate, and effective internal control system. The Company's risk management also meets international standards, from the overall of the corporate level to the activity level. This assures that the Company is able to achieve its predefined goals. Banpu Power's internal control system consists of the following components:



1. Control Environment

The Company is committed to the promotion of a sound, effective and efficient control environment to enhance the opportunity to achieve its business goals. The management structure has a clear line of command and authorization levels according to the Key Performance Indicator (KPI) and clear delegation of authority (DOA) to ensure effective management, operations and checks and balances.

Major policies and procedures are regularly reviewed and updated in response to changes in the internal and external environment.

The Company focuses on achieving standards on recruitment and management of human resources, which are in accordance with the corporate culture, and providing reasonable and appropriate compensation based on performance. The Company places great importance on staff

capacity development to achieve effective operation; therefore, it has created individual development plans, succession plans, and job rotation programs. All employees at Banpu Power are encouraged to internalize and practice Banpu Heart, the corporate culture comprising Passionate, Innovative, and Committed, and embrace change to drive the Company toward secure and sustainable growth according to Environmental, Social and Governance (ESG) principles.

In addition, in conducting its business, the Company underlines integrity and transparency based on the principles of good corporate governance and the Code of Conduct to ensure that a proper system of checks and balances has been in place. A whistleblower channel is established to receive complaints and grievances of corruption. The Company also prepared the Standard Practice Manual for giving and accepting gifts, hospitality, or other similar forms of reward in line with the Anti-Corruption Policy, which was amended in November 2021 and approved by the Board of Directors' Meeting No. 11/2021 on 26 November 2021.

2. Risk Assessment

The Company places a high priority on risk management and preparation for changes caused by both internal and external factors affecting its business activities at the department, business unit, and corporate levels. Risk Management Policy was formulated in explicit writing and approved by the Board of Directors. The Risk Management Committee was set up to provide the risk management approach as well as supervise and monitor the execution to ensure its efficiency and effectiveness.

The management and all employees take part in the risk assessment and monitoring of risks caused by internal and external factors which are strategy, operation, reporting, compliance, information technology, and corruption. The assessment also includes the assessment of likelihood and impact. The Risk Management Function, under the supervision of the Asset Management Department, has a duty to monitor the progress of risk mitigation implementation of the Company, its subsidiaries and its joint ventures as well as report the progress of risk management to the Risk Management Committee, the Audit Committee, and the Board of Directors on a quarterly basis.

The Risk Management Committee is responsible for developing a risk management policy and risk management approach, oversee, and monitor the overall management of key risks in the company. The management and all employees take part in the risk assessment and mitigation for managing risks to an acceptable level and closely monitor the risk situations, covering a variety of risks relating to strategy, operation, finance, compliance, information technology, corruption, and corporate reputation. Risk situations are reported to the Risk Management Committee, reviewed by the Audit Committee, before being submitted to the Board of Directors on a quarterly basis.

Banpu Power has always stresses importance of Environmental, Social and Governance (ESG) issue relating to the Company as well as strategic planning and preparing for changes in responding to global situations. The Company aligns its business operational framework with the ESG principles, requiring risk identification concerning climate change, water resource management, human rights, cybersecurity, corruption, and compliance with the Personal Data Protection Act (PDPA). The Risk Management Committee and business units have identified response measures in the Company's short-term response plans and strategic plan.

In addition, the Company developed the C-RiM (Compliance & Risk Management) and Law in Hand application to supervise the compliance and risks in each country via an online platform to improve efficiency of monitoring business operation.

3. Control Activities

The Company has been operating its business under an efficient internal control system. It has established control measures at both corporate and operational levels for the Company, its subsidiaries, and joint ventures through explicitly written policies and procedures. It considers factors that may influence operational plans, identifies present control measures, and seeks to avoid impact based on the approaches that suit the Company's business, environment, and risks. Control policies and procedures are frequently reviewed; if they no longer suit current work environments, the management will adjust them to align with changing environments.

The Company oversees and monitors the operations to ensure alignment with action plans, work manuals, and practices, as well as compliance with applicable laws and regulations. There is a clear and appropriate segregation of duties, an effective system of checks and balances, a precise delegation of management authority and proper authorization, and Key Performance Indicators (KPI) linked to the Company's goals. The Company safeguards its assets to prevent misuse of the assets for personal purposes and has an appropriate and effective information technology control system. The Company has developed an electronic work system and workflow system to prevent mistakes and negligence of important duties.

Additionally, the Company has established a clear policy on related party transactions, considering them on a similar basis to an arm's length transaction. Thus, related party transactions shall be done under fair pricing and conditions, which do not lead to the benefit transfer, for the best interests of the Company and stakeholders.

4. Information and Communication System

The Company has developed an effective and secure information technology (IT) system in compliance with relevant laws to enable sustainable business expansion according to the ESG principles and respond to megatrends and digital disruptions. Composable Architecture has been deployed to Information Technology General Control for supporting on driving business transformation, such as Business Intelligence Software to retrieve, analyze, and transform data into useful business insights for management and employees to enhance operational efficiency relating to the procurement cycle, inventory management, production performance management and asset management. The communication of important information has been done via websites, and Microsoft Team 365 used as an application to connect employees among each country for business operation. Besides, there is Electronic Document Management System to enable fast and updated internal and external communications. All these practices are in line with the Company's digital transformation plan to drive the transition

from traditional energy business into the ecosystem of new energy business. Besides, the Company has improved the IT infrastructure by deploying the modern workplace technology to support the agile ways of working and elevate working agility. During the ongoing COVID-19 pandemic, the Company has enforced the Work Anywhere program organization wide. It has also improved the IT infrastructure to achieve high agility, such as new online meeting platform to support working from anywhere or any locations in response to the New Normal workplace. The Company has extended the IT infrastructure by integrating the cloud computing system to enhance operational efficiency. Nevertheless, the Company is well aware of the cyber threats that may arise from the use of digital technologies to drive its business. Accordingly, it set up a working team to oversee assessment for risks, including information technology (IT) and operational technology (OT). The working team went beyond cybersecurity risk management to determining approaches to cyber resilience and reported the progress to the Audit Committee. In 2021, the Company received ISO 27001 certification, the International Information Security Standard. This is to enhance stakeholder trust, elevate the standard of the information security system, enhance customers trust, comply with applicable laws and regulations in Thailand and all countries where it operates, while aligning with risk management of cyber threats and cybersecurity. The Company ensures cyber-risk compliance by applying end-to-end cybersecurity management and oversight, from IoT devices to data platforms. In addition, the agility way of work has been practiced continuously in line with the Company's long-term goals, while Security by Design & Privacy by Default is integrated into every stage of digital product development from the beginning to quality assurance.

Moreover, the Company has established a system to prepare and store important data to support the Board of Directors' deliberation process with accurate, complete, effective, and timely data retrieval. Every year, the Board of Directors participates in Board Retreat, in which they can raise issues and share opinions with the management. Various effective communication channels are provided for internal communications, such as the Company's website, email, communications

activities, town hall meetings, and regular meetings, to enhance collaboration to achieve the Company's goals. The Company ensures cybersecurity by restricting employee access to data in the Company's systems according to the principle of segregation of duties. For external parties, the Investor Relations Department and the Corporate Communications Department are responsible for equitable information disclosures and communication with stakeholders through the Company's channels.

The Company also provides special or confidential channels for internal and external parties to safely report unethical and corrupt acts, for instance, by sending a letter to the secretary of the Corporate Governance and Nomination Committee, via the Company's website, and via email.

5. Monitoring System

The Company has implemented a monitoring system both at the management and operational levels. There are regular reviews and monitoring of performance by supervisors and executives, and executive meetings are held regularly to track the progress against the predefined goals. The Internal Audit Department is responsible for reviewing and assessing the sufficiency, efficiency, and effectiveness of the Company's internal control system. According to Banpu Power's corporate structure, the Internal Audit Department reports directly to the Audit Committee and indirectly to the Chief Executive Officer to establish the independence of the internal audit activity. The Company also hired Banpu Public Company Limited to provide internal audit services according to the Management Service Agreement using a risk-based audit approach. The audit services also include providing recommendations on process improvement and regular monitoring of the results to ensure appropriate and timely corrective actions. The reports on internal audit and monitoring results are submitted to the management and the Audit Committee on a quarterly basis.

Since the ongoing pandemic in 2021 restricted employees' traveling, the Internal Audit Department has adopted a new audit method using remote audits, including data analytics and various digital technologies while maintaining audit quality and efficiency. This is a step forward to "Smart Audit & Continuous Monitoring", which helps to maintain the audit quality and improve efficiency as a benefit to the business operation among the rapid changes. The Company has also developed the agile audit and data analytics to increase efficiency and confidence in the internal audit system as well as to protect and add sustainable value for the business.

Apart from the Internal Audit Department, the Company also has the Compliance Department to promote and monitor compliance with law and external regulations, focusing on strict compliance with relevant community and environmental laws. Compliance performance reporting is conducted based on ISO 19600 (Compliance Management Systems - Guidelines), which highlights Compliance Management System. The Company has leveled up Group Compliance Documents enforced in every country by deploying Three Lines Model in risk management, providing advice on legal compliance, and improving activities-based compliance to cover both high-level and end-to-end processes.

The Company has prepared the implementation of Thailand's Personal Data Protection Act (PDPA) and related procedures in other countries. The Board of Directors and the management have formulated policies and practices, set up a working team, and required that every department has a data protection officer and data inventory. The Company also communicated about the PDPA, use and collection of personal data, security system to prevent a data breach, and coordinated with state agencies to ensure that all executives and employees understand, realize the importance, and strictly comply with the Act.

Connected Transactions

Connected Persons

Connected Persons	Type of Business	Relationship
1. Banpu Public Company Limited (Banpu Plc.)	Energy	1) A major shareholder with 78.66% shareholding 2) Four joint directors with the Company are: 1. Mr. Chanin Vongkusolkit 2. Mr. Metee Auapinyakul 3. Mr. Rawi Corsiri 4. Mrs. Somruedee Chaimongkol 3) Two Directors who are the executives of Banpu Plc. are: 1. Mrs. Somruedee Chaimongkol 2. Mr. Kirana Limpaphayom
2. Banpu Minerals Company Limited (BMC)	Coal trading and investment in coal mining	1) A wholly-owned subsidiary of Banpu plc. and Banpu Plc. is the Company's major shareholder 2) One joint director with the Company who is also executive of Banpu Plc. is: Mrs. Somruedee Chaimongkol
3. Asian American Coal, Inc. (AACI)	Investment in coal mining	1) An indirect wholly-owned subsidiary of Banpu Plc. through BP Overseas Development Company Limited 2) Two joint directors with the Company are: 1. Mr. Chanin Vongkusolkit 2. Mrs. Somruedee Chaimongkol
4. Banpu Australia Co. Pty Ltd. (BPA)	Investment in coal mining in Australia	1) An indirect wholly-owned subsidiary of Banpu Plc. through Banpu Singapore Pte. Ltd. 2) Three joint directors with the Company are: 1. Mr. Chanin Vongkusolkit 2. Mrs. Somruedee Chaimongkol 3. Mr. Kirana Limpaphayom
5. Banpu (Shanghai) Trading Co., Ltd. (BST)	Coal trading	1) An indirect wholly-owned subsidiary of Banpu Plc. through BMS 2) No joint director 3) The Company's executive who is a director of BST is: Mr. Pilun Pochanart
6. Banpu Vietnam Limited Liability Company (BPVT)	Management advisory service (except the financial, accounting and legal advisory services)	1) A wholly-owned subsidiary of Banpu plc. and Banpu Plc. is the Company's major shareholder 2) No joint director 3) There is no executive of the Company who is BPVT's director.

Connected transactions and relationships are as follows:

1. Banpu Power Public Company Limited (BPP)

Company	Connected Transaction
1. Banpu Public Company Limited (Banpu)	<p>Transactions between BPP and Banpu are as follows:</p> <ul style="list-style-type: none"> Management fee in 2021 of THB 160,150,000.00 Dividend paid to Banpu in 2021 of THB 1,558,179,673.05
2. Banpu Power US Corporation (BPPUS)	<p>Transactions between BPP and BPPUS are as follows:</p> <ul style="list-style-type: none"> Interest income in 2021 of THB 46,830,564.45 Accrued interest receivable as at 31 December 2021 of THB 46,677,156.58 Long-term loan to BPPUS as at 31 December 2021 of THB 5,744,880,810.00
3. Banpu Coal Power Ltd. (BPCP)	<p>Transactions between BPP and BPCP are as follows:</p> <ul style="list-style-type: none"> Dividend income in 2021 of THB 106,588,568.88 Accrued dividend receivable as at 31 December 2021 of THB 170,000,000.00
4. Banpu Power International Limited (BPPI)	<p>Transactions between BPP and BPPI include loans in the form of a loan agreement with an interest rate calculated based on the amount of loan and market interest rate, as follows:</p> <ul style="list-style-type: none"> Interest income in 2021 of THB 165,097,136.77 Long-term loan to BPPI as at 31 December 2021 of THB 4,365,307,338.00 Accrued interest receivable as at 31 December 2021 of THB 308,832,519.22
5. Banpu Power Japan Co., Ltd. (BPPJP)	<p>Transaction between BPP and BPPJP is as follows:</p> <ul style="list-style-type: none"> Management fee income in 2021 of THB 192,495.36
6. Banpu Next Co., Ltd. (Banpu NEXT)	<p>Transactions between BPP and Banpu NEXT are as follows:</p> <ul style="list-style-type: none"> Interest income in 2021 of THB 232,087,332.04 Management fee income in 2021 of THB 1,775,000 Accrued interest receivable as at 31 December 2021 of THB 398,535,491.42 Long-term loan to Banpu NEXT as at 31 December 2021 of THB 5,479,065,019.24

7. BPP Vinh Chau Wind Power Limited Liability Company (BPPVC)

Transactions between BPP and BPPVC are as follows:

- Management fee income in 2021 of THB 833,385.80
- Accrued management fee income as at 31 December 2021 of THB 868,917.40
- Advance to BPPVC as at 31 December 2021 of THB 2,623,781.97

2. Banpu Investment (China) Ltd. (BPIC)

Company	Connected Transaction
1. BPP Renewable Investment (China) Co., Ltd. (BPPRIC)	<p>Transactions between BPIC and BPPRIC include loans in the form of a loan agreement with an interest rate calculated based on the amount of loan and market interest rate.</p> <ul style="list-style-type: none"> Interest income in 2021 of THB 61,339,784.27 Management fee income in 2021 of THB 79,651,957.72 Short-term loan to BPPRIC as at 31 December 2021 of THB 649,511,590.00 Long-term loan to BPPRIC as at 31 December 2021 of THB 341,295,500.00 Accrued interest receivable as at 31 December 2021 of THB 384,885,746.45
2. Banpu Public Company Limited (Banpu)	<p>Transaction between BPIC and Banpu is as follows:</p> <ul style="list-style-type: none"> Advance to Banpu as at 31 December 2021 of THB 24,718,017.58
3. Banpu Power International Limited (BPPI)	<p>Transactions between BPIC and BPPI are as follows:</p> <ul style="list-style-type: none"> Interest expense in 2021 of THB 161,030,143.74 Short-term loan as at 31 December 2021 of THB 1,655,943,923.08 Long-term loan as at 31 December 2021 of THB 2,709,331,460.03 Accrued interest payable as at 31 December 2021 of THB 195,405,833.73
4. Banpu Australia Co., Pty Ltd. (BPA)	<p>Transactions between BPIC and BPA are as follows:</p> <ul style="list-style-type: none"> Management fee income in 2021 of THB 14,950,348.34 Accrued income - management fee as at 31 December 2021 of THB 9,744,772.81

5. Banpu Minerals Company Limited (BMC) Transactions between BPIC and BMC are as follows:
- Management fee income in 2021 of THB 22,377,225.14
 - Accrued income - management fee as at 31 December 2021 of THB 5,628,100.88
6. Asian American Coal, Inc. (AACI) Transactions between BPIC and AACI are as follows:
- Management fee income in 2021 of THB 45,755,012.71
 - Accrued income - management fee as at 31 December 2021 of THB 6,477,470.13
7. Banpu (Beijing) Energy Trading Co., Ltd. (BBET) Transactions between BPIC and BBET are as follows:
- Management fee in 2021 of THB 11,713,522.79
 - Coal purchase in 2021 of THB 3,516,121,322.31
 - Coal purchase accounts payable as at 31 December 2021 of THB 453,666,721.03

3. Banpu Power Japan Co., Ltd. (BPPJP)

Company	Connected Transaction
1. Banpu Power Public Company Limited (BPP)	Transaction between BPPJP and BPP is as follows: <ul style="list-style-type: none"> • Management fee in 2021 of THB 192,495.36

4. Banpu Power International Limited (BPPI)

Company	Connected Transaction
1. Banpu Investment (China) Ltd. (BPIC)	Transactions between BPPI and BPIC include loans in the form of loan agreement with an interest rate calculated based on the amount of loan and market interest rate, as follows: <ul style="list-style-type: none"> • Interest income in 2021 of THB 161,029,775.72 • Short-term loan to BPIC as at 31 December 2021 of THB 1,655,956,045.00 • Long-term loan to BPIC as at 31 December 2021 of THB 2,709,351,293.00 • Accrued interest receivable as at 31 December 2021 of THB 195,407,264.17

2. Banpu Power Public Company Limited (BPP) Transactions between BPPI and BPP include loans in the form of loan agreement with an interest rate calculated based on the amount of loan and market interest rate, as follows:
- Interest expense in 2021 of THB 164,405,616.70
 - Short-term loan as at 31 December 2021 of THB 1,655,956,045.00
 - Long-term loan as at 31 December 2021 of THB 2,709,351,293.00
 - Accrued interest payable as at 31 December 2021 of THB 308,832,519.22

5. Power Vietnam Co., Ltd. (PV)

Company	Connected Transaction
1. Banpu Vietnam Limited Liability Company (BPVT)	Transaction between PV and BPVT is as follows: <ul style="list-style-type: none"> • Management fee in 2021 of THB 3,628,966.51

6. Banpu Power US Corporation (BPPUS)

Company	Connected Transaction
1. BKV-BPP Power LLC. (BKV-BPP)	Transactions between BPPUS and BKV-BPP include loans in the form of loan agreement with an interest rate calculated based on the amount of loan and market interest rate, as follows: <ul style="list-style-type: none"> • Interest income in 2021 of THB 43,319,278.71 • Long-term loan to BKV-BPP as at 31 December 2021 of THB 4,712,205,900.00 • Accrued interest receivable as at 31 December 2021 of THB 43,436,066.94
2. Banpu Power Public Company Limited (BPP)	Transactions between BPPUS and BPP are as follows: <ul style="list-style-type: none"> • Interest expense in 2021 of THB 46,564,757.63 • Long-term loan as at 31 December 2021 of THB 5,744,880,810.00 • Accrued interest payable as at 31 December 2021 of THB 46,677,156.58
3. BKV Corporation (BKV)	Transaction between BPPUS and BKV is as follows: <ul style="list-style-type: none"> • Advances receivable as at 31 December 2021 of 41,774,875.00

7. BKV-BPP Power LLC. (BKV-BPP)

Company	Connected Transaction
1. Banpu Power US Corporation (BPPUS)	<p>Transactions between BKV-BPP and BPPUS are as follows:</p> <ul style="list-style-type: none"> Interest expense in 2021 of THB 43,319,278.70 Long-term loan as at 31 December 2021 of THB 4,712,205,900.00 Accrued interest payable as at 31 December 2021 of THB 43,436,066.94
2. Banpu North America Corporation (BNAC)	<p>Transactions between BKV-BPP and BNAC are as follows:</p> <ul style="list-style-type: none"> Interest expense in 2021 of THB 43,319,278.70 Long-term loan as at 31 December 2021 of THB 4,712,205,900.00 Accrued interest payable as at 31 December 2021 of THB 43,436,066.94

Necessity and Justification of Connected Transactions

In the event that the Company enters into any agreements or there are any transactions between the Company and its subsidiaries, associated companies, related companies, and/or third parties, the Company will consider the necessity and justification for entering into such transactions for the sake of the Company's interests.

Measures or Approval Procedure for Connected Transactions

In the event that the Company enters into any agreements or there are any transactions between the Company and its subsidiaries, associated companies, related companies, third parties and/or those who may have a conflict of interest, for the interests of the Company, the Board of Directors requires such transactions to comply with the Company's policy and regulations prescribed in the Notification of the Board of Governors of the Stock Exchange of Thailand, Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Connected Transactions. The prices and conditions must be similar to those in any transactions done with a third party. Directors or employees who may have a conflict of interest shall not participate in the approval of such transactions.

Policy or Tendency of Future Connected Transactions

(a) Loans from Banpu Public Company Limited

In this year, the Company had no loan transaction from Banpu Plc. If there is any future loan transaction to or from subsidiaries with related parties, the Company and subsidiaries will comply with relevant regulations and laws on connected transactions

(b) Management fees and use of Banpu's support services

In 2021, the Company and its subsidiaries entered into the management service agreement with Banpu Plc. with total annual service fees of THB 160.15 million, paid on a monthly basis. The agreement covers management and advisory services relating to accounting and financial, internal audit, legal affairs, general administrative support, information technology, human resources, and asset management. The Company renewed the management service agreement with Banpu Plc. on 30 September 2021, for two years from 1 October 2021 to 30 September 2023. A renewal of the agreement shall be notified at least 30 days prior to the end date of the agreement.

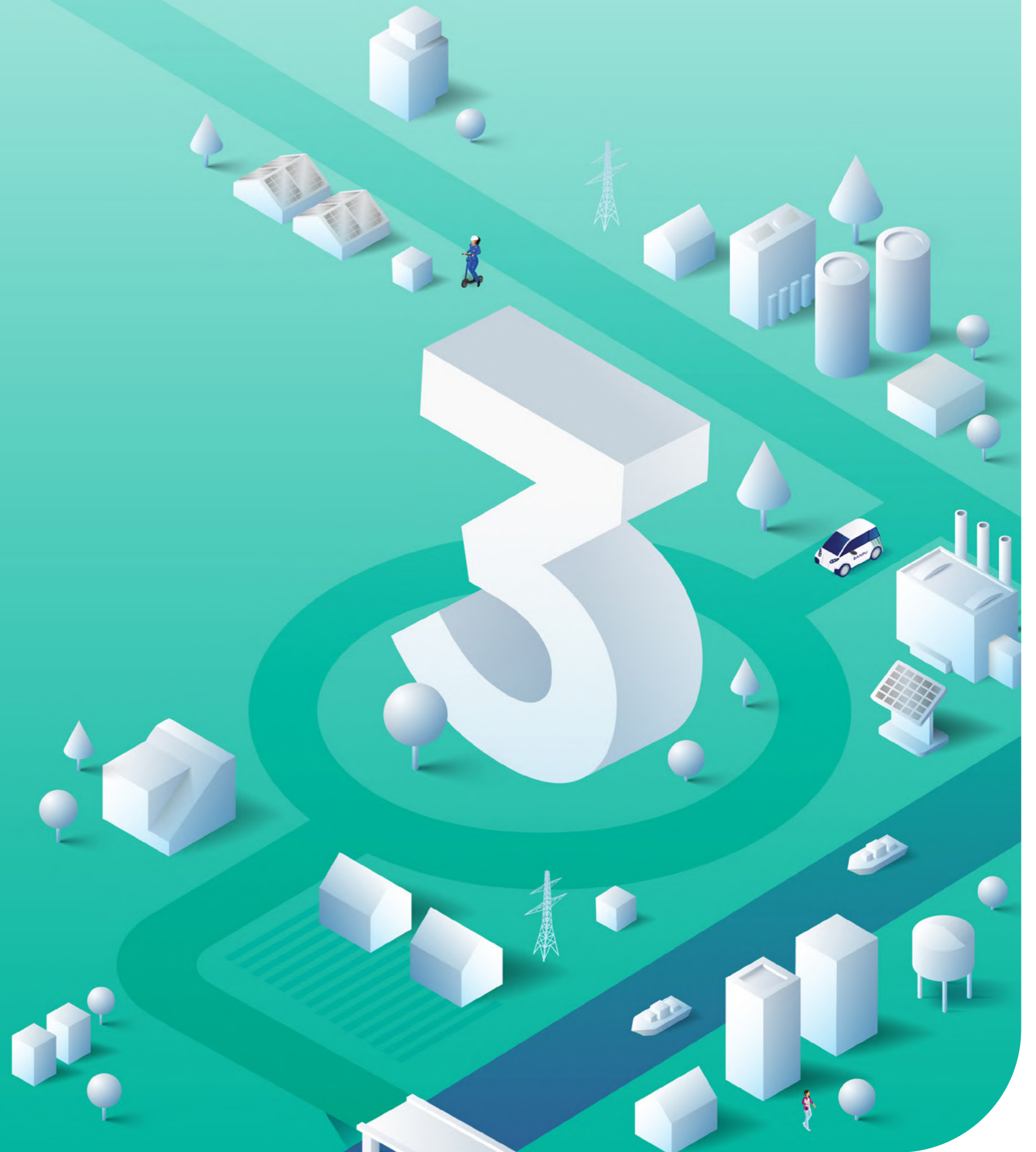
(c) Management services for related parties

BIC, a subsidiary of Banpu Power operating in China with competent personnel in management, provides advisory services to Banpu Plc. and its subsidiaries under a one-year agreement. The agreement covers advisory services and management of business operations, finance, risk and IT management, management training and asset management, etc.

(d) Advance payable/receivable for related parties

Advances paid to and received from related parties are expenses paid for each other on normal operations, such as feasibility expenditure, travel expenses, fees, and miscellaneous expenses, etc. Advances paid to a related party are due 30 days after the invoice date, and advances received from a related party are due 30 days after the invoice date. Advance payable/receivable are to be paid back based on the actual amount originally paid.

Financial Report



Report of the Board of Directors' Responsibilities for the Financial Statements

The Board of Directors has placed top priority on supervising the Company's operations to ensure their compliance with good corporate governance policy and overseeing the accuracy, completeness, and adequacy of financial statements and financial information appearing in the Annual Report (Form 56-1 One Report). It also has a responsibility to ascertain that the financial statements are carefully prepared in strict compliance with Thai Financial Reporting Standards, which is based on the International Financial Reporting Standards. In addition, the Board of Directors must establish and maintain an effective internal control system to ensure the reliability of its financial statements. The Board has to safeguard the Company's assets with a good protection system to prevent corruption or suspicious operations. Connected transactions which can give rise to possible conflicts of interest are closely monitored to ensure that they are genuine transactions and are reasonably carried out based on the ordinary course of business for

the Company's maximum benefits and in compliance with relevant laws and regulations. The Audit Committee has already reported the result of its activities to the Board of Directors, and its opinions in the Audit Committee's Report are included in the Annual Report (Form 56-1 One Report).

The Board of Directors is of the opinion that the Company's internal control system has been proved to be satisfactory. The Board was able to obtain reasonable assurance on the reliability of the consolidated financial statements as at 31 December 2021, which the auditor conducted an audit in accordance with Thai Standards on Auditing. The auditor is of the opinion that the financial statements present fairly the financial position and the results of its operations and cash flows in conformity with Thai Financial Reporting Standards.



Assoc. Prof. Dr. Naris Chaiyasoot
Chairman of the Board of Directors



Dr. Kirana Limpaphayom
Chief Executive Officer



Independent Auditor's Report

To the shareholders of Banpu Power Public Company Limited

My opinion

In my opinion, the consolidated financial statements and the separate financial statements present fairly, in all material respects, the consolidated financial position of Banpu Power Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial position of the Company as at 31 December 2021, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRS).

What I have audited

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2021;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include significant accounting policies and other explanatory information.

Basis for opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Code of Ethics for Professional Accountants issued by the Federation of Accounting Professions that are relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key audit matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Key audit matter	How my audit addressed the key audit matter
<p>Acquisition of investment in a joint venture</p> <p>Refer to Note 14.1 c) Acquisition of investment in a joint venture.</p> <p>During the year ended 31 December 2021, the Group purchased ordinary shares for 33.50% interest in Nakoso IGCC Management Co., Ltd (NIMCO), which holds a 40% ownership in the Nakoso Integrated Gasification Combined Cycle Power Plant in Japan. The purchase consideration paid was JPY 8,630.94 million or equivalent to THB 2,445.19 million. Management determined that this acquisition was an investment in a joint venture, applying the definition in TFRS 11 Joint arrangement. In doing so, as required by TAS 28 Investments in Associates and Joint Ventures, the management had to determine the fair value of the net identifiable assets acquired and review the purchase price allocation (PPA) in accordance with the concepts in TFRS 3 Business combinations. The fair value of identifiable assets acquired and liabilities assumed was presented as part of the investment cost.</p> <p>Management engaged an external valuer to appraise the fair values of identifiable assets acquired, which was THB 7,825.79 million, mainly consists of plant and equipment of THB 5,559.36 million, the right to operate the power plant of THB 1,674.01 million and the fair value of liabilities assumed of THB 5,380.60 million. The fair value determination was performed as part of the PPA.</p> <p>The fair value determination of the right to operate the power plant involves significant management judgement regarding future operating results, projected cash flows and the discount rate to be applied to those projected cash flows. Key assumptions applied in determining the fair value are electricity tariffs, power plants capacity, operating expenditures, capital structure and discount rate to be applied to the projected cash flows.</p> <p>I focused on the fair value determination of the net identifiable assets acquired from the investment acquisition, especially for the right to operate the power plant because management applied the discounted cash flow model and it contains several assumptions. Those assumptions involve management's significant judgements in assessing future cash flows and the discount rate applied for the valuation.</p>	<p>I carried out the following procedures to get evidence of management's assessment of the investment acquisition and the fair value determination of the net identifiable assets acquired:</p> <ul style="list-style-type: none"> • read the shareholder agreement to understand the key terms and conditions and confirmed our understanding of the transaction with the management. • assessed whether management's accounting for the investment acquisition should be accounted for as an investment in a joint venture and whether it's in accordance with the accounting for business combinations. • understood and assessed the valuation method and assumptions used by the external valuer to determine the fair values. • evaluated the competency, qualifications, experience and objectivity of the external valuer who is management's expert. • assessed the appropriateness of the identifiable assets acquired and liabilities assumed as at the acquisition date and evaluated management's procedures for determining the fair values of the net identifiable assets acquired. • tested the fair value calculation of the right to operate the power plant, challenged management's significant assumptions applied in the estimation of projected cash flows, such as electricity tariffs, power plant capacity, operating expenditures and capital structure, and compared those assumptions to the underlying agreements and external sources. • assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry, to see whether the discount rate used by management was within an acceptable range. <p>As a result of the procedures performed, I determined that the acquisition of the investment that invests in the electricity power plant is an investment in a joint venture in accordance with the definition set out in TFRS 11. The assumptions applied in determining the fair values of the right to operate the power plant were reasonable and in line with the accounting for business combinations.</p>

Key audit matter

How my audit addressed the key audit matter

Acquisition of investment in a subsidiary

Refer to Note 14.1 d) Acquisition of investment in a subsidiary.

During the year ended 31 December 2021, BKV-BPP Power LLC (BKV-BPP), which is held equally by Banpu Power US Corporation (BPP US), a subsidiary of the Company and BKV Corporation (BKV), a subsidiary of the Parent, completed the purchase of all shares in Temple Generation Intermediate Holdings, LLC which holds a 100% interest in Temple I CCGT power plant in the United States, with the total consideration of US Dollar 440.96 million or equivalent to THB 14,764.57 million. Management considered that Temple Generation Intermediate Holdings, LLC is a subsidiary of the Group because BPP US has control over such entity that meets the specified conditions under TFRS 10 Consolidated Financial Statements.

The management applied a concentration test which is an optional test to permit a simplified assessment of whether the acquired set of activities and assets qualified as not a business acquisition according to TFRS 3 Business combinations. As a result, management determined that this acquisition is an asset acquisition under TFRS 3 because substantially all of the fair value of the gross assets acquired is concentrated in property, plant and equipment of Temple I. Therefore, the management applied the concept in TFRS 3 for the valuation methodology and assumptions used in the model to the measure the fair value of property, plant and equipment arising from the asset acquisition by involving the external valuer.

I focused on identifying the fair value of assets arising from the asset acquisition due to its significant value and the valuation involves significant assumptions and judgments made by the management.

The audit procedures of this matter were performed by a component auditor in the United States. I planned the audit procedures of the consolidation process and communicated them to the component auditors. In addition, I understood and evaluated the work performed by the component auditor to obtain sufficient and appropriate audit evidence.

The component auditor carried out the following procedures, which I have reviewed, to obtain evidence for management's assessment of accounting related to the asset acquisition and allocation of the purchase price according to the relative fair value of identifiable assets acquired.

- assessed whether management's accounting for the controlling entity of BPP US is in line with the specified conditions under TFRS 10.
- reviewed management's assessment that the net assets acquired meet the concentration test criteria, and do not meet the definition of a business under TFRS 3, and should be accounted for as an asset acquisition.
- evaluated the competency, qualifications, experience and objectivity of the external valuer who is management's expert.
- assessed the appropriateness of the identifiable assets acquired and the liabilities assumed at the acquisition date and evaluated management's procedures for determining the fair values of the net identifiable assets acquired and the allocation of the purchase price proportionally according to the relative fair values.
- tested the calculation of fair values of property, plant and equipment acquired, challenged management's judgement in relation to the assumptions used in the cash flow forecasting, and compared those assumptions to the relevant underlying agreements and external sources.
- assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry, to see whether the discount rate used by management was within an acceptable range.

As a result of the procedures performed, I determined that the acquisition of shareholding in Temple Generation Intermediate Holdings, LLC is an asset acquisition based on the application of the optional test (the concentration test) under TFRS 3. The assumptions used to identify the fair value of property, plant and equipment arising from the asset acquisition were reasonable and in line with the accounting for asset acquisition.

Key audit matter

How my audit addressed the key audit matter

Impairment assessment of investment in a subsidiary

Refer to Note 14 Investments in subsidiaries, associates and joint ventures, the Company has an investment in Banpu Coal Power Ltd., a subsidiary whose principal business is to invest in a business of generation and sales of electricity under a long-term power purchase agreement. The cost of investment in the subsidiary in the separate statement of financial position was THB 5,922 million.

As at 31 December 2021, the cost of investment in this subsidiary as presented in the separate financial statements was higher than its net equity value. Management considered this an impairment indicator of investment in the subsidiary and therefore performed impairment test by applying the value-in-use model to calculate the recoverable amount. This model involves significant management judgment with respect to the future operating results of business, projected cash flows and discount rate to be applied to the projected cash flows. The subsidiary has only invested in a coal-fired power plant in Thailand, the management applied the value-in-use model based on the projected cash flow of such coal-fired power plant. Key assumptions applied in the value-in-use model are electricity tariff, assumed power plant capacity, growth rate, expected changes to operating expenditures, and the discount rate to be applied to the projected cash flows.

As a result of management's impairment testing, the recoverable amount of this investment is lower than the carrying value. Therefore, the Company recognised a provision for impairment loss on investment in a subsidiary of THB 270 million in the separate financial statements for the year 2021.

I focused on the impairment assessment of the investments in a subsidiary and their related assets due to their significant values, the various assumptions applied to calculate of the recoverable amounts and management's significant judgements involved in determining the appropriate level of impairment to be recorded.

I carried out the following procedures to assess the impairment testing of the investment in a subsidiary which invests in a coal-fired power plant in Thailand which prepared by the management.

- assessed the appropriateness of management's identification of the indicators for impairment of investment in a subsidiary.
- held discussions with the management to understand the basis for assumptions applied to the cash flow projections.
- challenged management's significant assumptions applied in the impairment testing of investment in a subsidiary, especially the electricity tariffs, assumed the power plant capacity, growth rate and operating expenditures, and compared those assumptions to the underlying agreements, external sources, foreign exchange rate forecasts and the approved business plan.
- assessed reasonableness of the business plan by comparing the 2021 plan with actual results.
- assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry to see whether the discount rate applied by management was within the acceptable range.

As a result of the procedures performed, I noted that the key assumptions applied by management in assessing the recoverable amount were reasonable and consistent with supporting evidence.

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to the audit committee.

Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRS, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group's and the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated and separate financial statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

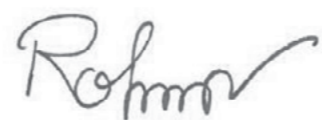
- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the audit committee with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers ABAS Ltd.



Rodjanart Banyatanusard
Certified Public Accountant (Thailand) No. 8435
Bangkok
23 February 2022

Banpu Power Public Company Limited

Statement of Financial Position As at 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Assets					
Current assets					
Cash and cash equivalents	10	2,634,854	2,169,033	1,141,799	1,595,569
Restricted deposits at financial institutions		194	88	-	-
Financial assets measured at fair value through profit or loss	6, 11	524,272	332,546	-	-
Financial assets measured at fair value through other comprehensive income	6	5,600	10,392	-	-
Trade receivables, net	12	1,311,280	927,226	-	-
Amounts due from related parties	27	869,310	487,197	762,162	281,049
Current portion of dividend receivables from related parties	14, 27	125,000	150,000	125,000	150,000
Advances to related parties	27	2,761	8,804	2,761	34,182
Short-term loans to related parties	27	2,363,615	2,795,705	-	-
Current portion of long-term loans to a related party	27	341,296	-	-	-
Fuel		904,092	443,374	-	-
Spare parts and supplies, net		282,111	61,663	-	-
Financial derivative assets	6	51,778	-	-	-
Other current assets	13	466,355	132,541	9,140	10,595
Total current assets		9,882,518	7,518,569	2,040,862	2,071,395
Non-current assets					
Dividend receivables from related parties	14, 27	238,831	288,831	45,000	196,033
Long-term loans to related parties	27	5,479,065	5,740,754	15,589,253	7,890,550
Investments in subsidiaries, net	14	-	-	19,787,163	17,118,717
Investments in associates and joint ventures	14	33,766,280	26,638,516	20,084,019	19,870,427
Property, plant and equipment, net	15	23,811,139	8,001,318	1,396	1,764
Right-of-use assets, net	16	631,098	568,789	3,359	4,799
Deferred income tax assets, net	17	602,758	544,275	5,472	5,265
Goodwill		42,385	38,094	-	-
Other non-current assets		412,691	223,632	182,591	166,405
Total non-current assets		64,984,247	42,044,209	55,698,253	45,253,960
Total assets		74,866,765	49,562,778	57,739,115	47,325,355

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Financial Position As at 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Liabilities and equity					
Current liabilities					
Short-term loans from financial institutions	18	6,551,133	1,453,895	6,134,199	1,000,000
Trade accounts payable		331,090	169,964	-	-
Advances from and amounts due to related parties	27	629,639	244,964	5,948	29,367
Current portion of long-term loans					
from financial institutions, net	20	1,439,380	950,774	850,260	698,415
Current portion of lease liabilities, net	16	12,759	11,860	1,380	1,319
Financial derivative liabilities	6	127,779	-	-	-
Income tax payable		957	58,601	-	-
Other current liabilities	19	1,875,427	1,176,918	79,976	19,844
Total current liabilities		10,968,164	4,066,976	7,071,763	1,748,945
Non-current liabilities					
Long-term loans from financial institutions, net	20	9,252,789	3,480,832	9,134,956	2,995,670
Long-term loans from related party	27	4,712,206	-	-	-
Lease liabilities, net	16	18,265	7,765	2,278	3,657
Deferred income tax liabilities, net	17	24,776	966	-	-
Financial derivative liabilities	6	-	1,949	-	1,949
Employee benefit obligations		29,210	26,513	29,210	26,513
Other non-current liabilities	19	282,049	-	-	-
Total non-current liabilities		14,319,295	3,518,025	9,166,444	3,027,789
Total liabilities		25,287,459	7,585,001	16,238,207	4,776,734
Equity					
Share capital					
Registered share capital					
3,101,202,000 ordinary shares of Baht 10 each					
(31 December 2020: 3,104,492,000 ordinary shares of Baht 10 each)	21	31,012,020	31,044,920	31,012,020	31,044,920
Issued and paid-up share capital					
3,047,731,700 ordinary shares of Baht 10 each					
(31 December 2020: 3,051,021,700 ordinary shares of Baht 10 each)	21	30,477,317	30,510,217	30,477,317	30,510,217
Premium on share capital		7,231,386	7,231,386	7,231,386	7,231,386
Surplus from business combination under common control		(3,891,564)	(3,891,564)	-	-
Reserve for share-based payment	23	40,326	40,326	40,326	40,326
Retained earnings					
Appropriated					
- Legal reserve	22	1,647,200	1,600,200	1,647,200	1,600,200
- Other reserve	21	-	41,694	-	41,694
Unappropriated		10,648,296	9,550,966	2,104,679	3,168,051
Less Treasury shares	21	-	(41,694)	-	(41,694)
Other components of equity		(517,787)	(3,932,802)	-	(1,559)
Owners of the Company		45,635,174	41,108,729	41,500,908	42,548,621
Non-controlling interests	14	3,944,132	869,048	-	-
Total equity		49,579,306	41,977,777	41,500,908	42,548,621
Total liabilities and equity		74,866,765	49,562,778	57,739,115	47,325,355

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Comprehensive Income For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Sales		6,784,497	5,505,511	-	-
Cost of sales		(6,824,268)	(4,390,664)	-	-
Gross profit (loss)		(39,771)	1,114,847	-	-
Dividend income from a subsidiary and joint ventures	14, 27	-	-	793,871	782,350
Management fee and others		652,375	646,643	76,702	23,589
Interest income		381,457	374,439	447,490	387,660
Selling expenses		(833)	-	-	-
Administrative expenses		(1,102,269)	(949,645)	(346,249)	(295,982)
Effect of change in investment types from the group restructuring		-	(577,138)	-	17,632
Provision for impairment loss on investment in a subsidiary	14	-	-	(270,000)	-
Net gains (losses) from changes in fair value of financial instruments		240,988	3,936	(1,970)	(3,523)
Net gains on exchange rate		374,543	148,066	386,135	12,800
Interest expenses		(245,711)	(236,091)	(151,090)	(145,570)
Other financial costs		(3,735)	(6,921)	(3,735)	(5,894)
Share of profit from associates and joint ventures, net	14	2,974,494	3,565,379	-	-
Profit before income taxes		3,231,538	4,083,515	931,154	773,062
Income taxes	17	(57,203)	(300,491)	597	(4,488)
Profit for the year		3,174,335	3,783,024	931,751	768,574
Other comprehensive income (expense), net of taxes:					
Items that will not be reclassified to profit or loss					
- Share of other comprehensive income (expense) of associates and joint ventures accounted for using the equity method	14	(474,371)	236,838	-	-
- Losses on fair value of equity instruments through other comprehensive income		-	(439,653)	-	-
- Remeasurements of post-employment benefit		-	(5,306)	-	(6,101)
Less Income tax relating to other comprehensive expense		-	1,061	-	1,220
Total items that will not be reclassified to profit or loss, net of taxes		(474,371)	(207,060)	-	(4,881)
Items that will be reclassified to profit or loss					
- Gains on cash flow hedge reserve		1,949	776	1,949	776
Less Income tax relating to other comprehensive income		(390)	(155)	(390)	(155)
- Share of other comprehensive income (expense) of associates and joint ventures accounted for using the equity method	14	2,814,977	(592,296)	-	-
- Translation differences		1,159,124	1,504,912	-	-
Total items that will be reclassified to profit or loss, net of taxes		3,975,660	913,237	1,559	621
Other comprehensive income (expense) for the year, net of taxes		3,501,289	706,177	1,559	(4,260)
Total comprehensive income for the year		6,675,624	4,489,201	933,310	764,314

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Comprehensive Income For the year ended 31 December 2021

	Note	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Profit attributable to:					
Owners of the Company		3,127,027	3,702,480	931,751	768,574
Non-controlling interests		47,308	80,544	-	-
		<u>3,174,335</u>	<u>3,783,024</u>	<u>931,751</u>	<u>768,574</u>
Total comprehensive income attributable to:					
Owners of the Company		6,507,468	4,355,096	933,310	764,314
Non-controlling interests		168,156	134,105	-	-
		<u>6,675,624</u>	<u>4,489,201</u>	<u>933,310</u>	<u>764,314</u>
Earnings per share					
Basic earnings per share (Baht)	25	1.026	1.214	0.306	0.252

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited Statement of Changes in Equity For the year ended 31 December 2021

Notes	Consolidated financial statements Baht'000											Total equity		
	Attributable to owners of the Company										Non-controlling interests			
	Issued and paid-up share capital	Premium on share capital	Treasury shares	Surplus from business combination under common control	Reserve for share-based payment	Retained earnings		Other components of equity						
						Legal reserve	Other reserve	Unappropriated	Cash flow hedge reserve	Change in fair value of financial assets			Translation differences	Total other components of equity
Opening balance as at 1 January 2021	30,510,217	7,231,386	(41,694)	(3,881,564)	40,326	1,600,200	41,694				9,550,966	(974,248)		
Decrease in share capital	(32,900)	-	41,694	-	-	(41,694)	32,900	-	-	-	-	-	-	-
Legal reserve	-	-	-	-	-	47,000	(47,000)	-	-	-	-	-	-	-
Dividend paid	-	-	-	-	-	-	(1,981,023)	-	-	-	-	-	-	(1,981,023)
Acquisition of investment in a subsidiary	-	-	-	-	-	-	-	3,127,027	-	-	-	-	-	2,906,928
Profit for the year	-	-	-	-	-	-	-	(34,574)	903,182	(439,797)	2,951,630	3,415,015	47,308	3,174,335
Total comprehensive income (expense) for the year	-	-	-	-	-	-	-	(34,574)	(71,066)	(235,908)	(210,813)	(517,787)	120,848	3,501,289
Closing balance as at 31 December 2021	30,477,317	7,231,386	-	(3,881,564)	40,326	1,647,200	-	10,648,296	(647,941)	1,470,453	(4,348,428)	(3,525,914)	734,943	41,278,478
Opening balance as at 1 January 2020	30,510,217	7,231,386	-	(1,970,423)	37,407	1,561,200	-	6,699,662	-	-	-	-	-	(41,694)
Treasury shares	-	-	(41,694)	-	-	-	41,694	(41,694)	-	-	-	-	-	-
Treasury shares reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in investment types from the group restructuring	-	-	-	(1,921,141)	-	-	-	1,063,749	-	(1,063,749)	-	(1,063,749)	-	(1,921,141)
Legal reserve	-	-	-	-	-	39,000	(39,000)	-	-	-	-	-	-	-
Reserve for share-based payment	-	-	-	-	2,919	-	-	-	-	-	-	-	-	2,919
Dividend paid	-	-	-	-	-	-	-	(1,829,191)	-	-	-	-	-	(1,829,191)
Change in remeasurements of post-employment benefit from transfer of employees to an associate	-	-	-	-	-	-	(795)	-	-	-	-	-	-	(795)
Profit for the year	-	-	-	-	-	-	3,702,480	-	(326,307)	(202,815)	1,185,983	656,861	80,544	3,783,024
Total comprehensive income (expense) for the year	-	-	-	-	-	-	(4,245)	9,550,966	(974,248)	203,889	(3,162,443)	(3,932,802)	53,561	706,177
Closing balance as at 31 December 2020	30,510,217	7,231,386	(41,694)	(3,881,564)	40,326	1,600,200	41,694	9,550,966	(647,941)	1,470,453	(4,348,428)	(3,525,914)	869,048	41,977,777

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Changes in Equity For the year ended 31 December 2021

	Notes	Separate financial statements Baht'000							Total equity	
		Issued and paid-up share capital	Premium on share capital	Treasury shares	Reserve for share-based	Retained earnings		Other components of equity		
						Legal reserve	Other reserve	Unappropriated		Other comprehensive expense
Opening balance as at 1 January 2021		30,510,217	7,231,386	(41,694)	40,326	1,600,200	41,694	3,168,051	(1,559)	42,548,621
Decrease in share capital	21	(32,900)	-	41,694	-	-	(41,694)	32,900	-	-
Legal reserve	22	-	-	-	-	47,000	-	(47,000)	-	-
Dividend paid	26	-	-	-	-	-	-	(1,981,023)	-	(1,981,023)
Profit for the year		-	-	-	-	-	-	931,751	-	931,751
Total comprehensive income for the year		-	-	-	-	-	-	-	1,559	1,559
Closing balance as at 31 December 2021		30,477,317	7,231,386	-	40,326	1,647,200	-	2,104,679	-	41,500,908
Opening balance as at 1 January 2020		30,510,217	7,231,386	-	37,407	1,561,200	-	4,314,243	(2,180)	43,652,273
Treasury shares		-	-	(41,694)	-	-	-	-	-	(41,694)
Treasury shares reserve		-	-	-	-	-	41,694	(41,694)	-	-
Legal reserve	22	-	-	-	-	39,000	-	(39,000)	-	-
Reserve for share-based payment	23	-	-	-	2,919	-	-	-	-	2,919
Dividend paid	26	-	-	-	-	-	-	(1,829,191)	-	(1,829,191)
Profit for the year		-	-	-	-	-	-	768,574	-	768,574
Total comprehensive income (expense) for the year		-	-	-	-	-	-	(4,881)	621	(4,260)
Closing balance as at 31 December 2020		30,510,217	7,231,386	(41,694)	40,326	1,600,200	41,694	3,168,051	(1,559)	42,548,621

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Cash Flows For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
		'Baht'000	'Baht'000	'Baht'000	'Baht'000
Cash flows from operating activities					
Profit for the year before income taxes		3,231,538	4,083,515	931,154	773,062
Adjustment to reconcile profit for cash receipts (payments) from operations					
- Depreciation and amortisation		580,598	402,463	1,964	2,123
- Interest income		(381,457)	(374,439)	(447,490)	(387,660)
- Interest expenses		245,711	236,091	151,090	145,570
- Other financial costs		3,735	6,921	3,735	5,894
- Share of profit from associates and joint ventures, net	14	(2,974,494)	(3,565,379)	-	-
- Dividend income from a subsidiary and joint ventures	14, 27	-	-	(793,871)	(782,350)
- Effect of change in investment types from the group restructuring		-	577,138	-	(17,632)
- Loss on disposal of investment in an associate	14	245	-	16,408	-
- Provision for impairment loss on investment in a subsidiary	14	-	-	270,000	-
- Net gains on disposal of property, plant and equipment		(10)	(2,694)	(10)	(13)
- Write-off property, plant and equipment	15	11,375	50,787	-	-
- Share-based payment	23	-	2,919	-	2,919
- Net gains from changes in fair value of financial instruments		(242,959)	-	-	-
- Net gains on exchange rate		(110,759)	(63,257)	(385,792)	(12,679)
Cash flow before changes in working capital		363,523	1,354,065	(252,812)	(270,766)
Changes in working capital (net of effects from acquisition and disposal of subsidiaries)					
- Trade accounts receivable		(371,991)	67,411	-	-
- Amounts due from related parties		1,208	(23,630)	573	117
- Advances to related parties		6,043	(11,016)	31,421	(3,500)
- Fuel and spare parts		(468,945)	(78,586)	-	-
- Other current assets		(274,459)	(137,714)	4,293	1,184
- Other non-current assets		(24,170)	(199,448)	(16,192)	(16,397)
- Trade accounts payable		152,596	(205,328)	-	-
- Advances from and amounts due to related parties		292,271	203,042	(23,419)	29,361
- Employee benefits obligation		2,697	(26,593)	2,697	(21,013)
- Other current liabilities		204,360	114,353	20,221	(5,822)
- Other non-current liabilities		2,604	-	-	-
Cash receipts from (used in) operations		(114,263)	1,056,556	(233,218)	(286,836)
- Interest paid		(164,632)	(232,130)	(113,880)	(151,528)
- Income tax paid		(88,751)	(274,644)	-	-
Net cash receipts from (used in) operating activities		(367,646)	549,782	(347,098)	(438,364)

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Cash Flows For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Cash flows from investing activities					
Cash receipts from financial assets measured at amortised cost		-	3,235,438	-	3,235,438
Cash receipts from financial assets measured at fair value through profit or loss		1,662,839	875,518	-	-
Cash payments for financial assets measured at fair value through profit or loss		(1,801,146)	(1,106,979)	-	-
Cash receipts from financial assets measured at fair value through other comprehensive income		78,922	259,016	-	-
Cash payments for financial assets measured at fair value through other comprehensive income		(73,044)	(203,871)	-	-
Cash receipts from restricted deposits at financial institutions		138,565	137,530	-	-
Cash payments for restricted deposits at financial institutions		(138,654)	(137,616)	-	-
Cash receipts from short-term loans to related parties	27	744,980	179,270	-	-
Cash payments for short-term loans to related parties	27	-	(1,599,096)	-	(1,587,661)
Cash receipts from long-term loans to related parties	27	24,833	1,255,438	15,940	1,255,438
Cash payments for long-term loans to related parties	27	-	-	(8,301,759)	(62,040)
Cash payments for investments in a subsidiary	14	-	-	(1,933,992)	-
Cash payments for addition of investments in an associate and a joint venture	14	(2,679,266)	(2,426,630)	(236,000)	(2,426,630)
Cash payments for purchase of other investments		-	(132,938)	-	-
Net cash payments for business combination		-	(9,679)	-	-
Net cash payments for acquisition of investment in a subsidiary	14	(14,747,833)	-	-	-
Decrease in cash from change in investment types from the group restructuring		-	(688,740)	-	-
Cash payments for purchase of property, plant and equipment		(257,772)	(328,666)	(158)	(533)
Cash receipts from disposal of property, plant and equipment		34	17,552	19	138
Cash payments for right-of-use assets		-	(259,221)	-	-
Interest received		57,698	442,167	3,440	423,147
Cash receipts from dividends from a subsidiary and joint ventures	14	937,282	975,094	969,904	982,351
Net cash receipts from (used in) investing activities		(16,052,562)	483,587	(9,482,606)	1,819,648

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Cash Flows For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Cash flows from financing activities					
Cash receipts from short-term loans from financial institutions		9,184,921	6,546,927	8,539,800	5,300,000
Cash payments for short-term loans from financial institutions		(4,196,169)	(6,039,716)	(3,457,340)	(4,300,000)
Cash receipts from long-term loans from financial institutions	20	7,140,799	162,817	6,993,806	-
Cash payments for long-term loans from financial institutions	20	(971,363)	(1,019,713)	(700,000)	(700,000)
Cash receipts from long-term loans from related party	27	4,721,033	-	-	-
Cash payments for lease liabilities	16	(13,319)	(15,114)	(1,511)	(1,511)
Cash payments for other financial costs		(17,798)	(1,678)	(17,798)	(651)
Proceeds from non-controlling interests		2,906,928	-	-	-
Cash payments for treasury shares		-	(41,694)	-	(41,694)
Dividend paid to shareholders	26	(1,981,023)	(1,829,191)	(1,981,023)	(1,829,191)
Net cash receipts from (used in) financing activities		16,774,009	(2,237,362)	9,375,934	(1,573,047)
Net increase (decrease) in cash and cash equivalents		353,801	(1,203,993)	(453,770)	(191,763)
Exchange differences on cash and cash equivalents		112,020	30,316	-	-
Cash and cash equivalents at beginning of the year		2,169,033	3,342,710	1,595,569	1,787,332
Cash and cash equivalents at end of the year		2,634,854	2,169,033	1,141,799	1,595,569
Supplementary of cash flows					
Significant non-cash transactions as at 31 December					
Other payables for purchase of property, plant and equipment	19	358,203	427,610	-	-
Conversion of long-term loans to a related party to investment in a subsidiary	14, 27	-	-	1,004,454	-
Amounts due from a related party for a disposal of investment in an associate	14	6,000	-	6,000	-

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Certification of Information and Data Accuracy



Attachment 1

Details about the Board of Directors and Management

1.1 Details about the Board of Directors, Management, and Controlling Person

1. Assoc. Prof. Dr. Naris Chaiyasoot

Age 67

Position	Appointed Date
Independent Director	4 August 2015
Chairman of the Board of Directors	4 August 2015
Chairman of the Corporate Governance and Nomination Committee	21 August 2015
Member of the Audit Committee	21 August 2015

% of Shares Held

Self: -
Spouse: -



Family Relationship between Director and Management:

None

Education

- Ph.D. in Economics, University of Hawaii
- M.Econ. (English Program), Thammasat University
- B.Econ. (Hons), Thammasat University

Training

- Advanced Audit Committee Program (AACP) #29/2018, IOD
- Chartered Director Class (CDC) #3/2008, IOD
- Director Certification Program (DCP) #82/2006, IOD
- Director Accreditation Program (DAP) #32/2005, IOD
- Finance for Non-Finance Directors Program (FND) #19/2005, IOD
- Role of the Chairman Program #45/2019, IOD
- Health Ambassador #2/2019, Chulabhorn Royal Academy

Work Experience in the Last Five Years

- 2015 - present Independent Director/
Chairman of the Board of Directors/
Chairman of the Corporate Governance
and Nomination Committee/
Member of the Audit Committee,
Banpu Power Public Company Limited
- Apr 2021 - present Chairman,
United Palm Oil Industry Public
Company Limited
- 2016 - present Chairman,
AP (Thailand) Public Company Limited
- 2013 - present Chairman of the Audit Committee/
Independent Director/
Member of the Nomination
and Compensation
Committee,
GMM Grammy Public Company Limited
- 2020 - present Chairman,
Travelex (Thailand) Limited
- 2020 - present Chairman,
Function International Co., Ltd.
- 2015 - present Chairman,
R.X. Co., Ltd.
- 2012 - 2018 Director/Chairman of the Audit Committee,
Fortune Part Industries Public
Company Limited
- Jan - Sep 2015 Deputy Permanent Secretary of
Ministry of Finance,
Ministry of Finance

2. Mr. Yokporn Tantisawetrat

Age 67

Position	Appointed Date
Independent Director	4 August 2015
Chairman of the Audit Committee	21 August 2015

% of Shares Held

Self: 0.002%
Spouse: -



Family Relationship between Director and Management:

None

Education

- M.Econ., Thammasat University
- B.Econ., Chulalongkorn University

Training

- Director Accreditation Program (DAP) #66/2007, IOD
- Director Certification Program (DCP) #229/2016, IOD
- Advanced Audit Committee Program (AACP) #25/2017, IOD
- IT Governance Program (ITG) #7/2018, IOD
- Advanced Bank Management Program, The Wharton School
- Advanced Management Program (AMP), Harvard Business School
- National Defence Program 2003, National Defence College

Work Experience in the Last Five Years

- 2015 - present Independent Director/
Chairman of the Audit Committee,
Banpu Power Public Company Limited
- May 2021 - present Director,
TMBThanachart Bank Public
Company Limited
- 2017 - present Independent Director,
AP (Thailand) Public Company Limited
- 2017 - present Director,
Kirloskar Brothers (Thailand) Limited
- 2016 - May 2021 Director,
TMB Bank Public Company Limited
- 2016 - Apr 2021 Expert Member/Chairman of
the Audit Committee,
The Securities
and Exchange Commission
- 2006 - 2015 Executive Vice President,
Risk Management Group,
Siam Commercial Bank Public
Company Limited

3. Prof. Dr. Bundhit Eua-arporn

Age 57

Position	Appointed Date
Independent Director	4 August 2015
Chairman of the Compensation Committee	21 August 2015
Member of the Audit Committee	21 August 2015

% of Shares Held

Self: 0.003%

Spouse: -



Family Relationship between Director and Management:

None

Education

- Ph.D. in Engineering, Imperial College of Science Technology and Medicine, U.K.
- M.Eng., Chulalongkorn University
- B.Eng., Chulalongkorn University

Training

- Director Certification Program (DCP) #110/2018, IOD
- Executive Program in Energy Literacy for a Sustainable Future Program, # 6/2015, Thailand Energy Academy
- Bhumipalung Phandin Program #3/2014
- Temasek Foundation-NUS Programme for Leadership in University Management 2012

Work Experience in the Last Five Years

- 2015 - present Independent Director/
Chairman of the Compensation Committee/
Member of the Audit Committee,
Banpu Power Public Company Limited
- 2017 - present Independent Director/
Chairman of the Nomination Committee,
PTT Exploration and Production Public Company Limited
- 2016 - present President,
Chulalongkorn University
- Nov 2021 - present Chairman,
Office of the Basic Education Commission (OBEC)
- Aug - Sep 2017 Director,
The National Energy Reform Committee,
Thailand's National Reform Council
- 2015 - 2016 Expert Member of
the Board of Directors,
Thailand Institute of Scientific
and Technological Research
- 2013 - 2016 Dean,
Faculty of Engineering,
Chulalongkorn University

4. Prof. Dr. Patchanita Thamyongkit

Age 45

Position	Appointed Date
Independent Director	2 April 2021
Member of the Audit Committee	30 April 2021
Member of the Corporate Governance and Nomination Committee	30 April 2021

% of Shares Held

Self: -



Family Relationship between Director and Management:

None

Education

- Dr.rer.nat (Ph.D.) (Organic Chemistry), Eberhard-Karls-Universität Tübingen, Germany
- B.Sc. (Organic Chemistry), Chulalongkorn University

Training

- Director Certification Program (DCP) #289, IOD
- Risk Management Program for Corporate Leaders (RLC) #23/2021, IOD
- Advanced Audit Committee Program (AAP) #40/2021, IOD

Work Experience in the Last Five Years

- 2021 - present Independent Director/
Member of the Audit Committee/
Member of the Corporate Governance
and Nomination Committee,
Banpu Power Public Company Limited
- 2020 - present Acting Director,
Chulalongkorn University Intellectual
Property Institute
- 2019 - present Assistant to the President for Research
and Innovation,
Chulalongkorn University
- 2005 - present Professor, Department of Chemistry
Faculty of Science,
Chulalongkorn University
- 2012 - 2014/
2017 - 2019 Associate Dean, Graduate School,
Chulalongkorn University
- 2015 - 2017 Vice Director,
Scientific and Technological Research
Equipment Center,
Chulalongkorn University

5. Mr. Chanin Vongkusolkit

Age 69

Position

Director
Member of
the Corporate Governance
and Nomination Committee

Appointed Date

12 December 1996
21 August 2015

% of Shares Held

Self: 0.001%
Spouse: 0.011%



Family Relationship between Director and Management:

None

Education

- M.B.A. (Finance), St. Louis University, Missouri, U.S.A.
- B.Econ., Thammasat University

Training

- DCP Refresher Course #3/2006, IOD
- Director Certification Program (DCP) #20/2002, IOD
- TLCA Leadership Development Program (LDP) - Enhancing Competitiveness #0/2012, Thai Listed Companies Association

Work Experience in the Last Five Years

- 1996 - present Director, Banpu Power Public Company Limited¹
- 2015 - present Member of the Corporate Governance and Nomination Committee, Banpu Power Public Company Limited¹
- 2016 - present Chairman, Banpu Public Company Limited
- 1983 - present Director, Banpu Public Company Limited
- 2015 - 2016 Senior Executive Officer, Banpu Public Company Limited
- 1983 - 2015 Chief Executive Officer, Banpu Public Company Limited

- 2018 - present Chairman, The Erawan Group Public Company Limited
- 2004 - present Director, The Erawan Group Public Company Limited
- 1983 - present Director, Mitr Phol Sugar Corp., Ltd.
- May 2021 - present Chairman, Thai Listed Companies Association
- 2019 - present Director, Thai Listed Companies Association
- 2021 - present Advisor, The Thammasat Economics Association
- 2012 - 2021 Chairman, The Thammasat Economics Association
- 2015 - present Director, Thailand's Private Sector Collective Action Coalition Against Corruption (CAC)
- 2008 - present Chairman, The Foundation for Better Life
- 2012 - 2021 Board of Directors, Faculty of Economics, Thammasat University
- 2016 - 2018 Expert Commissioner, The Securities and Exchange Commission
- 2015 - 2018 Chairman of the Working Committee, The Working Committee for Sustainability Development of Listed Companies - Office of the Securities and Exchange Commission

¹ The Company was registered as a public company on 10 September 2015.

6. Mr. Metee Auapinyakul

Age 68

Position

Director
Member of
the Compensation Committee

Appointed Date

22 May 2015
21 August 2015

% of Shares Held

Self: 0.014%
Spouse: 0.001%



Family Relationship between Director and Management:

None

Education

- Ph.D. Doctor of Business, Engineering and Technology, St. Louis University, Missouri, U.S.A
- B.S.C. (Management), St. Louis University, Missouri, U.S.A.

Training

- Infrastructure for the Market Economy, Harvard University John F. Kennedy School of Government, Boston, U.S.A.
- Diploma, National Defence College of Thailand, The Joint State - Private Sector (NDCT 377) #7
- Diploma, National Defence College, Joint State - Private Sectors (NDCT Mngmt) #1
- Director Certification Program (DCP) #61/2005, IOD

Work Experience in the Last Five Years

- 2015 - present Director/Member of the Compensation Committee, Banpu Power Public Company Limited
- 1983 - present Director, Banpu Public Company Limited
- 2014 - present Advisor, Banpu Public Company Limited
- 2004 - present Chief Advisor, General Environmental Conservation Public Company Limited

7. Mr. Rawi Corsiri

Age 72

Position

Director
Member of
the Corporate Governance
and Nomination Committee

Appointed Date

29 October 2001
21 August 2015

% of Shares Held

Self: 0.002%
Spouse: 0.002%



Family Relationship between Director and Management:

None

Education

- MBA., Sasin Graduate Institute of Business Administration of Chulalongkorn University
- B.Sc. (Geology), Chulalongkorn University

Training

- Director Certification Program (DCP) #32/2003, IOD
- Capital Market Academy Leader (CMA) #2/2006, Capital Market Academy
- NIDA-Wharton Executive Leadership Program, Faculty of Business Administration, National Institute of Development Administration (NIDA) and The Wharton School, University of Pennsylvania, U.S.A.
- Top Executive Program (TEA #3), Thailand Energy Academy

Work Experience in the Last Five Years

- 2001 - present Director, Banpu Public Company Limited¹
- 2015 - present Member of the Corporate Governance and Nomination Committee, Banpu Public Company Limited
- 2012 - present Director, Banpu Public Company Limited
- 2016 - present Chairman of the Corporate Governance and Nomination Committee, Banpu Public Company Limited
- 2012 - 2016 Member of the Corporate Governance and Nomination Committee, Banpu Public Company Limited¹
- 2001 - present Director, BLCP Power Ltd.
- 2009 - 31 Jul 2020 Director, Hongsia Power Company Limited
Director, Phu Fai Mining Company Limited
- 2012 - 2016 Advisor, Banpu Public Company Limited
- 2010 - 2017 Director, Centennial Coal Co. Pty Ltd.

¹ The Company was registered as a public company on 10 September 2015.

8. Mrs. Somruedee Chaimongkol

Age 60

Position

Director
Member of
the Compensation Committee

Appointed Date

30 July 2009
1 August 2015

% of Shares Held

Self: 0.059%
Spouse: -



Family Relationship between Director and Management:

-

Education

- B.Acc., Bangkok University

Training

- Program for Global Leadership, Harvard University Graduate School of Business Administration, Boston, U.S.A.
- Director Certification Program (DCP) #78/2006, IOD
- Top Executive Management Program, Capital Market Academy (CMA) #18
- Top Executive Management Program on Industrial Development and Investment #2, Institute of Business and Industrial Development (IBID)

Work Experience in the Last Five Years

- 2009 - present Director, Banpu Power Public Company Limited¹
- 2015 - present Member of the Compensation Committee, Banpu Power Public Company Limited
- 2015 - present Chief Executive Officer/Director, Banpu Public Company Limited
- 2006 - 2015 Chief Financial Officer, Banpu Public Company Limited

- Present Director, BLCP Power Ltd.
- Director, Banpu NEXT Co., Ltd.
- Director, Banpu NEXT Green Leasing Co., Ltd.
- Director, Banpu Minerals Co., Ltd.
- Director, Banpu International Co., Ltd.
- Director, Banpu Coal Sales Co., Ltd.
- Director, Power Vietnam Co., Ltd.
- Director, Banpu Coal Power Co., Ltd.
- Director, Banpu Innovation & Ventures Co., Ltd.
- Director, BOG Co., Ltd.
- Director, Hunnu Investments Pte. Ltd.
- Director, Banpu Singapore Pte. Ltd.
- Director, BMS Coal Sales Pte. Ltd.
- Director, Banpu Minerals (Singapore) Pte. Ltd.
- Director, Sunseap Group Pte. Ltd.
- Director, Durapower Holdings Pte. Ltd.
- Director, Hunnu Coal Pty Ltd.
- Director, AFE Investments Pty Limited
- Director, Banpu Australia Resources Pty Ltd.
- Director, Banpu Australia Co., Pty Ltd.
- Director, Banpu Energy Holding Pty Ltd
- Director, Banpu Energy Australia Pty Ltd.
- Director, Banpu Renewable Australia Pty Ltd.
- Director, Banpu Coal Investment Company Limited
- Director, BPIN Investment Company Limited
- Director, BP Overseas Development Company Limited
- Director, Asian American Coal, Inc.
- Director, Banpu Japan K.K.
- Director, BKV Corporation
- Director, Banpu North America Corporation
- Director, Banpu Power US Corporation

¹ The Company was registered as a public company on 10 September 2015.

9. Mr. Voravudhi Linananda

Age 64

Position

Director

Appointed Date

30 July 2009

% of Shares Held

Self: 0.003%

Spouse: 0.000%



Family Relationship between Director and Management:

None

Education

- MBA., Sasin Graduate Institute of Business Administration of Chulalongkorn University
- B.Eng. (Mechanical Engineering), Faculty of Engineering, Kasetsart University

Training

- Advanced Management Program (AMP173) Harvard Business School, U.S.A.
- Director Certification Program (DCP) #149/2011, IOD
- Orchestrating Winning Performance Program, #OWPII/2013, Institute of International Management Development (IMD SE Asia)

Work Experience in the Last Five Years

- 2009 - present Director, Banpu Power Public Company Limited¹
Director, BLCP Power Ltd.
Director, Hongsa Power Company Limited
Director, Phu Fai Mining Company Limited
- 2017 - present Advisor, Banpu Public Company Limited
- Aug 2020 - present Director, Banpu Energy Australia Pty Ltd
- Feb 2020 - present Director, Banpu NEXT Co., Ltd.
- 2013 - 2017 Chief Operating Officer, Banpu Public Company Limited
- 2015 - 2017 Chief Executive Officer, Banpu Power Public Company Limited
- 2015 - 2016 Company Secretary, Banpu Power Public Company Limited
- 2015 - Feb 2017 Director, Banpu Coal Investment Company Limited
Director, BP Overseas Development Company Limited
Director, Hokkaido Solar Estate G.K.
Director, BPPR Co., Ltd.
Director, BPPR Japan Co., Ltd.
- 2014 - Feb 2017 Director, Banpu Engineering Services Co., Ltd.
Director, Banpu Energy Services (Thailand) Co., Ltd.
Director, Banpu Energy Service (Japan) Co., Ltd.

¹ The Company was registered as a public company on 10 September 2015.

10. Dr. Kirana Limpaphayom

Age 47

Position

Director

Chief Executive Officer

Appointed Date

10 April 2020

10 April 2020

% of Shares Held

Self: 0.004%

Spouse: 0.000%



Family Relationship between Director and Management:

None

Education

- Ph.D. Sociology, University of Warwick
- M.Sc. Industrial Relations, London School of Economics and Political Science (LSE), University of London
- MBA., Sasin Graduate Institute of Business Administration of Chulalongkorn University
- B.Econ., Chulalongkorn University

Training

- Director Certification Program (DCP) #294/2020, IOD
- Graduate of the Australian Institute of Company Directors (GAICD)
- Director Certificate Program, Indonesian Institute of Corporate Directors (IICD)

Work Experience in the Last Five Years

- 10 Apr 2020 - present Director/Chief Executive Officer, Banpu Power Public Company Limited
Head of Power Business
Banpu Public Company Limited
- 2020 - present Director, Power Vietnam Co., Ltd.
Director, Banpu Coal Power Co., Ltd.
Director, Banpu Power (Japan) Co., Ltd.
Director, Banpu Power US Corporation
Director, Banpu Power International Limited
Director, Pan-Western Energy Corporation LLC
Director, Hongsa Power Company Limited
- Mar 2016 - 10 Apr 2020 President Director, PT. Indo Tambangraya Megah Tbk
- Aug 2015 - Mar 2016 Senior Vice President, Office of the President Director, PT. Indo Tambangraya Megah Tbk
- Jul 2019 - 10 Apr 2020 President Director, Thai Business Club Indonesia (TBCI)
- Director, Phu Fai Mining Company Limited
- Director, BLCP Power Ltd.
- Director, BKV-BPP Power LLC
- Director, Zouping Peak Pte. Ltd.
- Director, Banpu NEXT Co., Ltd.
- Director, Banpu NEXT Green Leasing Co., Ltd
- Director, Banpu Energy Holding Pty Ltd
- Director, Banpu Innovation & Ventures LLC.
- Director, Banpu Energy Australia Pty Ltd
- Director, Banpu Australia Co., Pty Ltd.
- Director, AFE Investments Pty Limited
- Director, Banpu Australia Resources Pty Ltd.
- Commissioner, PT. Indo Tambangraya Megah Tbk
- Alternate Director, Centennial Coal Co. Pty Ltd.

11. Mr. Praphan Likitwacharapakorn

Age 64

Position

Chief Operating Officer

Appointed Date

1 January 2019

% of Shares Held

Self: -

Spouse: -



Family Relationship between Director and Management:

None

Education

- B.Eng. (Electrical Engineering), Faculty of Engineering, Chiang Mai University
- Senior Professional Engineer License (Electrical Engineering)

Training

- Director Certification Program (DCP) #192/2014, IOD
- Executive Leadership Program NIDA-Wharton, Faculty of Business Administration, National Institute of Development Administration (NIDA) and The Wharton School, University of Pennsylvania, U.S.A. #7/2014
- The BOSS #72 by Management Psychology Institute
- Top Executive Program (TEA) #10, Thailand Energy Academy

Work Experience in the Last Five Years

- 2019 - present Chief Operating Officer, Banpu Power Public Company Limited
- 2017 - 2018 Advisor, Banpu Public Company Limited
- 2013 - 2017 Managing Director, BLCP Power Ltd.

12. Ms. Benjamas Suratanakavikul

Age 50

Position

Chief Financial Officer

Appointed Date

10 April 2020

% of Shares Held

Self: -



Family Relationship between Director and Management:

None

Education

- MBA., Sasin Graduate Institute of Business Administration of Chulalongkorn University
- B. Sc. (Mathematics), National University of Singapore

Training

- Executive Development Program (EDP) #20, Thai Listed Companies Association (TLCA)

Work Experience in the Last Five Years

- 10 Apr 2020 - present Chief Financial Officer, Banpu Power Public Company Limited
- 2017 - 2019 Deputy Managing Director - Finance and Accounting, Hongsa Power Company Limited

13. Mr. Padungsak Thanakij

Age 63

Position

Senior Vice President -
Power Business, Vietnam

Appointed Date

10 April 2020

% of Shares Held

Self: 0.001%

Spouse: -



Family Relationship between Director and Management:

None

Education

- Mini-MBA., Thammasat University
- B.Eng. (Mining Engineering), Chulalongkorn University

Training

- Banpu Leadership Development Program

Work Experience in the Last Five Years

- 10 Apr 2020 - present Senior Vice President - Power Business, Vietnam, Banpu Power Public Company Limited
- 2018 - Mar 2020 Operation Director, PT. Indo Tambangraya Megah Tbk
- 2016 - 2018 Melak Cluster Head, PT. Indo Tambangraya Megah Tbk

14. Mr. Pilun Pochanart

Age 57

Position

Senior Vice President -
Power Business, China

Appointed Date

10 April 2020

% of Shares Held

Self: 0.000%

Spouse: 0.000%



Family Relationship between Director and Management:

None

Education

- MBA. (Executive), Sasin Graduate Institute of Business Administration of Chulalongkorn University
- B.Eng. (Mechanical Engineering), Chiang Mai University

Work Experience in the Last Five Years

- 10 Apr 2020 - present Senior Vice President - Power Business, China, Banpu Power Public Company Limited
- 2018 - present Director, Banpu Investment (China) Co., Ltd.
- present Director, Shijiazhuang Chengfeng Cogen Co., Ltd.
- present Director, Feichang Xingyu Solar Power PV Technology
- present Director, Tangshan Banpu Heat and Power Co., Ltd.

- present Director, Zouping Peak CHP Co., Ltd.
- present Director, BPP Renewable Investment (China) Co., Ltd.
- present Director, Dongping Haoyuan Solar Power Generation Co., Ltd.
- present Director, Weifang Tian'en Jinshan Comprehensive Energy Co., Ltd.
- present Director, Anqiu City Hui'en PV Technology Co., Ltd.
- present Director, Anqiu Huineng Renewable Energy Co., Ltd.
- present Director, Jiaxing Deyuan Energy-saving Technology Co., Ltd.
- present Director, Shanxi Gaohe Energy Company, Ltd.
- present Director, Hebi Zhong Tai Mining Co., Ltd.
- present Director, Shanxi Lu Guang Power Company Limited

1.2 Details about the Company Secretary and Duties and Responsibilities of the Company Secretary

15. Ms. Thassanee Passarapark

Age 50

Position	Appointed Date
Company Secretary	1 January 2019

% of Shares Held

Self: -

Family Relationship between Director and Management:

None

Education

- LL.B., Thammasat University

Training

- Advances for Corporate Secretaries #1/2017, Thai Company Secretary Club, Thai Listed Companies Association
- Corruption Risk & Control (CRC) #2/2019, IOD
- Company Secretary Program (CSP) #110/2020, IOD
- Professional Development Program for Company Secretary #1/2021, Thai Listed Companies Association

Work Experience in the Last Five Years

- 2019 - present Company Secretary, Banpu Power Public Company Limited
- 2016 - 2018 Company Secretarial Officer, Banpu Power Public Company Limited

The Board of Directors' Meeting No. 12/2018 held on 21 December 2018 appointed Ms. Thassanee Passarapark as Company Secretary, effective from 1 February 2019 onwards, entrusted with duties and responsibilities as stipulated in the Securities and Exchange Act. The Company Secretary is responsible for organizing the Board of Directors' meetings and general shareholders' meeting, ensuring compliance with the meetings' resolutions, and advising the Board on rules and regulations with which it must comply. The Company Secretary has responsibilities to prepare and keep the register of directors, Board meeting invitation letters, Board meeting minutes, Banpu Power Annual Report, invitation letters to attend the shareholders' meeting and records of its minutes, the report on stakeholder analysis by the Board and related issues required by the Securities and Exchange Commission, the Capital Market Supervisory Board, and the Stock Exchange of Thailand.

Details about the Head of Internal Audit and the Secretary of the Audit Committee

1. Ms. Orawan Phunamsarp

Age 41

Position	Appointed Date
Head of Internal Audit and the Secretary of the Audit Committee	1 December 2018

% of Shares Held

Self: -

Family Relationship between Director and Management:

None

Education

- M.Sc. (Technology Administration), Assumption University
- B.B.A. (Accounting), Khon Kaen University

Training

- Personal Data Protection Act (PDPA) for Internal Auditors, the Institute of Internal Auditors of Thailand (IIAT)
- Innovate with Design Thinking Program, Leading Scrum Projects, SEAC (YourNextU)
- Project Management Course, Banpu Power Public Company Limited
- CIA Review Part I Course, Federation of Accounting Professions
- IIAT Annual Conference 2021, the Institute of Internal Auditors of Thailand
- Workshop - Strategy Foundation Program, Banpu Power Public Company Limited
- The 7 Habits of Highly Effective People, Banpu Power Public Company Limited

Work Experience in the Last Five Years

- 2018 - present Manager - Internal Audit, Banpu Power Public Company Limited
Secretary of the Audit Committee, Banpu Power Public Company Limited
- 2015 - 2018 Manager - Global Internal Audit, Indorama Ventures Public Company Limited

Attachment 2

Details about Directors of Banpu Power and Its Subsidiaries, Associate Companies, and Joint Ventures

Name	BPP	Subsidiary											Associate Company ¹	Joint Venture					
		BPCP	BPPJP	PV	ZD	BIC	LN	ZP	BPIC	ZPP	BPPI	PW	BPPUS	Banpu NEXT	BLCP	SLG	HPC	PFMC	BKV-BPP
1. Assoc. Prof. Dr. Naris Chaiyasoot	X, //																		
2. Mr. Yokporn Tantisawetrat	//																		
3. Prof. Dr. Bundhit Eua-arporn	//																		
4. Prof. Dr. Patchanita Thamyongkit	//																		
5. Mr. Chanin Vongkusolkrit	/	/	/					/				/	/	/	/		/	/	
6. Mr. Metee Auapinyakul	/																		
7. Mr. Rawi Corsiri	/															/			
8. Ms. Somruedee Chaimongkol	/	/		/									/	/	/				
9. Mr. Voravudhi Linananda	/													/	/	/	/	/	
10. Dr. Kirana Limpaphayom	/, M	/	/	/						/	/	/	/	/	/	/	/	/	
11. Mr. Praphan Likitwacharakorn	O																		
12. Ms. Benjamas Suratanakavikul	O		/	/						/		/	/						
13. Mr. Padungsak Thanakij	O																		
14. Mr. Pilun Pochanart	O				/	/	/	/								/			

Notes: Symbols for Directors and Executives
 X Chairman of the Board of Directors M Chief Executive Officer O Executive
 / Director // Independent Director, Member of the Audit Committee

Symbols of Banpu Power and Its Subsidiaries

BPP	Banpu Power Public Company Limited	BPCP	Banpu Coal Power Limited	BPPJP	Banpu Power (Japan) Co., Ltd.	PV	Power Vietnam Co., Ltd.
ZD	Shijiazhuang Chengfeng Cogen Co., Ltd.	BIC	Banpu Investment (China) Ltd.	LN	Tangshan Banpu Heat and Power Co., Ltd.	ZP	Zouping Peak CHP Co., Ltd.
BPIC	Banpu Power Investment Co., Ltd.	ZPP	Zouping Peak Pte. Ltd.	BPPI	Banpu Power International Limited	PW	Pan-Western Energy Corporation LLC
BPPUS	Banpu Power US Corporation	Banpu NEXT	Banpu NEXT Co., Ltd.	BLCP	BLCP Power Limited	SLG	Shanxi Lu Guang Power Co., Ltd.
HPC	Hongsa Power Co., Ltd.	PFMC	Phu Fai Mining Co., Ltd.	BKV-BPP	BKV-BPP Power LLC		

¹ The Company appointed its representative directors to serve as directors of Banpu NEXT Co., Ltd., its associate company, in compliance with the rules stipulated under the chapter on governance and management of subsidiaries and associate companies in the Company's Articles of Association.

Attachment 3

Corporate Governance Policies and Principles and the Code of Conduct

The Board of Directors is committed to management based on Banpu Power's corporate governance principles, the Best Practices for Directors of Listed Companies, as well as regulations and related practices of the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC). The Company has thus formulated the Corporate Governance Policy and Code of Conduct in writing as guiding principles for all directors, executives, and employees in driving effective business operations and success according to the Company's vision and objectives. This, in turn, will create added value and ensure the utmost benefit of the shareholders, fostering stable and sustainable growth for the Company. The Corporate Governance Policies and Principles cover the following topics:

- Duties and Responsibilities of the Board of Directors to Shareholders: Setting Strategic Directions and Corporate Governance Policy
- Policies Related to Shareholders: Shareholder Rights and Shareholder Meetings
- Policy on Conflict of Interests
- Policy on Stakeholders
- Policy on Information Disclosure, Transparency, Financial and Operational Reporting
- Policy on Risk Management
- Policy on Internal Control
- Policy on Monitoring and Evaluation of Performance
- Policy on Succession Plans
- Policy on Innovation
- Policy on Information Technology
- Policy on Anti-Corruption
- Policy on Market Sensitive Information
- Policy on Sustainable Development
- Corporate Culture and Organizational Attitude

The Company has stipulated the qualifications, structure, Board composition, and duties of the Corporate Governance Committee in Corporate Governance Policy to elevate Banpu Power's corporate governance to be on a par with international best practices.

Additionally, the Company has set forth the Code of Conduct for directors, executives, and employees as operational practices in the "Code of Conduct Handbook" for a clear understanding and convenience of directors, executives, and employees. The Code of Conduct informs the Company's expectations on the treatment of employees, shareholders, customers, trading partners, competitors, and society at large. The Board of Directors has also established a mechanism and procedure to actualize the practice in full compliance. The Corporate Governance Policy and the Code of Conduct Handbook are published on the Company's website and can be downloaded from <https://www.banpupower.com/wp-content/uploads/2021/07/CG-PolicyCoC-EN-2021.pdf>

Attachment 4

Report of the Audit Committee 2021

The Audit Committee of Banpu Power Public Company Limited consists of four independent directors who are competent and have relevant experience in finance and accounting, economics, risk management, engineering, chemical science, and energy business as follows:

- | | |
|--------------------------------------|---------------------------------|
| 1) Mr. Yokporn Tantisawetrat | Chairman of the Audit Committee |
| 2) Assoc. Prof. Dr. Naris Chaiyasoot | Member of the Audit Committee |
| 3) Prof. Dr. Bundhit Eua-arporn | Member of the Audit Committee |
| 4) Prof. Dr. Patchanita Thamyongkit | Member of the Audit Committee |

Ms. Orawan Phunamsarp is the Head of Internal Audit and the Secretary to the Audit Committee.

The Audit Committee is fully aware of its duties and responsibilities stipulated in the Audit Committee Charter as well as other duties entrusted by the Board of Directors with independence and in compliance with the Best Practice Guidelines for Audit Committee and the regulations of the Stock Exchange of Thailand. The Audit Committee underlines compliance with the principles of good corporate governance, effective and efficient systems of risk management, as well as internal control and internal audit to create sustainable value for the organization based on the Three Lines Model¹.

In 2021, the Audit Committee convened nine times at which a quorum was established with the participation of the management, Internal Audit, and the external auditors on the related agenda. The Audit Committee also held a private meeting with the external auditors without the presence of the management. The results of the Audit Committee meetings were quarterly reported to the Board of Directors. The Audit Committee's main activities can be summarized as follows:

1. **Review of Financial Statements:** The Audit Committee reviewed Banpu Power's quarterly financial statements and the 2021 annual financial statements on major issues, including related party transactions, transactions with a possible conflict of interest, and the appropriateness of accounting policies. The Committee also reviewed material accounts, significant changes in accounting and adjustment, accounting estimates, the disclosure of notes to the financial statements, and the external auditor's observations from the review and audit of the financial statements. The Audit Committee received sufficient explications from external auditors, management, and related parties and ensured that the financial statements were prepared in compliance with laws and financial reporting standards. The disclosure of notes to the financial statements was accurate, sufficient, and timely for the benefit of investors and users of the financial statements.
2. **Review of Internal Control and Internal Audit:** The Audit Committee reviewed the internal control system together with the Internal Audit Division in the areas of operations, resource utilization, asset care, prevention or reduction of mistakes, damages, and corruption, reliability of financial reports, compliance with laws, regulations, and rules, improvement of the corporate governance process, risk management, internal control, and oversight of compliance with relevant regulations. It was emphasized on awareness-raising for employees to adhere to the air-tight internal control with prudence and carefulness. The Committee also considered the result of self-evaluation based on the Self Evaluation Form formulated by the Office of the Securities and Exchange Commission (SEC). Overall, the Audit Committee concluded that Banpu Power had an adequate, appropriate, and effective internal control system that covers the corporate level as well as activity level.

¹ This principle were renamed from Three Lines of Defense to Three Lines Model in July 2020.

Source : <https://global.theiaa.org/about/about-internal-auditing/Pages/Three-Lines-Model.aspx#positionpaper>

The Audit Committee reviewed the Internal Audit Division operation by approving the annual audit plan and budget as well as evaluating the performance of the Head of Internal Audit and performance of the Division as well as the internal audit service provider (Banpu Public Company Limited, according to the Management Service Agreement). Moreover, the Committee provided advice and followed up the audit results against the audit plan. The Committee stressed preventive audit measures and monitoring prompt corrective action of significant issues. Internal audit and follow-up results were regularly reported to the management. It was also reported to the Audit Committee on a quarterly basis. During the COVID-19 pandemic, the Company has adopted the remote audit protocol with the support of data analytics for more efficient internal auditing of subsidiaries and affiliated companies in Thailand and abroad.

3. **Review of Legal and Regulatory Compliance:** The Audit Committee reviewed the legal and regulatory compliance of Banpu Power's business operations and policies. The Corporate Compliance Department is responsible for auditing and monitoring legal and regulatory compliance and regularly report compliance issues and monitoring results to the management and the Audit Committee. In addition, the Company reported risk management and internal audit results covering key compliance risks. In 2021, the Company deployed Compliance Risk Management (C-RiM) application in overseeing compliance risk of the Company and its subsidiaries in each country via an online system, and Laws In-Hand application was used to monitor recent legal and regulatory updates in all countries where Banpu Power has business operations.
4. **Review of Related Party Transactions:** The Audit Committee reviewed related party transactions or transactions that may cause conflicts of interest between the Company, its subsidiaries, and other related parties based on the arm's length principle. That is to ensure that the transactions were carried out at fair value for the best interest of the Company and stakeholders and did not involve a transfer of interest. The transactions must also be fair and reasonable in compliance with the laws and regulations of the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC).
5. **Governance of Risk Management System:** The Audit Committee reviewed the efficiency and effectiveness of the risk management process and monitored key risks that may have posed threats to the Company's business operations. The Committee quarterly monitored the progress of the management of key risks and changing situations affecting the operations. The Committee also established mitigation measures, emphasizing systematic and sustainable management which timely responds to rapidly changing business environment and trends. Policy on risk management was explicitly stipulated in writing in the Risk Management Policy and the Charter of Risk Management Committee, which was approved by the Board of Directors. The Committee convened regular meetings to assess risks. The Risk Management Policy was communicated to all units of Banpu Power, including its subsidiaries and joint ventures, so they could efficiently manage and mitigate risks.
6. **The Appointment of the External Auditor and Determination of the Audit Fee for 2022:** The Audit Committee considered the selection of external auditors based on Banpu Power's evaluation criteria which included independence, timeliness, quality, professional standard, and reasonable audit fees. As a result, the external auditors' qualifications met the Stock Exchange of Thailand's requirements. For 2022, the Audit Committee proposed the appointment of auditors to the Board of Directors for consideration and submission to the 2022 Annual General Meeting of Shareholders for approval. The following individuals were nominated:
 - 1) Ms. Rodjanart Banyatananusard CPA, License No. 8435; and/or
 - 2) Ms. Amornrat Permpoonwattanasuk CPA, License No. 4599; and/or
 - 3) Mr. Pongthavee Ratanakoses CPA, License No. 7795; and/or
 - 4) Mr. Boonrueng Lerdwisewit CPA License No. 6552.

These CPAs of PricewaterhouseCoopers ABAS Limited (PwC) were appointed as the external auditors of Banpu Power for 2022. The Company also approved the audit fees for 2022. One of these individuals was assigned to conduct his/her audit and to provide opinions on the financial statements of Banpu Power. In case these appointed auditors are unable to perform their duties, PricewaterhouseCoopers ABAS Limited (PwC) shall appoint other of its CPAs as the external auditors of Banpu Power.

In summary, in 2021, the Audit Committee independently performed its duties and responsibilities set forth in the Audit Committee Charter which was approved by the Board of Directors, based on their knowledge, capabilities, and prudent consideration for the equitable benefit of the stakeholders. The Audit Committee is certain that Banpu Power's financial statements were completed and were consistent with generally accepted accounting standards and principles, and there was adequate information disclosure. Banpu Power's business conduct was in line with a sound corporate governance policy, and the Company had an appropriate risk management system as well as effective and adequate internal control and internal audit systems. In addition, Banpu Power properly complied with existing laws and regulations relevant to its business operations.

On behalf of the Audit Committee



(Mr. Yokporn Tantisawetrat)
Chairman of the Audit Committee
Banpu Power Public Company Limited





BANPU POWER PUBLIC COMPANY LIMITED

26th Floor, Thanapoom Tower, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400

Tel: +66 2007 6000

Fax: +66 2007 6060

Website: www.banpupower.com

Email: info@banpupower.co.th

ESCALATING TOWARD

Greener & Smarter Energy Generation



Financial Report 2021

Banpu Power Public Company Limited



ESCALATING
TOWARD
Greener & Smarter Energy Generation

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[Annual Report 2021 \(Form 56-1 One Report\)](#)

Report of the Board of Directors' Responsibilities for the Financial Statements

The Board of Directors has placed top priority on supervising the Company's operations to ensure their compliance with good corporate governance policy and overseeing the accuracy, completeness, and adequacy of financial statements and financial information appearing in the Annual Report (Form 56-1 One Report). It also has a responsibility to ascertain that the financial statements are carefully prepared in strict compliance with Thai Financial Reporting Standards, which is based on the International Financial Reporting Standards. In addition, the Board of Directors must establish and maintain an effective internal control system to ensure the reliability of its financial statements. The Board has to safeguard the Company's assets with a good protection system to prevent corruption or suspicious operations. Connected transactions which can give rise to possible conflicts of interest are closely monitored to ensure that they are genuine transactions and are reasonably carried out based on the ordinary course of business for

the Company's maximum benefits and in compliance with relevant laws and regulations. The Audit Committee has already reported the result of its activities to the Board of Directors, and its opinions in the Audit Committee's Report are included in the Annual Report (Form 56-1 One Report).

The Board of Directors is of the opinion that the Company's internal control system has been proved to be satisfactory. The Board was able to obtain reasonable assurance on the reliability of the consolidated financial statements as at 31 December 2021, which the auditor conducted an audit in accordance with Thai Standards on Auditing. The auditor is of the opinion that the financial statements present fairly the financial position and the results of its operations and cash flows in conformity with Thai Financial Reporting Standards.



Assoc. Prof. Dr. Naris Chaiyasoot
Chairman of the Board of Directors



Dr. Kirana Limpaphayom
Chief Executive Officer



Report of the Audit Committee to Shareholders

The Audit Committee of Banpu Power Public Company Limited consists of four independent directors who are competent and have relevant experience in finance and accounting, economics, risk management, engineering, chemical science, and energy business as follows:

- | | |
|---------------------------------------|---------------------------------|
| 1.) Mr. Yokporn Tantisawetrat | Chairman of the Audit Committee |
| 2.) Assoc. Prof. Dr. Naris Chaiyasoot | Member of the Audit Committee |
| 3.) Prof. Dr. Bundhit Eua-arporn | Member of the Audit Committee |
| 4.) Prof. Dr. Patchanita Thamyongkit | Member of the Audit Committee |

Ms. Orawan Phunamsarp is the Head of Internal Audit and the Secretary to the Audit Committee.

The Audit Committee is fully aware of its duties and responsibilities stipulated in the Audit Committee Charter as well as other duties entrusted by the Board of Directors with independence and in compliance with the Best Practice Guidelines for Audit Committee and the regulations of the Stock Exchange of Thailand. The Audit Committee underlines compliance with the principles of good corporate governance, effective and efficient systems of risk management, as well as internal control and internal audit to create sustainable value for the organization based on the Three Lines Model¹.

In 2021, the Audit Committee convened nine times at which a quorum was established with the participation of the management, Internal Audit, and the external auditors on the related agenda. The Audit Committee also held a private meeting with the external auditors without the presence of the management. The results of the Audit Committee meetings were quarterly reported to the Board of Directors. The Audit Committee's main activities can be summarized as follows:

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¹ This principle were renamed from Three Lines of Defense to Three Lines Model in July 2020.

Source: <https://global.theiia.org/about/about-internal-auditing/Pages/Three-Lines-Model.aspx#positionpaper>

- 2. Review of Internal Control and Internal Audit:** The Audit Committee reviewed the internal control system together with the Internal Audit Division in the areas of operations, resource utilization, asset care, prevention or reduction of mistakes, damages, and corruption, reliability of financial reports, compliance with laws, regulations, and rules, improvement of the corporate governance process, risk management, internal control, and oversight of compliance with relevant regulations. It was emphasized on awareness-raising for employees to adhere to the air-tight internal control with prudence and carefulness. The Committee also considered the result of self-evaluation based on the Self Evaluation Form formulated by the Office of the Securities and Exchange Commission (SEC). Overall, the Audit Committee concluded that Banpu Power had an adequate, appropriate, and effective internal control system that covers the corporate level as well as activity level.

The Audit Committee reviewed the Internal Audit Division's operation by approving the annual audit plan and budget as well as evaluating the performance of the Head of Internal Audit and performance of the division as well as the internal audit service provider (Banpu Public Company Limited, according to the Management Service Agreement). Moreover, the Committee provided advice and followed up the audit results against the audit plan. The Committee stressed preventive audit measures and monitoring prompt corrective action of significant issues. Internal audit and follow-up results were regularly reported to the management. It was also reported to the Audit Committee on a quarterly basis. During the COVID-19 pandemic, the Company has adopted the remote audit protocol with the support of data analytics for more efficient internal auditing of subsidiaries and affiliated companies in Thailand and abroad.

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- 4. Review of Related Party Transactions:** The Audit Committee reviewed related party transactions or transactions that may cause conflicts of interest between the Company, its subsidiaries, and other related parties based on the arm's length principle. That is to ensure that the transactions were carried out at fair value for the best interest of the Company and stakeholders and did not involve a transfer of interest. The transactions must also be fair and reasonable in compliance with the laws and regulations of the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC).
- 5. Governance of Risk Management System:** The Audit Committee reviewed the efficiency and effectiveness of the risk management process and monitored key risks that may have posed threats to the Company's business operations. The Committee quarterly monitored the progress of the management of key risks and changing situations affecting the operations. The Committee also established mitigation measures, emphasizing systematic and sustainable management which timely responds to rapidly changing business environment and trends. Policy on risk management was explicitly stipulated in writing in the Risk Management Policy and the Charter of Risk Management Committee, which was approved by the Board of Directors. The Committee convened regular meetings to assess risks. The Risk Management Policy was communicated to all units of Banpu Power, including its subsidiaries and joint ventures, so they could efficiently manage and mitigate risks.

6. **The Appointment of the External Auditor and Determination of the Audit Fee for 2022:** The Audit Committee considered the selection of external auditors based on Banpu Power's evaluation criteria which included independence, timeliness, quality, professional standard, and reasonable audit fees. As a result, the external auditors' qualifications met the Stock Exchange of Thailand's requirements. For 2022, the Audit Committee proposed the appointment of auditors to the Board of Directors for consideration and submission to the 2022 Annual General Meeting of Shareholders for approval. The following individuals were nominated:

- 1.) Ms. Rodjanart Banyatananusard, CPA, License No. 8435; and/or
- 2.) Ms. Amornrat Permpoonwattanasuk, CPA, License No. 4599; and/or
- 3.) Mr. Pongthavee Ratanakoses, CPA, License No. 7795; and/or
- 4.) Mr. Boonrueng Lerdwisewit, CPA License No. 6552.

These CPAs of PricewaterhouseCoopers ABAS Limited (PwC) were appointed as the external auditors of Banpu Power for 2022. The Company also approved the audit fees for 2022. One of these individuals was assigned to conduct his/her audit and to provide opinions on the financial statements of Banpu Power. In case these appointed auditors are unable to perform their duties, PricewaterhouseCoopers ABAS Limited (PwC) shall appoint other of its CPAs as the external auditors of Banpu Power.

In summary, in 2021, the Audit Committee independently performed its duties and responsibilities set forth in the Audit Committee Charter which was approved by the Board of Directors, based on their knowledge, capabilities, and prudent consideration for the equitable benefit of the stakeholders. The Audit Committee is certain that Banpu Power's financial statements were completed and were consistent with generally accepted accounting standards and principles, and there was adequate information disclosure. Banpu Power's business conduct was in line with a sound corporate governance policy, and the Company had an appropriate risk management system as well as effective and adequate internal control and internal audit systems. In addition, Banpu Power properly complied with existing laws and regulations relevant to its business operations.

On behalf of the Audit Committee



(Mr. Yokporn Tantisawetrat)
Chairman of the Audit Committee
Banpu Power Public Company Limited

Management's Discussion and Analysis

1. Management Discussion and Analysis

Banpu Power continues to accelerate its portfolio transformation through new investment in power plant development located in various countries especially with high efficiency, low emissions (HELE) technologies. During 2021, the Company expanded its equity capacity equivalent in both thermal power plants and renewables by 541 MW in the high-growth countries and entered wholesale electricity market with advanced trading system and mechanism.

The Company reported its 2021 net profit of THB 3,127 million including the FX translation gain of THB 374 million due to weakening of the Thai currency against US Dollar. HPC operated with high efficiency and continue to provide firm share of profit. The Company had additional profit from Nakoso IGCC in Japan and Temple I CCGT in the United States of America. Its EBITDA was reported at THB 3,487 million.

The revenue for 2021 was reported at THB 6,784 million, increased by 23% compared to last year. This derived from 3 Combined Heat and Power (CHP) plants in China for THB 6,112 million. Although CHP plants experienced high domestic coal cost over the year, the Company has mitigated this risk by counter measures such as implementing centralized coal procurement system, negotiating with its counterparty to raise steam selling price to reflect the higher coal cost, proactively optimize the plant operation mode to protect bottom line, and carefully manage its coal inventory to run the plant with smooth operation and be able to provide electricity and steam to serve industrial customers and residential customers efficiently. Moreover, there was additional revenue from Temple I of THB 673 million, the Company started to recognize Temple I revenue since November 2021 onwards.

The share of profit from associates and joint ventures was reported at THB 2,974 million, from HPC power plant equivalent to THB 3,612 million, increased by 12% from last year. It operated with high Equivalent Availability Factor (EAF) at 85%, resulting from an effective maintenance plan for the power plant. BLCP power plant reported its share of profit of THB 215 million included impact from deferred tax and unrealized FX translation loss of THB 552 million. Nakoso power plant reported its share of profit of THB 210 million which started to recognize profit since Q2/2021. Although Shanxi Lu Guang (SLG) power plant in China has started its electricity generation dispatch, it experienced a challenge for the high coal price, resulting in its share of loss of THB 542 million. For renewable and energy technology business invested through Banpu NEXT has reported its share of loss of THB 521 million mainly from energy trading business due to the market situation.

Banpu Power will continue its journey of sustainable development by enhancing the efficiency of its existing power plants to generate stable cash flow as well as seeking new investment opportunity through its synergy among Banpu group in order to optimize its invested asset value. Besides, the Company will focus to expand more in clean energy business and develop its existing business to meet future energy demand. The Company will also seek the investment opportunities in the high-growth potential regions with government policy support to achieve its capacity target of 5,300 MW within 2025 as planned.

2. Group Performance Analysis

The analysis and explanation performance for the year ended 31 December 2021 and 2020:

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

Consolidated financial performance (Unit: Million Baht)	Y2021	Y2020	Change	
			Amount	%
Sales	6,784	5,506	1,278	23%
Cost of sales	(6,824)	(4,391)	(2,433)	55%
Gross profit	(40)	1,115	(1,155)	-104%
Administrative expenses	(1,103)	(946)	(157)	17%
Share of profit from an associate and joint ventures	2,974	3,565	(591)	-17%
Other Income	1,649	1,169	480	41%
Other financial costs	(249)	(243)	(6)	3%
Profit before income taxes	3,232	4,083	(851)	-21%
Income taxes	(57)	(300)	243	-81%
Profit for the year	3,174	3,783	(609)	-16%
Owners of the company	3,127	3,702	(575)	-16%
Non-controlling interests	47	81	(34)	-42%
Basic earnings per share (unit: Baht)	1.026	1.214	(0.188)	-15%

The group reported net profit for 2021 at THB 3,127 million, decreased by THB 575 million or 16 % compared to 2020. In 2021, the group recognized income and profit sharing from new power plant businesses invested during the year, which are Nakoso power plant in Japan, and Temple I gas-fired power plant in the U.S. Net with a decrease in profit sharing from BLCP power plant from recognition of defer tax expense and unrealized loss on FX translation, and a decrease in profit sharing from SLG power plant that has already started commercial operation while encountered high coal cost situation.

Details of the group operating performance for 2021 were described as followings:

Sales, Cost of sales and Gross profit

Sales reported at THB 6,784 million, increased by THB 1,278 million or 23% compared to 2020. This was mainly from higher steam sales and others from CHP plants in China of THB 824 million and from electricity sales from gas-fired power plant in the U.S. of THB 673 million, also the group did not consolidate income from solar power plant business in China and energy trading business in Japan in 2021 as a result from group restructuring since March 2020. Details were described as followings:

Items	Power Sold (GWh)		Steam & Others Sold (Million Tonnes)		Average Power Tariff (RMB/GWh)		Average Steam & Others Price (RMB/Tonne)	
	Y2021	Y2020	Y2021	Y2020	Y2021	Y2020	Y2021	Y2020
100% Basis								
Zhending CHP	312.68	414.85	0.30	0.44	0.34	0.34	150.81	115.05
Luannan CHP	537.65	708.75	2.28	1.39	0.35	0.34	120.10	106.27
Zouping CHP	328.73	439.60	1.75	2.34	0.43	0.42	164.92	91.71
Total CHP Power Plants	1,179.07	1,563.20	4.33	4.17	0.37	0.36	140.38	99.04
Gas Fired Power Plant	417.23	-	-	-	-	-	-	-
Solar Power Plants	-	47.47	-	-	-	0.83	-	-

Combined Heat and Power (CHP) plants in China: Increase THB 824 million

An increase of sales from CHP plants compared to 2020 was derived from:

1. An increase of THB 967 million from steam sales and others. This was a result of an increase of steam sales of 0.16 million tonne, and an average price of steam sales per tonne also increased by RMB 41.34. An average price of steam per tonne was RMB 140.38 (2020: RMB 99.04).
2. A decrease of THB 656 million from power sales volume 384.13 GWh. was from plant optimization to manage higher coal cost situation. An average power tariff was RMB 0.37 per kWh (2020: RMB 0.36 per kWh).
3. The effects of foreign exchange rate translation of THB 513 million due to a depreciation of THB currency against RMB currency compared to 2020. This impacts to higher revenue in THB currency when converting from revenue in RMB currency. Average exchange rate of RMB/THB in 2021 was THB 4.9665 (2020: THB 4.5385).

Gas-Fired Power Plant in the U.S. THB 673 million

Sales from gas-fired power plant business was THB 673 million from investment for business expansion in the U.S. during 4Q/2021.

Solar Power Plants in China

Sales decreased from 2020 of THB 90 million due to change in type of investment from group restructuring since March 2020, that changed profit recognition from consolidating net profits from solar power plant business as subsidiaries, to be taking profit sharing as an associate.

Energy Trading in Japan

Sales decreased from 2020 of THB 129 million due to change in type of investment from group restructuring since March 2020, that changed profit recognition from consolidating net profits from energy trading in Japan as subsidiaries, to be taking profit sharing as an associate.

Cost of sales: Increase 55%

Cost of sales was THB 6,824 million, increased by THB 2,433 million compared to 2020 from:

1. CHP plants in China that cost of sales increased by THB 1,884 million from:
 - An increase in coal cost THB 1,661 million was from a higher average coal cost of RMB 370 per tonne. Average coal cost was RMB 942 per tonne (2020: RMB 572 per tonne) or increased by 65 % compared to 2020. Whereas production was decrease by 0.15 million tonne compared to 2020.
 - The effects of foreign exchange rate translation of THB 223 million. This impacted to higher cost of sales in THB currency when converting from cost of sales in RMB currency. Average exchange rate of RMB/THB in 2021 was THB 4.9665 (2020: THB 4.5385).
2. Gas-fired power plant in the U.S. that cost of sales increased by THB 711 million from new investment for business expansion in the U.S.
3. Solar power plant in China and energy trading business in Japan that cost of sales was decreased by THB 48 million and THB 114 million, respectively from changes in type of investment according to the Group investment restructuring resulted in unable to consolidate cost of sales since March 2020.

**Gross profit:
Decrease 104%**

Gross loss was THB 40 million, or decreased by THB 1,155 million compared to 2020 was from:

1. A decrease in operating performance from CHP plants in China THB 1,060 million. This was a result from higher coal cost as market price, also the lower power sales volume from CHP plants in China due to plant optimization to as a counter measure against higher coal cost situation.
2. A decrease in operating performance from gas-fired power plant business in the U.S. of THB 39 million aligned with seasonal power consumption demand in Texas and warmer climate.
3. A decrease from change in investment type from group investment restructuring of solar power plant business in China and energy trading business in Japan, total of THB 56 million.

**Administrative expenses:
Increase 17%**

Administrative expenses of THB 1,103 million, increased by THB 157 million compared to 2020 was mainly from the employee expense and from professional and consulting fees related to business expansion in Japan and the U.S.

Items (Unit: Million Baht)	Profit (loss) sharing		Increase/(Decrease)	
	Y2021	Y2020	Amount	%
BLCP	215	543	(328)	-60%
HPC & PFMC	3,612	3,223	389	12%
SLG	(542)	76	(618)	-812%
Holding Company for Solar Power in Japan	-	21	(21)	-100%
Holding Company for Nakoso Power Plant	210	-	210	100%
Banpu NEXT	(521)	(290)	(231)	80%
Holding Company for Solar Power in Indonesia	(0)	(8)	8	0%
Total	2,974	3,565	(591)	-17%

**Share of profit from joint
and ventures associates:
Decrease 17 %**

Profit sharing from joint ventures and an associate was THB 2,974 million, decreased by THB 591 million compared to 2020 was a net result of:

1. A decrease in profit sharing from BLCP of THB 328 million. This was from deferred tax expense recognition and impact from foreign exchange conversion for accounting purpose of THB 231 million, whereas a decrease in operating performance of THB 97 million in accordance with revenue structure under long term power purchase agreement.
2. An increase in profit sharing from HPC power plant and Phu Fai Mining Company Limited (PFMC) total of THB 389 million, was from gain on exchange rate of THB 371 million and from an increase in operating performance of THB 18 million.
3. A higher recognition of loss sharing from SLG power plant of THB 618 million caused by higher coal cost.

4. A decrease in profit sharing from investment in power plant associate in Japan of THB 21 million from change in investment type according to group investment restructuring.
5. An increase in profit sharing from Nakoso power plant, a joint venture in Japan of THB 210 million that start recognition since Q2/2021.
6. An increase in loss sharing from investment in renewable power and energy technology business of THB 231 million from operating performance of energy trading business in Japan.
7. A decrease in loss sharing from an associate in Indonesia of THB 8 million.

Other income

Other income of THB 1,649 million was comprised of:

1. Interest income of THB 381 million.
2. Management fee income of THB 203 million, mainly was fees charged to related companies and joint ventures.
3. Pipeline connecting fee income charged to new steam customers of CHP plants in China of THB 128 million.
4. Subsidy income from Chinese government of THB 138 million.
5. Net gain on derivatives of THB 241 million that was unrealized gain on fair value from natural gas swap contract and electricity swap contract.
6. Net gain on exchange rate of THB 374 million was mostly from unrealized gain on exchange rate from USD currency loans at the end of the year caused by a depreciation of THB currency against USD currency compared to 2020. Average exchange rate of USD/THB for 2021 was THB 31.9771 (2020: USD/THB 31.2937).
7. Other income of THB 184 million consisted of ash & slag sales from CHP plants of THB 80 million, and others of THB 104 million.

**Interest expenses
and finance cost:
Increase 3%**

Interest expenses and finance cost of THB 249 million, increased by THB 6 million compared to 2020, primarily from additions of loan from financial institutions during the year.

**Corporate income tax:
Decrease 81%**

Corporate income tax of THB 57 million, decreased by THB 243 million compared to 2020. This comprised of:

1. A decrease in corporate income tax of THB 267 million, mainly from a decrease in operating profit from CHP plant businesses in China.
2. An increase in deferred income tax liability of THB 24 million from taxable expense from Nakoso power plant and gas-fired power plant in the U.S.

Net profit for the year ended 31 December 2021 reported at THB 3,127 million, decreased by THB 575 million.

Basic Earnings per Share reported at THB 1.026 (2020: THB 1.214)

3. Statement of Consolidated Financial Position

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

Items (Unit: Million Baht)	Financial Position		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Assets	74,867	49,563	25,304	51%
Liabilities	25,287	7,585	17,702	233%
Equity	49,580	41,978	7,602	18%

3.1 Total assets of THB 74,867 million, an increase of THB 25,304 million or 51% compared to the 31 December 2020 was mainly described as follows:

Financial Position (Unit: Million Baht)	Assets		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Cash and cash equivalents	2,635	2,169	466	21%
Financial assets	530	343	187	54%
Trade accounts receivable and note receivables	1,311	927	384	41%
Fuel and Spare parts & supplies, net	1,186	505	681	135%
Current portion of dividend receivables from related parties	125	150	(25)	-17%
Other current assets	4,095	3,424	671	20%
Total current assets	9,883	7,519	2,364	31%
Dividend receivables from related parties	239	289	(50)	-17%
Investments in an associate and joint ventures	33,766	26,639	7,127	27%
Property, plant and equipment, net	23,811	8,001	15,810	198%
Right of use assets, net	631	569	62	11%
Other non current assets	6,537	6,546	(9)	0%
Total non current assets	64,984	42,044	22,940	55%
Total assets	74,867	49,563	25,304	51%

- Cash and cash equivalents of THB 2,635 million, increased by THB 466 million or 21% (Explanation in no. 4 Statement of Consolidated Cash Flows).
- Financial assets measured at fair value through profit or loss of THB 530 million, increased by THB 187 million or 54%. This was from an additional of THB 1,874 million during the year; net with redemption of THB 1,742 million and gain on exchange rate translation at the end of the year of THB 55 million.
- Account receivable of THB 1,311 million, increased by THB 384 million or 41%. This was mainly from an increase in sales from CHP plants of THB 250 million, steam sales during Q4/2021 and gas-fired power plant of THB 134 million.
- Fuel and spare parts, net of THB 1,186 million, increased by THB 681 million or 135%. This was from investment in gas-fired power plant business in the U.S. of THB 310 million and increase from CHP plants in China of THB 371 million caused by higher coal cost compared to 2020.

- Other current assets of THB 4,095 million, increased by THB 671 million or 20% was mainly from:
 1. An increase in prepaid expenses from investment in gas-fired power plant business in the U.S. of THB 187 million.
 2. An increase in accrued interest income from related parties of THB 377 million. This was from recognition of interest income during the year of THB 381 million offset with cash receives from settlement of THB 58 million and gain on foreign exchange rate translation at the end of year of THB 54 million.
 3. An increase in prepaid tax from CHP plants in China of THB 185 million.
 4. A decrease in loan to related party of THB 91 million. This was a net result of reclassification from non-current portion of THB 341 million, cash receives from settlement of THB 745 million and gain on foreign exchange rate translation at the end of year THB 313 million.
 5. An increase in other current assets of THB 13 million
- Current and non-current portions of dividend receivables from related parties totaling of THB 364 million, decrease by 75 million, from dividend receivables from the joint venture during the year.

Dividend receivables from related parties (Unit: Million Baht)	Financial Position		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Current portion of dividend receivables from related parties	125	150	(25)	-
Dividend receivables from related parties	239	289	(50)	-
Total	364	439	(75)	-

- Investment in joint ventures and associates of THB 33,766 million, increased by THB 7,127 million or 27%. This was from a recognition of profit sharing from joint ventures and an associate THB 2,974 million, new investment in Nakoso power plant, a joint venture in Japan of THB 2,445 million, and new investment in an associate in renewable and energy technology of THB 236 million to support investment in solar power plant business in Australia. This included gain on foreign exchange rate translation at the end of year THB 1,913 million, and the recognition share of other comprehensive income from joint ventures and associates of THB 427 million, including dividend declaration during the year of THB 862 million, and from sales of investment of THB 6 million.
- Net property plant and equipment of THB 23,811 million, increased by THB 15,810 million or 198% was from additions from investment in gas-fired power plant in the U.S. of THB 15,207 million and additions of machinery and equipment of CHP plants THB 146 million, gain on foreign exchange rate translation at the end of year THB 1,010 million; net with disposals THB 11 million and depreciation charges THB 542 million.
- Right-of-used assets of THB 631 million, increased by THB 62 million or 11%, was a result from additions of THB 21 million, gain on foreign exchange rate translation at the end of year 76 million, net with amortization of THB 35 million.
- Other non-current assets of THB 6,537 million, decreased by THB 9 million was mainly from:
 1. A decrease in loan to related parties of THB 262 million from reclassification to current portion THB 341 million net with gain on foreign exchange rate translation at the end of year of THB 104 million and cash receives from loan settlement of THB 25 million.
 2. An increase from investment in gas-fired power plant in the U.S. of THB 167 million.
 3. An increase in deferred tax assets of THB 58 million, caused by the effects from foreign exchange rate translation at the end of year due to a depreciation of THB currency against RMB currency.
 4. An increase in other assets of THB 28 million.

3.2 Total liabilities of THB 25,287 million, increased by THB 17,702 million or 233% compared to total liabilities as of 31 December 2020 with details mainly described as follows:

Financial Position (Unit: Million Baht)	Liabilities		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Short-term loans from financial institutions	6,551	1,454	5,097	351%
Trade accounts payable	331	170	161	95%
Current portion of long-term loans from financial institutions	1,439	951	488	51%
Current portion of lease liabilities	13	12	1	8%
Other current liabilities	2,634	1,480	1,153	78%
Total current liabilities	10,968	4,067	6,901	170%
Long-term loans from financial institutions, net	9,253	3,481	5,772	166%
Lease liabilities	18	8	10	135%
Other non current liabilities	5,048	29	5,019	17053%
Total non-current liabilities	14,319	3,518	10,801	307%
Total liabilities	25,287	7,585	17,702	233%

- Short-term loans from financial institutions of THB 6,551 million, increased by THB 5,097 million or 351% was from a net result of additional loans THB 9,185 million and repayment THB 4,196 million. Also, there was the effects of foreign exchange rate translation at the end of year THB 108 million on loan in RMB currency due to a depreciation of THB currency against RMB currency. Average exchange rate of RMB/THB as of 31 December 2021 was THB 5.2507 (31 Dec 2020: THB 4.6187). Average exchange rate of USD/THB as of 31 December 2021 was THB 33.4199 (31 Dec 2020: THB 30.0371).
- Current portion of long-term loans from financial institutions of THB 1,439 million, increased by THB 488 million or 51%. This was a net result of reclassification from non-current portion THB 1,409 million (including net front end fee), repayment THB 971 million and from the effects of foreign exchange rate translation on RMB loan at the end of year was THB 50 million.
- Other current liabilities of THB 2,634 million, increase by THB 1,153 million or 78% was mainly from:
 1. An increase in investment in gas-fired power plant in the U.S. of THB 729 million that was mainly from accrued expense others THB 445 million and property taxes payable THB 122 million.
 2. An increase in advance received from steam residential customers of CHP plants in China of THB 82 million.
 3. An increase from amount due to related party of THB 324 million, comprised of coal purchase payable THB 262 million, accrued interest expense THB 43 million, accrued management fee THB 4 million and advance receive THB 15 million.
 4. An increase from other current liabilities of THB 18 million.
- Long-term loans from financial institutions of THB 9,253 million, increase by THB 5,772 million or 166%, was from additional loan THB 7,127 million (including net front end fee), net with reclassification to current portion THB 1,409 million and the effect of foreign exchange rate translation at the end of year THB 54 million on RMB loan and USD loan from a depreciation of THB currency against RMB currency and USD currency.
- Other non-current liability total of THB 5,048 million, increased by THB 5,019 million was from investment in gas-fired power plant in the U.S. of THB 4,994 million that was mainly from loan from related party, and an increase from other non-current assets of THB 25 million.

3.3 Shareholders' equity of THB 49,580 million, an increase of THB 7,602 million or 18% compared to shareholders' equity as of 31 December 2020 was due to:

Financial Position (Unit: Million Baht)	Equity		Increase/(Decrease)	
	31-Dec-21	31-Dec-20	Amount	%
Owners of the parent	45,636	41,109	4,527	11%
Non-controlling interests	3,944	869	3,075	354%
Total equity	49,580	41,978	7,602	18%

- An increase of THB 3,127 million from net profits for 2021.
- An increase of THB 903 million from cashflows hedge reserves.
- An increase of THB 2,951 million from gain on foreign exchange translation of subsidiaries and joint ventures' financial statements.
- An increase of THB 3,075 million from non-controlling interests from investment in the U.S. THB 2,907 million and profits THB 168 million.
- A decrease of THB 1,981 million from dividend paid.
- A decrease of THB 439 million from the change in fair value of hedged financial instruments.
- A decrease of THB 34 million from remeasurement of post-employment benefit.

Net debt to equity ratio as of 31 December 2021 from consolidated financial positions was 0.28 times (31 December 2020: 0.07 time)

4. Statements of Consolidated Cash Flows

Statement of consolidated cash flows for the year ended 31 December 2021 reported an increase of net cash flows from 31 December 2020 total of THB 466 million (included the effect from exchange rate translation gain of THB 112 million). The consolidated cash flows were as follows:

Cash flow (Unit: Million Baht)	Consolidated
Net cash used in operating activities	(368)
Net cash used in investing activities	(16,053)
Net cash receipts from financing activities	16,774
Net increase in cash and cash equivalents	354
Exchange differences on cash and cash equivalents	112
Cash and cash equivalents at beginning of the period	2,169
Cash and cash equivalents at end of the period	2,635

4.1 Net cash outflows from operating activities of THB 368 million comprised of:

- Collection from sales of power and steam THB 5,535 million.
- Payment to suppliers and contractors THB 5,649 million.
- Payment of interest expense THB 165 million.
- Payment of corporate income tax THB 89 million.

4.2 Net cash outflows from investing activities of THB 16,053 million comprised of:

- Receipts of dividends from joint ventures and others THB 937 million.
- Receipts from interest income THB 58 million.
- Receipts from financial assets THB 1,742 million.
- Receipts from restricted deposits at bank THB 138 million.
- Receipts from loan to related party THB 770 million.
- Payments for machine, equipment, and project in progress in China THB 216 million.
- Payments for investment in gas-fired power plant for business expansion in the U.S. THB 14,790 million.
- Payments for investment in Nakoso power plant, a joint venture in Japan, and renewable and Energy technology business of 2,679 million.
- Payments for financial assets THB 1,874 million.
- Payment for restricted deposits at bank THB 139 million.

4.3 Net cash inflows from financing activities of THB 16,774 million comprised of:

- Receipts from short-term and long-term loans from financial institutions THB 16,307 million.
- Repayments of short-term and long-term loans from financial institutions THB 5,167 million.
- Receipts from long-term loans from related party THB 4,721 million.
- Receipts from invest in subsidiaries from non-controlling interests THB 2,907 million.
- Payment for lease liabilities THB 13 million.
- Dividend paid to shareholders THB 1,981 million.

Independent Auditor's Report

To the shareholders of Banpu Power Public Company Limited

My opinion

In my opinion, the consolidated financial statements and the separate financial statements present fairly, in all material respects, the consolidated financial position of Banpu Power Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial position of the Company as at 31 December 2021, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRS).

What I have audited

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2021;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include significant accounting policies and other explanatory information.

Basis for opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Code of Ethics for Professional Accountants issued by the Federation of Accounting Professions that are relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key audit matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Key audit matter

How my audit addressed the key audit matter

Acquisition of investment in a joint venture

Refer to Note 14.1 c) Acquisition of investment in a joint venture.

During the year ended 31 December 2021, the Group purchased ordinary shares for 33.50% interest in Nakoso IGCC Management Co., Ltd (NIMCO), which holds a 40% ownership in the Nakoso Integrated Gasification Combined Cycle Power Plant in Japan. The purchase consideration paid was JPY 8,630.94 million or equivalent to THB 2,445.19 million. Management determined that this acquisition was an investment in a joint venture, applying the definition in TFRS 11 Joint arrangement. In doing so, as required by TAS 28 Investments in Associates and Joint Ventures, the management had to determine the fair value of the net identifiable assets acquired and review the purchase price allocation (PPA) in accordance with the concepts in TFRS 3 Business combinations. The fair value of identifiable assets acquired and liabilities assumed was presented as part of the investment cost.

Management engaged an external valuer to appraise the fair values of identifiable assets acquired, which was THB 7,825.79 million, mainly consists of plant and equipment of THB 5,559.36 million, the right to operate the power plant of THB 1,674.01 million and the fair value of liabilities assumed of THB 5,380.60 million. The fair value determination was performed as part of the PPA.

The fair value determination of the right to operate the power plant involves significant management judgement regarding future operating results, projected cash flows and the discount rate to be applied to those projected cash flows. Key assumptions applied in determining the fair value are electricity tariffs, power plants capacity, operating expenditures, capital structure and discount rate to be applied to the projected cash flows.

I focused on the fair value determination of the net identifiable assets acquired from the investment acquisition, especially for the right to operate the power plant because management applied the discounted cash flow model and it contains several assumptions. Those assumptions involve management's significant judgements in assessing future cash flows and the discount rate applied for the valuation.

I carried out the following procedures to get evidence of management's assessment of the investment acquisition and the fair value determination of the net identifiable assets acquired:

- read the shareholder agreement to understand the key terms and conditions and confirmed our understanding of the transaction with the management.
- assessed whether management's accounting for the investment acquisition should be accounted for as an investment in a joint venture and whether it's in accordance with the accounting for business combinations.
- understood and assessed the valuation method and assumptions used by the external valuer to determine the fair values.
- evaluated the competency, qualifications, experience and objectivity of the external valuer who is management's expert.
- assessed the appropriateness of the identifiable assets acquired and liabilities assumed as at the acquisition date and evaluated management's procedures for determining the fair values of the net identifiable assets acquired.
- tested the fair value calculation of the right to operate the power plant, challenged management's significant assumptions applied in the estimation of projected cash flows, such as electricity tariffs, power plant capacity, operating expenditures and capital structure, and compared those assumptions to the underlying agreements and external sources.
- assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry, to see whether the discount rate used by management was within an acceptable range.

As a result of the procedures performed, I determined that the acquisition of the investment that invests in the electricity power plant is an investment in a joint venture in accordance with the definition set out in TFRS 11. The assumptions applied in determining the fair values of the right to operate the power plant were reasonable and in line with the accounting for business combinations.

Key audit matter

How my audit addressed the key audit matter

Acquisition of investment in a subsidiary

Refer to Note 14.1 d) Acquisition of investment in a subsidiary.

During the year ended 31 December 2021, BKV-BPP Power LLC (BKV-BPP), which is held equally by Banpu Power US Corporation (BPP US), a subsidiary of the Company and BKV Corporation (BKV), a subsidiary of the Parent, completed the purchase of all shares in Temple Generation Intermediate Holdings, LLC which holds a 100% interest in Temple I CCGT power plant in the United States, with the total consideration of US Dollar 440.96 million or equivalent to THB 14,764.57 million. Management considered that Temple Generation Intermediate Holdings, LLC is a subsidiary of the Group because BPP US has control over such entity that meets the specified conditions under TFRS 10 Consolidated Financial Statements.

The management applied a concentration test which is an optional test to permit a simplified assessment of whether the acquired set of activities and assets qualified as not a business acquisition according to TFRS 3 Business combinations. As a result, management determined that this acquisition is an asset acquisition under TFRS 3 because substantially all of the fair value of the gross assets acquired is concentrated in property, plant and equipment of Temple I. Therefore, the management applied the concept in TFRS 3 for the valuation methodology and assumptions used in the model to the measure the fair value of property, plant and equipment arising from the asset acquisition by involving the external valuer.

I focused on identifying the fair value of assets arising from the asset acquisition due to its significant value and the valuation involves significant assumptions and judgments made by the management.

The audit procedures of this matter were performed by a component auditor in the United States. I planned the audit procedures of the consolidation process and communicated them to the component auditors. In addition, I understood and evaluated the work performed by the component auditor to obtain sufficient and appropriate audit evidence.

The component auditor carried out the following procedures, which I have reviewed, to obtain evidence for management's assessment of accounting related to the asset acquisition and allocation of the purchase price according to the relative fair value of identifiable assets acquired.

- assessed whether management's accounting for the controlling entity of BPP US is in line with the specified conditions under TFRS 10.
- reviewed management's assessment that the net assets acquired meet the concentration test criteria, and do not meet the definition of a business under TFRS 3, and should be accounted for as an asset acquisition.
- evaluated the competency, qualifications, experience and objectivity of the external valuer who is management's expert.
- assessed the appropriateness of the identifiable assets acquired and the liabilities assumed at the acquisition date and evaluated management's procedures for determining the fair values of the net identifiable assets acquired and the allocation of the purchase price proportionally according to the relative fair values.
- tested the calculation of fair values of property, plant and equipment acquired, challenged management's judgement in relation to the assumptions used in the cash flow forecasting, and compared those assumptions to the relevant underlying agreements and external sources.
- assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry, to see whether the discount rate used by management was within an acceptable range.

As a result of the procedures performed, I determined that the acquisition of shareholding in Temple Generation Intermediate Holdings, LLC is an asset acquisition based on the application of the optional test (the concentration test) under TFRS 3. The assumptions used to identify the fair value of property, plant and equipment arising from the asset acquisition were reasonable and in line with the accounting for asset acquisition.

Key audit matter

How my audit addressed the key audit matter

Impairment assessment of investment in a subsidiary

Refer to Note 14 Investments in subsidiaries, associates and joint ventures, the Company has an investment in Banpu Coal Power Ltd., a subsidiary whose principal business is to invest in a business of generation and sales of electricity under a long-term power purchase agreement. The cost of investment in the subsidiary in the separate statement of financial position was THB 5,922 million.

As at 31 December 2021, the cost of investment in this subsidiary as presented in the separate financial statements was higher than its net equity value. Management considered this an impairment indicator of investment in the subsidiary and therefore performed impairment test by applying the value-in-use model to calculate the recoverable amount. This model involves significant management judgment with respect to the future operating results of business, projected cash flows and discount rate to be applied to the projected cash flows. The subsidiary has only invested in a coal-fired power plant in Thailand, the management applied the value-in-use model based on the projected cash flow of such coal-fired power plant. Key assumptions applied in the value-in-use model are electricity tariff, assumed power plant capacity, growth rate, expected changes to operating expenditures, and the discount rate to be applied to the projected cash flows.

As a result of management's impairment testing, the recoverable amount of this investment is lower than the carrying value. Therefore, the Company recognised a provision for impairment loss on investment in a subsidiary of THB 270 million in the separate financial statements for the year 2021.

I focused on the impairment assessment of the investments in a subsidiary and their related assets due to their significant values, the various assumptions applied to calculate of the recoverable amounts and management's significant judgements involved in determining the appropriate level of impairment to be recorded.

I carried out the following procedures to assess the impairment testing of the investment in a subsidiary which invests in a coal-fired power plant in Thailand which prepared by the management.

- assessed the appropriateness of management's identification of the indicators for impairment of investment in a subsidiary.
- held discussions with the management to understand the basis for assumptions applied to the cash flow projections.
- challenged management's significant assumptions applied in the impairment testing of investment in a subsidiary, especially the electricity tariffs, assumed the power plant capacity, growth rate and operating expenditures, and compared those assumptions to the underlying agreements, external sources, foreign exchange rate forecasts and the approved business plan.
- assessed reasonableness of the business plan by comparing the 2021 plan with actual results.
- assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry to see whether the discount rate applied by management was within the acceptable range.

As a result of the procedures performed, I noted that the key assumptions applied by management in assessing the recoverable amount were reasonable and consistent with supporting evidence.

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to the audit committee.

Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRS, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group's and the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated and separate financial statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the audit committee with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers ABAS Ltd.



Rodjanart Banyatanusard
Certified Public Accountant (Thailand) No. 8435
Bangkok
23 February 2022

Banpu Power Public Company Limited

Statement of Financial Position As at 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Assets					
Current assets					
Cash and cash equivalents	10	2,634,854	2,169,033	1,141,799	1,595,569
Restricted deposits at financial institutions		194	88	-	-
Financial assets measured at fair value through profit or loss	6, 11	524,272	332,546	-	-
Financial assets measured at fair value through other comprehensive income	6	5,600	10,392	-	-
Trade receivables, net	12	1,311,280	927,226	-	-
Amounts due from related parties	27	869,310	487,197	762,162	281,049
Current portion of dividend receivables from related parties	14, 27	125,000	150,000	125,000	150,000
Advances to related parties	27	2,761	8,804	2,761	34,182
Short-term loans to related parties	27	2,363,615	2,795,705	-	-
Current portion of long-term loans to a related party	27	341,296	-	-	-
Fuel		904,092	443,374	-	-
Spare parts and supplies, net		282,111	61,663	-	-
Financial derivative assets	6	51,778	-	-	-
Other current assets	13	466,355	132,541	9,140	10,595
Total current assets		9,882,518	7,518,569	2,040,862	2,071,395
Non-current assets					
Dividend receivables from related parties	14, 27	238,831	288,831	45,000	196,033
Long-term loans to related parties	27	5,479,065	5,740,754	15,589,253	7,890,550
Investments in subsidiaries, net	14	-	-	19,787,163	17,118,717
Investments in associates and joint ventures	14	33,766,280	26,638,516	20,084,019	19,870,427
Property, plant and equipment, net	15	23,811,139	8,001,318	1,396	1,764
Right-of-use assets, net	16	631,098	568,789	3,359	4,799
Deferred income tax assets, net	17	602,758	544,275	5,472	5,265
Goodwill		42,385	38,094	-	-
Other non-current assets		412,691	223,632	182,591	166,405
Total non-current assets		64,984,247	42,044,209	55,698,253	45,253,960
Total assets		74,866,765	49,562,778	57,739,115	47,325,355

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Financial Position As at 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Liabilities and equity					
Current liabilities					
Short-term loans from financial institutions	18	6,551,133	1,453,895	6,134,199	1,000,000
Trade accounts payable		331,090	169,964	-	-
Advances from and amounts due to related parties	27	629,639	244,964	5,948	29,367
Current portion of long-term loans					
from financial institutions, net	20	1,439,380	950,774	850,260	698,415
Current portion of lease liabilities, net	16	12,759	11,860	1,380	1,319
Financial derivative liabilities	6	127,779	-	-	-
Income tax payable		957	58,601	-	-
Other current liabilities	19	1,875,427	1,176,918	79,976	19,844
Total current liabilities		10,968,164	4,066,976	7,071,763	1,748,945
Non-current liabilities					
Long-term loans from financial institutions, net	20	9,252,789	3,480,832	9,134,956	2,995,670
Long-term loans from related party	27	4,712,206	-	-	-
Lease liabilities, net	16	18,265	7,765	2,278	3,657
Deferred income tax liabilities, net	17	24,776	966	-	-
Financial derivative liabilities	6	-	1,949	-	1,949
Employee benefit obligations		29,210	26,513	29,210	26,513
Other non-current liabilities	19	282,049	-	-	-
Total non-current liabilities		14,319,295	3,518,025	9,166,444	3,027,789
Total liabilities		25,287,459	7,585,001	16,238,207	4,776,734
Equity					
Share capital					
Registered share capital					
3,101,202,000 ordinary shares of Baht 10 each (31 December 2020: 3,104,492,000 ordinary shares of Baht 10 each)	21	31,012,020	31,044,920	31,012,020	31,044,920
Issued and paid-up share capital					
3,047,731,700 ordinary shares of Baht 10 each (31 December 2020: 3,051,021,700 ordinary shares of Baht 10 each)	21	30,477,317	30,510,217	30,477,317	30,510,217
Premium on share capital		7,231,386	7,231,386	7,231,386	7,231,386
Surplus from business combination under common control		(3,891,564)	(3,891,564)	-	-
Reserve for share-based payment	23	40,326	40,326	40,326	40,326
Retained earnings					
Appropriated					
- Legal reserve	22	1,647,200	1,600,200	1,647,200	1,600,200
- Other reserve	21	-	41,694	-	41,694
Unappropriated		10,648,296	9,550,966	2,104,679	3,168,051
<u>Less</u> Treasury shares	21	-	(41,694)	-	(41,694)
Other components of equity		(517,787)	(3,932,802)	-	(1,559)
Owners of the Company		45,635,174	41,108,729	41,500,908	42,548,621
Non-controlling interests	14	3,944,132	869,048	-	-
Total equity		49,579,306	41,977,777	41,500,908	42,548,621
Total liabilities and equity		74,866,765	49,562,778	57,739,115	47,325,355

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Comprehensive Income For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Sales		6,784,497	5,505,511	-	-
Cost of sales		(6,824,268)	(4,390,664)	-	-
Gross profit (loss)		(39,771)	1,114,847	-	-
Dividend income from a subsidiary and joint ventures	14, 27	-	-	793,871	782,350
Management fee and others		652,375	646,643	76,702	23,589
Interest income		381,457	374,439	447,490	387,660
Selling expenses		(833)	-	-	-
Administrative expenses		(1,102,269)	(949,645)	(346,249)	(295,982)
Effect of change in investment types from the group restructuring		-	(577,138)	-	17,632
Provision for impairment loss on investment in a subsidiary	14	-	-	(270,000)	-
Net gains (losses) from changes in fair value of financial instruments		240,988	3,936	(1,970)	(3,523)
Net gains on exchange rate		374,543	148,066	386,135	12,800
Interest expenses		(245,711)	(236,091)	(151,090)	(145,570)
Other financial costs		(3,735)	(6,921)	(3,735)	(5,894)
Share of profit from associates and joint ventures, net	14	2,974,494	3,565,379	-	-
Profit before income taxes		3,231,538	4,083,515	931,154	773,062
Income taxes	17	(57,203)	(300,491)	597	(4,488)
Profit for the year		3,174,335	3,783,024	931,751	768,574
Other comprehensive income (expense), net of taxes:					
Items that will not be reclassified to profit or loss					
- Share of other comprehensive income (expense) of associates and joint ventures accounted for using the equity method	14	(474,371)	236,838	-	-
- Losses on fair value of equity instruments through other comprehensive income		-	(439,653)	-	-
- Remeasurements of post-employment benefit		-	(5,306)	-	(6,101)
<u>Less</u> Income tax relating to other comprehensive expense		-	1,061	-	1,220
Total items that will not be reclassified to profit or loss, net of taxes		(474,371)	(207,060)	-	(4,881)
Items that will be reclassified to profit or loss					
- Gains on cash flow hedge reserve		1,949	776	1,949	776
<u>Less</u> Income tax relating to other comprehensive income		(390)	(155)	(390)	(155)
- Share of other comprehensive income (expense) of associates and joint ventures accounted for using the equity method	14	2,814,977	(592,296)	-	-
- Translation differences		1,159,124	1,504,912	-	-
Total items that will be reclassified to profit or loss, net of taxes		3,975,660	913,237	1,559	621
Other comprehensive income (expense) for the year, net of taxes		3,501,289	706,177	1,559	(4,260)
Total comprehensive income for the year		6,675,624	4,489,201	933,310	764,314

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Comprehensive Income For the year ended 31 December 2021

	Note	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Profit attributable to:					
Owners of the Company		3,127,027	3,702,480	931,751	768,574
Non-controlling interests		47,308	80,544	-	-
		<u>3,174,335</u>	<u>3,783,024</u>	<u>931,751</u>	<u>768,574</u>
Total comprehensive income attributable to:					
Owners of the Company		6,507,468	4,355,096	933,310	764,314
Non-controlling interests		168,156	134,105	-	-
		<u>6,675,624</u>	<u>4,489,201</u>	<u>933,310</u>	<u>764,314</u>
Earnings per share					
Basic earnings per share (Baht)	25	1.026	1.214	0.306	0.252

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited Statement of Changes in Equity For the year ended 31 December 2021

Notes	Consolidated financial statements Baht'000											Total equity		
	Attributable to owners of the Company												Non-controlling interests	
	Retained earnings					Other components of equity			Total other components of equity					
	Issued and paid-up share capital	Premium on share capital	Treasury shares	Surplus from business combination under common control	Reserve for share-based payment	Legal reserve	Other reserve	Unappropriated	Cash flow hedge reserve	Change in fair value of financial assets	Translation differences			Other comprehensive income (expense)
Opening balance as at 1 January 2021	30,510,217	7,231,386	(41,694)	(3,881,564)	40,326	1,600,200	41,694	9,550,966	(974,248)	203,889	(3,162,443)	(3,932,802)	869,048	41,977,777
Decrease in share capital	(32,900)	-	41,694	-	-	(41,694)	32,900	-	-	-	-	-	-	-
Legal reserve	-	-	-	-	-	47,000	(47,000)	-	-	-	-	-	-	(1,981,023)
Dividend paid	-	-	-	-	-	-	-	(1,981,023)	-	-	-	-	-	2,906,928
Acquisition of investment in a subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	47,308	3,174,335
Profit for the year	-	-	-	-	-	-	3,127,027	(34,574)	903,182	(439,797)	2,951,630	3,415,015	120,848	3,501,289
Total comprehensive income (expense) for the year	-	-	-	-	-	-	(34,574)	3,127,027	903,182	(439,797)	2,951,630	3,415,015	120,848	3,501,289
Closing balance as at 31 December 2021	30,477,317	7,231,386	-	(3,881,564)	40,326	1,647,200	-	10,648,296	(71,066)	(235,908)	(210,813)	(517,787)	3,944,132	49,579,306
Opening balance as at 1 January 2020	30,510,217	7,231,386	-	(1,970,423)	37,407	1,561,200	-	6,699,662	(647,941)	1,470,453	(4,348,428)	(3,525,914)	734,943	41,278,478
Treasury shares	-	-	(41,694)	-	-	-	-	-	-	-	-	-	-	(41,694)
Treasury shares reserve	-	-	-	-	-	-	41,694	(41,694)	-	-	-	-	-	-
Change in investment types from the group restructuring	-	-	-	(1,921,141)	-	-	-	1,063,749	-	(1,063,749)	-	(1,063,749)	-	(1,921,141)
Legal reserve	-	-	-	-	-	39,000	(39,000)	-	-	-	-	-	-	-
Reserve for share-based payment	-	-	-	-	2,919	-	-	-	-	-	-	-	-	2,919
Dividend paid	-	-	-	-	-	-	(1,829,191)	-	-	-	-	-	-	(1,829,191)
Change in remeasurements of post-employment benefit from transfer of employees to an associate	-	-	-	-	-	-	(795)	-	-	-	-	-	-	(795)
Profit for the year	-	-	-	-	-	-	3,702,480	(42,445)	(326,307)	(202,815)	1,185,983	656,861	80,544	3,783,024
Total comprehensive income (expense) for the year	-	-	-	-	-	-	(42,445)	3,702,480	(326,307)	(202,815)	1,185,983	656,861	53,561	706,177
Closing balance as at 31 December 2020	30,510,217	7,231,386	(41,694)	(3,881,564)	40,326	1,600,200	41,694	9,550,966	(974,248)	203,889	(3,162,443)	(3,932,802)	869,048	41,977,777

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Changes in Equity For the year ended 31 December 2021

	Notes	Separate financial statements Baht'000							Total equity	
		Issued and paid-up share capital	Premium on share capital	Treasury shares	Reserve for share-based	Retained earnings		Other components of equity		
						Legal reserve	Other reserve	Unappropriated		Other comprehensive expense
Opening balance as at 1 January 2021		30,510,217	7,231,386	(41,694)	40,326	1,600,200	41,694	3,168,051	(1,559)	42,548,621
Decrease in share capital	21	(32,900)	-	41,694	-	-	(41,694)	32,900	-	-
Legal reserve	22	-	-	-	-	47,000	-	(47,000)	-	-
Dividend paid	26	-	-	-	-	-	-	(1,981,023)	-	(1,981,023)
Profit for the year		-	-	-	-	-	-	931,751	-	931,751
Total comprehensive income for the year		-	-	-	-	-	-	-	1,559	1,559
Closing balance as at 31 December 2021		30,477,317	7,231,386	-	40,326	1,647,200	-	2,104,679	-	41,500,908
Opening balance as at 1 January 2020		30,510,217	7,231,386	-	37,407	1,561,200	-	4,314,243	(2,180)	43,652,273
Treasury shares		-	-	(41,694)	-	-	-	-	-	(41,694)
Treasury shares reserve		-	-	-	-	-	41,694	(41,694)	-	-
Legal reserve	22	-	-	-	-	39,000	-	(39,000)	-	-
Reserve for share-based payment	23	-	-	-	2,919	-	-	-	-	2,919
Dividend paid	26	-	-	-	-	-	-	(1,829,191)	-	(1,829,191)
Profit for the year		-	-	-	-	-	-	768,574	-	768,574
Total comprehensive income (expense) for the year		-	-	-	-	-	-	(4,881)	621	(4,260)
Closing balance as at 31 December 2020		30,510,217	7,231,386	(41,694)	40,326	1,600,200	41,694	3,168,051	(1,559)	42,548,621

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Cash Flows For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
		'Baht'000	'Baht'000	'Baht'000	'Baht'000
Cash flows from operating activities					
Profit for the year before income taxes		3,231,538	4,083,515	931,154	773,062
Adjustment to reconcile profit for cash receipts (payments) from operations					
- Depreciation and amortisation		580,598	402,463	1,964	2,123
- Interest income		(381,457)	(374,439)	(447,490)	(387,660)
- Interest expenses		245,711	236,091	151,090	145,570
- Other financial costs		3,735	6,921	3,735	5,894
- Share of profit from associates and joint ventures, net	14	(2,974,494)	(3,565,379)	-	-
- Dividend income from a subsidiary and joint ventures	14, 27	-	-	(793,871)	(782,350)
- Effect of change in investment types from the group restructuring		-	577,138	-	(17,632)
- Loss on disposal of investment in an associate	14	245	-	16,408	-
- Provision for impairment loss on investment in a subsidiary	14	-	-	270,000	-
- Net gains on disposal of property, plant and equipment		(10)	(2,694)	(10)	(13)
- Write-off property, plant and equipment	15	11,375	50,787	-	-
- Share-based payment	23	-	2,919	-	2,919
- Net gains from changes in fair value of financial instruments		(242,959)	-	-	-
- Net gains on exchange rate		(110,759)	(63,257)	(385,792)	(12,679)
Cash flow before changes in working capital		363,523	1,354,065	(252,812)	(270,766)
Changes in working capital (net of effects from acquisition and disposal of subsidiaries)					
- Trade accounts receivable		(371,991)	67,411	-	-
- Amounts due from related parties		1,208	(23,630)	573	117
- Advances to related parties		6,043	(11,016)	31,421	(3,500)
- Fuel and spare parts		(468,945)	(78,586)	-	-
- Other current assets		(274,459)	(137,714)	4,293	1,184
- Other non-current assets		(24,170)	(199,448)	(16,192)	(16,397)
- Trade accounts payable		152,596	(205,328)	-	-
- Advances from and amounts due to related parties		292,271	203,042	(23,419)	29,361
- Employee benefits obligation		2,697	(26,593)	2,697	(21,013)
- Other current liabilities		204,360	114,353	20,221	(5,822)
- Other non-current liabilities		2,604	-	-	-
Cash receipts from (used in) operations		(114,263)	1,056,556	(233,218)	(286,836)
- Interest paid		(164,632)	(232,130)	(113,880)	(151,528)
- Income tax paid		(88,751)	(274,644)	-	-
Net cash receipts from (used in) operating activities		(367,646)	549,782	(347,098)	(438,364)

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Banpu Power Public Company Limited

Statement of Cash Flows For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Cash flows from investing activities					
Cash receipts from financial assets measured at amortised cost		-	3,235,438	-	3,235,438
Cash receipts from financial assets measured at fair value through profit or loss		1,662,839	875,518	-	-
Cash payments for financial assets measured at fair value through profit or loss		(1,801,146)	(1,106,979)	-	-
Cash receipts from financial assets measured at fair value through other comprehensive income		78,922	259,016	-	-
Cash payments for financial assets measured at fair value through other comprehensive income		(73,044)	(203,871)	-	-
Cash receipts from restricted deposits at financial institutions		138,565	137,530	-	-
Cash payments for restricted deposits at financial institutions		(138,654)	(137,616)	-	-
Cash receipts from short-term loans to related parties	27	744,980	179,270	-	-
Cash payments for short-term loans to related parties	27	-	(1,599,096)	-	(1,587,661)
Cash receipts from long-term loans to related parties	27	24,833	1,255,438	15,940	1,255,438
Cash payments for long-term loans to related parties	27	-	-	(8,301,759)	(62,040)
Cash payments for investments in a subsidiary	14	-	-	(1,933,992)	-
Cash payments for addition of investments in an associate and a joint venture	14	(2,679,266)	(2,426,630)	(236,000)	(2,426,630)
Cash payments for purchase of other investments		-	(132,938)	-	-
Net cash payments for business combination		-	(9,679)	-	-
Net cash payments for acquisition of investment in a subsidiary	14	(14,747,833)	-	-	-
Decrease in cash from change in investment types from the group restructuring		-	(688,740)	-	-
Cash payments for purchase of property, plant and equipment		(257,772)	(328,666)	(158)	(533)
Cash receipts from disposal of property, plant and equipment		34	17,552	19	138
Cash payments for right-of-use assets		-	(259,221)	-	-
Interest received		57,698	442,167	3,440	423,147
Cash receipts from dividends from a subsidiary and joint ventures	14	937,282	975,094	969,904	982,351
Net cash receipts from (used in) investing activities		(16,052,562)	483,587	(9,482,606)	1,819,648

Banpu Power Public Company Limited

Statement of Cash Flows For the year ended 31 December 2021

	Notes	Consolidated financial statements		Separate financial statements	
		2021 'Baht'000	2020 'Baht'000	2021 'Baht'000	2020 'Baht'000
Cash flows from financing activities					
Cash receipts from short-term loans from financial institutions		9,184,921	6,546,927	8,539,800	5,300,000
Cash payments for short-term loans from financial institutions		(4,196,169)	(6,039,716)	(3,457,340)	(4,300,000)
Cash receipts from long-term loans from financial institutions	20	7,140,799	162,817	6,993,806	-
Cash payments for long-term loans from financial institutions	20	(971,363)	(1,019,713)	(700,000)	(700,000)
Cash receipts from long-term loans from related party	27	4,721,033	-	-	-
Cash payments for lease liabilities	16	(13,319)	(15,114)	(1,511)	(1,511)
Cash payments for other financial costs		(17,798)	(1,678)	(17,798)	(651)
Proceeds from non-controlling interests		2,906,928	-	-	-
Cash payments for treasury shares		-	(41,694)	-	(41,694)
Dividend paid to shareholders	26	(1,981,023)	(1,829,191)	(1,981,023)	(1,829,191)
Net cash receipts from (used in) financing activities		16,774,009	(2,237,362)	9,375,934	(1,573,047)
Net increase (decrease) in cash and cash equivalents		353,801	(1,203,993)	(453,770)	(191,763)
Exchange differences on cash and cash equivalents		112,020	30,316	-	-
Cash and cash equivalents at beginning of the year		2,169,033	3,342,710	1,595,569	1,787,332
Cash and cash equivalents at end of the year		2,634,854	2,169,033	1,141,799	1,595,569
Supplementary of cash flows					
Significant non-cash transactions as at 31 December					
Other payables for purchase of property, plant and equipment	19	358,203	427,610	-	-
Conversion of long-term loans to a related party to investment in a subsidiary	14, 27	-	-	1,004,454	-
Amounts due from a related party for a disposal of investment in an associate	14	6,000	-	6,000	-

Notes to The Consolidated and Separate Financial Statements

For the year ended 31 December 2021

1. General information

Banpu Power Public Company Limited (the Company) is a public company which listed on the Stock Exchange of Thailand. The Company is incorporated and domiciled in Thailand. The address of the Company's registered office is 1550, Thanapoom Tower 26th Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok.

For reporting purpose, the Company and its subsidiaries are referred to as the Group.

The Company is a subsidiary of Banpu Public Company Limited (the Parent) who holds 78.66% of the Company's shares.

The Group is engaged in investments in power businesses in Thailand and overseas.

These consolidated and separate financial statements were authorised by Board of Directors on 23 February 2022.

2. Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards (TFRS) and the financial reporting requirements issued under the Securities and Exchange Act.

The consolidated and separate financial statements have been prepared under the historical cost convention except for certain accounts as disclosed in the accounting policies.

The preparation of financial statements in conformity with TFRS requires management to use certain critical accounting estimates and to exercise its judgement in applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas that are more likely to be materially adjusted due to changes in estimates and assumptions are disclosed in Note 7.

An English version of the consolidated and separate financial statements has been prepared from the financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language financial statements shall prevail.

The Group reclassified comparative figure of note receivables amounting to Baht 10.39 million from trade receivables and note receivables, net to financial assets measured at fair value through other comprehensive income to conform with the current period presentation of the Group.

3. Amended financial reporting standards

3.1 Amended financial reporting standards that are effective for accounting period beginning or after 1 January 2021.

Revised Conceptual Framework for Financial Reporting added the following key principals and guidance:

- Measurement basis, including factors in considering difference measurement basis
- Presentation and disclosure, including classification of income and expenses in other comprehensive income
- Definition of a reporting entity, which maybe a legal entity, or a portion of an entity
- Derecognition of assets and liabilities

The amendment also includes the revision to the definition of an asset and liability in the financial statements, and clarification to the prominence of stewardship in the objective of financial reporting.

Amendment to TFRS 3, Business combinations amended the definition of a business which requires an acquisition to include an input and a substantive process that together significantly contribute to the ability to create outputs. The definition of the term 'outputs' is amended to focus on goods and services provided to customers and to exclude returns in the form of lower costs and other economic benefits. In addition, the standard sets out an optional test (the concentration test) to permit a simple assessment of whether an acquired set of activities and assets is not a business.

Amendment to TFRS 9, Financial instruments and TFRS 7, Financial instruments: disclosures amended to provide relief from applying specific hedge accounting requirements to the uncertainty arising from interest rate benchmark reform such as IBOR. The amendment also requires disclosure of hedging relationships directly affected by the uncertainty.

Amendment to TAS 1, Presentation of financial statements and TAS 8, Accounting policies, changes in accounting estimates and errors amended to definition of materiality. The amendment allows for a consistent definition of materiality throughout the Thai Financial Reporting Standards and the Conceptual Framework for Financial Reporting. It also clarified when information is material and incorporates some of the guidance in TAS 1 about immaterial information.

The Group has adopted these standards in its financial statements for accounting period beginning 1 January 2021, except TFRS 3, Business combinations, which the Group has early adopted this standard in its financial statements for accounting period ended 31 December 2020. However, the adoption of these standards for the period from 1 January 2021 has no significant impact to consolidated financial statements as at 31 December 2021.

3.2 Amended financial reporting standard that is effective for accounting period beginning or after 1 January 2022. The Group has not early adopted these standards.

Interest rate benchmark (IBOR) reform - phase 2, amendments to TFRS 9, TFRS 7, TFRS 16 and TFRS 4, and accounting guidance, financial instruments and disclosures for insurance business provide relief measures addressing issues that might affect financial reporting during the reform, including the effects of changes to contractual cash flows or hedging relationship arising from the replacement of one benchmark with an alternative benchmark.

Key relief measures of the phase 2 amendments are as follows:

- When changing the basis for determining contractual cash flows for financial assets and financial liabilities (including lease liabilities), changes that are necessary as a direct result of the IBOR reform and which are considered economically equivalent, will not result in an immediate gain or loss in the income statement. TFRS 16 has also been amended to require lessees to use a similar practical expedient when accounting for lease modifications that change the basis for determining future lease payments as a result of the IBOR reform.
- Hedge accounting relief measures will allow most TFRS 9 hedge relationships that are directly affected by the IBOR reform to continue. However, additional ineffectiveness might need to be recorded.

TFRS 7 requires additional disclosure about:

- the nature and extent of risks arising from the IBOR reform to which the entity is exposed to
- how the entity manages those risks
- the entity's progress in transitioning from the IBOR to alternative benchmark rates and how the entity is managing this transition.

The Group's management is currently assessing the impacts of adoption of these standards.

4. Accounting policies

The principal accounting policies applied in the preparation of these consolidated and separate financial statements are set out below:

4.1 Principles of consolidation

a) Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method less impairment (if any).

b) Associates

Associates are all entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting.

In the separate financial statements, investments in associates are accounted for using cost method less impairment (if any).

c) Joint arrangements

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

Joint operations

A joint operation is a joint arrangement whereby the Group has rights to the assets, and obligations for the liabilities relating to the arrangement. The Group recognises its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. These have been incorporated in the Group's financial statement line items.

Joint ventures

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method.

In the separate financial statements, investments in joint ventures are accounted for using cost method less impairment (if any).

d) Equity method

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income, respectively. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

e) Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A difference between the amount of the adjustment to non-controlling interests to reflect their relative interest in the subsidiary and any consideration paid or received is recognised within equity.

If the ownership interest in associates and joint ventures is reduced but significant influence and joint control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate. Profit or loss from reduce of the ownership interest in associates and joint ventures is recognise in profit or loss.

When the Group losses control, joint control or significant influence over investments, any retained interest in the investment is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value becomes the initial carrying amount of the retained interest which is reclassified to investment in an associate, or a joint venture or a financial asset accordingly.

f) Intercompany transactions on consolidation

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

4.2 Business combination

The Group applies the acquisition method to account for business combinations with an exception on business combination under common control. The consideration transferred for the acquisition of a subsidiary comprises fair value of the assets transferred, liabilities incurred to the former owners of the acquiree and equity interests issued by the Group.

Identifiable assets and liabilities acquired and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date.

On an acquisition-by-acquisition basis, the Group initially recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest recognised and the acquisition-date fair value of any previous equity interest in the acquiree (for business combination achieved in stages) over the fair value of the identifiable net assets acquired is recorded as goodwill. In the case of a bargain purchase, the difference is recognised directly in profit or loss.

Acquisition-related cost

Acquisition-related cost are recognised as expenses in consolidated financial statements.

Step-up acquisition

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measured are recognised in profit or loss.

Changes in fair value of contingent consideration paid/received

Subsequent changes to the fair value of the contingent consideration that is an asset or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not re-measured.

Business combination under common control

The Group accounts for business combination under common control by measuring acquired assets and liabilities of the acquiree at their carrying values presented in the highest level of the consolidation. The Group retrospectively adjusted the business combination under common control transactions as if the combination had occurred on the later of the beginning of the preceding comparative period and the date the acquiree has become under common control.

Consideration of business combination under common control are the aggregated amount of fair value of assets transferred, liabilities incurred and equity instruments issued by the acquirer at the date of which the exchange in control occurs.

The difference between consideration under business combination under common control and the acquirer's interests in the carrying value of the acquiree is presented as "surplus arising from business combination under common control" in equity and is derecognised when the investment is disposed of by transferred to retained earnings.

4.3 Foreign currency translation

a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which each entity operates (the Functional Currency). The financial statements are presented in Baht, which is the Company's functional currency and presentation currency.

b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transaction. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss is recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in profit and loss, any exchange component of that gain or loss is recognised in profit and loss.

c) Group companies

The results and financial position of all of the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- assets and liabilities are translated at the closing rate at the date of respective statement of financial position;
- income and expenses for statement of comprehensive income are translated at average exchange rates; and
- all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate.

4.4 Cash and cash equivalents

In the consolidated statements of cash flows and separate statements of cash flows, cash and cash equivalents includes cash on hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less.

4.5 Trade receivables

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. They are classified as current.

Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost.

The impairment of trade receivables is disclosed in Note 4.7 f).

4.6 Fuel and spare parts

Fuel consists of coal, diesel and natural gas and are valued at the lower of cost or net realisable value. Spare parts which are not met conditions of property, plant and equipment are stated at cost less allowance for obsolescence and defective.

Cost of fuel and spare parts are determined by the weighted average method. The cost of purchase comprises both the purchase price and costs directly attributable to the acquisition, such as import duties and transportation charges, less all attributable discounts and allowances. Net realisable value is the estimate of the selling price in the ordinary course of business, less the costs of completion. The Group recognises allowance for obsolete, slow-moving and defective spare parts are reviewed on a specific case.

4.7 Financial assets

a) Classification

The Group classifies its debt instrument financial assets in the following measurement categories depending on i) business model for managing the asset and ii) the cash flow characteristics of the asset whether they represent solely payments of principal and interest (SPPI).

- those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss); and
- those to be measured at amortised cost.

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

For investments in equity instruments, the Group has an irrevocable election at the time of initial recognition to account for the equity investment at fair value through profit or loss (FVPL) or at fair value through other comprehensive income (FVOCI) except those that are held for trading, they are measured at FVPL.

b) Recognition and derecognition

Regular way purchases, acquires and sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

c) Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether the cash flows are solely payment of principal and interest (SPPI).

d) Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the financial assets. There are three measurement categories into which the Group classifies its debt instruments:

- Amortised cost: Financial assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in interest income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in other gains (losses) together with foreign exchange gains and losses. Impairment losses are included in administrative expenses.
- FVOCI: Financial assets that are held for i) collection of contractual cash flows; and ii) for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through other comprehensive income (OCI), except for the recognition of impairment gains or losses, interest income using the effective interest method, and foreign exchange gains and losses which are recognised in profit or loss. When the financial assets are derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other gains (losses). Interest income is included in interest income. Impairment expenses are included in administrative expenses.
- FVPL: Financial assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within net gains (losses) from changes in fair value of financial instruments in the period in which it arises.

e) Equity instruments

The Group measures all equity investments at fair value. Where the Group has elected to present fair value gains and losses on equity instruments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in profit or loss as dividend income when the right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in net gains (losses) from changes in fair value of financial instruments in the statement of comprehensive income.

Impairment losses and reversal of impairment losses on equity investments are reported together with changes in fair value.

f) Impairment

The Group applies the TFRS 9 simplified approach in measuring the impairment of trade receivables and other receivables, which applies lifetime expected credit loss, from initial recognition, for trade receivables and other receivables.

To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected credit loss rates are based on payment profiles, historical credit losses as well as forward-looking information and factors that may affect the ability of the customers to settle the outstanding balances.

For other financial assets carried at amortised cost and FVOCI, the Group applies TFRS 9 general approach in measuring the impairment of those financial assets. Under the general approach, the 12-month or the lifetime expected credit loss is applied depending on whether there has been a significant increase in credit risk since the initial recognition.

The significant increase in credit risk (from initial recognition) assessment is performed every end of reporting period by comparing i) expected risk of default as of the reporting date and ii) estimated risk of default on the date of initial recognition.

The Group assesses expected credit loss by taking into consideration forward-looking information and past experiences. The expected credit loss is a probability-weighted estimate of credit losses (probability-weighted present value of estimated cash shortfall). The cash shortfall is the difference between all contractual cash flows that are due to the Group and all cash flows expected to receive, discounted at the original effective interest rate.

When measuring expected credit losses, the Group reflects the following:

- probability-weighted estimated uncollectible amounts
- time value of money; and
- supportable and reasonable information as of the reporting date about past experience, current conditions and forecasts of future situations.

Impairment and reversal of impairment losses are recognised in profit or loss and included in administrative expenses.

4.8 Non-current assets held-for-sale

Non-current assets (or disposal groups) are classified as assets held-for-sale when their carrying amount will be recovered principally through a sale transaction and a sale is considered highly probable. They are measured at the lower of the carrying amount and fair value less costs to sell.

An impairment loss is recognised for write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognised.

4.9 Property, plant and equipment

Property, plant and equipment are initially recorded at cost including contingent consideration arrangement. Subsequently, all plant and equipment are stated at historical cost less accumulated depreciation and allowance for impairment. Subsequent changes contingent consideration shall be recognised as part of its cost.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

Depreciation is calculated on the straight-line method to write off the cost of each asset to their residual values over their estimated useful life as follows:

Power plants and components of power plants	20 to 30 years
Building and building improvements	5 to 30 years
Machinery and equipment	10 to 30 years
Furniture	3 to 5 years
Office equipment and tools	3 and 5 years
Motor vehicles	5 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

Gains and losses on disposals are determined by comparing proceeds with carrying amount and are recognised in the profit or loss.

4.10 Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the net assets of the acquired subsidiary, joint venture or associated undertaking at the date of acquisition. Goodwill on acquisitions of subsidiaries is separately reported in the consolidated statement of financial position. Goodwill on acquisitions of interests in joint ventures or associates is included in interests in joint ventures and investments in associates and is tested for impairment as part of the overall balance.

Separately recognised goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Goodwill is allocated to cash-generating units for the purpose of impairment testing. The allocation is made to those cash-generating units or group of cash-generating units that are expected to benefit from the business combination in which the goodwill arose, identified according to operating segment.

4.11 Intangible assets

a) Computer software

Computer software development costs recognised as assets are amortised over their estimated useful lives, which do not exceed 5 years.

b) Rights to operate the power plants

The rights to operate the power plants arising from purchase of investments are amortised over the periods of estimated useful life of the power plants.

4.12 Impairment of assets

Assets that have an indefinite useful life, for example goodwill, are not subject to amortisation and are tested annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount which is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

4.13 Leases

Where the Group is the lessee

Leases are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Contracts may contain both lease and non-lease components. The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices. However, for leases of real estate for which the group is a lessee, it has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable
- variable lease payment that are based on an index or a rate
- amounts expected to be payable by the lessee under residual value guarantees
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset. (please delete if the Group does not have variable lease payment based on an index or rate).

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- restoration costs.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise small items of office furniture.

Where the Group is the lessor

When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable. The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income. Lease income is recognised over the term of the lease which reflects a constant periodic rate of return. Initial direct costs are included in initial measurement of the finance lease receivable and reduce the amount of income recognised over the lease term.

Rental income under operating leases (net of any incentives given to lessees) is recognised on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognised as expense over the lease term on the same basis as lease income. The respective leased assets are included in the statement of financial position based on their nature.

4.14 Financial liabilities

a) Classification

Financial instruments issued by the Group are classified as either financial liabilities or equity securities by considering contractual obligations.

- Where the Group has an unconditional contractual obligation to deliver cash or another financial asset to another entity, it is considered a financial liability unless there is a predetermined or possible settlement for a fixed amount of cash in exchange of a fixed number of the Group's own equity instruments.
- Where the Group has no contractual obligation or has an unconditional right to avoid delivering cash or another financial asset in settlement of the obligation, it is considered an equity instrument.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

b) Measurement

Financial liabilities are initially recognised at fair value and are subsequently measured at amortised cost.

c) Derecognition and modification

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled, or expired.

Where the terms of a financial liability are renegotiated/modified, the Group assesses whether the renegotiation / modification results in the derecognition of that financial liability. Where the modification results in an extinguishment, the new financial liability is recognised based on fair value of its obligation. The remaining carrying amount of financial liability is derecognised. The difference as well as proceed paid is recognised as other gains (losses) in profit or loss.

Where the modification does not result in the derecognition of the financial liability, the carrying amount of the financial liability is recalculated as the present value of the modified contractual cash flows discounted at its original effective interest rate. The difference is recognised in other gains (losses) in profit or loss.

4.15 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets (assets that take a substantial period of time to get ready for its intended use or sale) are added to the cost of those assets less investment income earned from those specific borrowings. The capitalisation of borrowing costs is ceased when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete.

Other borrowing costs are expensed in the period in which they are incurred.

4.16 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

Current tax

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax

Deferred income tax is recognised on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not recognised for temporary differences arise from:

- initial recognition of an asset or liability in a transaction other than a business combination that affects neither accounting nor taxable profit or loss is not recognised
- investments in subsidiaries, associates and joint arrangements where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax is measured using tax rates of the period in which temporary difference is expected to be reversed, based on tax rates and laws that have been enacted or substantially enacted by the end of the reporting period.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

4.17 Employee benefits

The Group operates various post-employment benefits schemes. The Group has both defined benefit and defined contribution plans.

Short-term employee benefits

Liabilities for short-term employee benefits such as wages, salaries, paid annual leave and paid sick leave, profit-sharing and bonuses that are expected to be settled wholly within 12 months after the end of the period are recognised in respect of employees' service up to the end of the reporting period. They are measured at the amount expected to be paid.

Defined contribution plan

The Group operates a provident fund that is funded by payments from employees and by the relevant Group companies which are managed by trustee. The Group has no legal or constructive obligations to pay further contributions once the contributions have been paid even if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Contributions to the provident fund are charged to the profit or loss in the year in which they are due.

Furthermore, the Group contributes to a monthly defined contribution retirement benefit plan administered by the government of the People's Republic of China. The relevant government agencies undertake to assume the retirement benefit obligation payable to all existing and future retired employees under this plan and the Group has no further obligation for post-retirement benefits beyond the contributions made. Contributions to this plan are recognised as an expense in profit or loss when incurred.

Retirement benefits

Employees are entitled to receive benefits reaching normal retirement age under the labour law applicable in Thailand and those countries in which the Group operates, or such other dates of entitlement as may be agreed between the Group and employees. Retirement benefits depend on one or more factors such as age, years of service and compensation.

The liability recognised in the statement of financial position in respect of defined benefit retirement plans is the present value of the defined benefit obligation at the end of the reporting period. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using the interest rates of government securities that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related retirement liability.

Remeasurement of gains and losses arising from experienced adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. They are included in retained earnings in the statements of changes in equity.

Past-service costs are recognised immediately in profit or loss.

4.18 Share-based payment

The Group operates a number of equity-settled, its share-based compensation plans, under which the Company receives services from employees as consideration for its equity instruments (warrants). The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. The total amount to be expensed is determined by reference to the fair value of the warrants granted:

- Including any market performance conditions;
- Excluding the impact of any service and non-market performance vesting conditions (for example, profitability, sales growth targets and remaining an employee of the entity over a specified time period); and
- Excluding the impact of any non-vesting conditions (for example, the requirement for employees to save or holdings shares for a specific period of time).

Non-market performance and service conditions are included in assumptions about the number of warrants that are expected to vest. The total expense is recognised over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied. At the end of each reporting period, the Company revises its estimates of the number of warrants that are expected to vest based on the non-marketing vesting conditions. It recognises the impact of the revision to original estimates, if any, in profit or loss, with a corresponding adjustment to equity.

When the warrants are exercised, the Group issues new shares. The proceeds received net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium.

The grant by the Group of warrants over its equity instruments to the employees of the Parent is treated as a distribution to owner both in the consolidated and separate financial statements and recognised directly to equity at fair value of the warrants as of the grant date.

4.19 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made.

4.20 Share capital

Ordinary shares with discretionary dividends are classified as equity.

Incremental external costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds.

Treasury share

Where any Group company purchases the Company's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes) is deducted from equity attributable to the company's equity holders until the shares are cancelled or reissued. Where such shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the company's equity holders.

4.21 Revenue recognition

Revenue are recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectibility of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfillment of the obligation to the customer.

Sales of electricity and steam not under lease

Sales of electricity and steam from Power Purchase Agreement and Steam Purchase Agreement will be recognised upon transmission of electricity and steam at delivery points stipulated in the Purchase Agreement. Revenue are recognised with realisable value net of output tax, rebates and discount.

Service income under finance lease agreements

Finance lease income under power purchase agreements is recognised on an effective interest method over the period of the agreements.

Service income under finance lease agreements related to the Power Purchase Agreements is recognised when the services have been rendered. Service income comprises income in relation to the availabilities of the power plants, other servicing income and fuel cost received from leases with respect to the leased assets. If the considerations exceed the services rendered, a contract liability is recognised. On the other hand, if the considerations less than the services rendered, a contract asset is recognised.

Dividend income

Dividend income is recognised when the Group's right to receive payment is established.

Interest income

Interest income is recognised using the effective interest method.

4.22 Dividend distribution

Dividends distribution to the Group's shareholders is recognised as a liability in the consolidated and separate financial statements in the period in which the dividends are approved by the shareholders and interim dividends are approved by the Board of Directors.

4.23 Derivatives and hedging activities

a) Embedded derivative and derivatives that do not qualify for hedge accounting

Embedded derivative that is separately accounted for and derivatives that do not qualify for hedge accounting is initially recognised at fair value. Changes in the fair value are included in "net gains (losses) from changes in fair value of financial instruments".

Fair value of derivatives is classified as a current or non-current following its remaining maturity.

b) Hedge accounting

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The Group designates certain derivatives as either:

- hedges of the fair value of i) recognised assets or liabilities or ii) unrecognised firm commitments (fair value hedges)
- hedges of a particular risk associated with the cash flows of i) recognised assets and liabilities and ii) highly probable forecast transactions (cash flow hedges); or
- hedges of a net investment in a foreign operation (net investment hedges).

At inception of the hedge relationship, the Group documents i) the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items and ii) its risk management objective and strategy for undertaking its hedge transactions.

The full fair value of a hedging derivative is classified as a current or non-current asset or liability following the maturity of related hedged item.

Cash flow hedges that qualify for hedge accounting

The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges is recognised in the cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss.

When a hedging instrument expires, or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity at that time remains in equity until the forecasted transaction occurs. When the forecasted transaction is no longer expected to occur, the cumulative gain or loss and deferred costs of hedging that were reported in equity are immediately reclassified to profit or loss.

Net investment hedges

Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges.

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in other comprehensive income and accumulated in reserves in equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss within net gains (losses) from changes in fair value of financial instruments. Gains and losses accumulated in equity are reclassified to profit or loss when the foreign operation is partially disposed of or sold.

4.24 Financial guarantee contracts

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of:

- the amount determined in accordance with the expected credit loss model under TFRS 9; and
- the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of TFRS 15.

The fair value of financial guarantees is determined based on the present value of the difference in cash flows between a) the contractual payments required under the debt instrument; and b) the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

Where guarantees in relation to loans or other payables of associates are provided for no compensation, the fair values are accounted for as contributions and recognised as part of the cost of the investment.

4.25 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The Chief Executive Officer is the chief operating decision-maker, responsible for allocating resources, assessing performance of the operating segments, and making strategic decisions.

5 Financial risk management

5.1 Financial risk

The Group's activities expose it to a variety of financial risks, market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group uses derivative financial instruments to hedge certain exposures.

Risk management is carried out by a central treasury department under policies approved by the Board of Directors. Group Treasury identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units.

5.1.1 Market risk

a) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange rate risk arising from various currency exposures that are not the functional currency of each entity under the Group, primarily with respect to US Dollar and Chinese Yuan. The Group does not use derivative instruments to hedge their exposure to foreign exchange rate risk.

Exposure

The Group and the Company's exposure to foreign currency risk that is not entity's functional currency expressed in Baht currency, was as follows:

	Consolidated financial statements			
	31 December 2021		31 December 2020	
	US Dollar Baht'000	Chinese Yuan Baht'000	US Dollar Baht'000	Chinese Yuan Baht'000
<u>Financial assets</u>				
Cash and cash equivalents	84,232	-	10,630	-
Amounts due from related parties	472,572	116,294	169,494	82,892
Short-term loans to a related party	1,241,540	-	1,115,884	-
Long-term loans to related parties	10,110,188	511,943	2,473,105	450,323
<u>Financial liabilities</u>				
Short-term loans from financial institutions	334,199	-	-	-
Advances from and amounts due to related parties	30,666	-	17,165	-
Other current liabilities	205,033	-	100,081	-
Long-term loans from financial institutions	2,005,194	-	-	-
Long-term loans from a related party	4,365,275	-	2,142,707	-

	Seperate financial statements			
	31 December 2021		31 December 2020	
	US Dollar Baht'000	Chinese Yuan Baht'000	US Dollar Baht'000	Chinese Yuan Baht'000
Financial assets				
Cash and cash equivalents	73,806	-	-	-
Amounts due from related parties	356,379	116,294	125,770	82,892
Long-term loans to related parties	10,110,188	511,943	2,473,105	450,323
Financial liabilities				
Short-term loans from financial institutions	334,199	-	-	-
Advances from and amounts due to related parties	5,948	-	-	-
Other current liabilities	9,627	-	-	-
Long-term loans from financial institutions	2,005,194	-	-	-

Sensitivity

As shown in the table above, the Group is primarily exposed to changes in Baht and US Dollar and Chinese Yuan and US Dollar. The sensitivity of profit or loss to changes in the exchange rates arises mainly from financial assets and financial liabilities denominated in US Dollar and Chinese Yuan.

	Consolidated financial statements	
	2021	2020
	Impact to net profit before income tax Baht'000	Impact to net profit before income tax Baht'000
Baht to 1 US Dollar exchange rate - increase 5%*	378,629	80,705
Baht to 1 US Dollar exchange rate - decrease 5%*	(378,629)	(80,705)
Chinese Yuan to 1 US Dollar exchange rate - increase 5%*	(160,862)	(54,206)
Chinese Yuan to 1 US Dollar exchange rate - decrease 5%*	160,862	54,206

	Separate financial statements	
	2021	2020
	Impact to net profit before income tax Baht'000	Impact to net profit before income tax Baht'000
Baht to 1 US Dollar exchange rate - increase 5%*	409,265	129,994
Baht to 1 US Dollar exchange rate - decrease 5%*	(409,265)	(129,994)

* Holding all other variables constant

b) Cash flow and fair value interest rate risk

The Group manages interest rate risk by closely monitoring the trend of interest rates in the world's markets as well as in Thailand. The Group allocates its debt portfolio in either short-term and long-term contracts or loans with fixed and floating interest rates corresponding to their types of investments. The Company has chosen financial instruments to create an alternative source of funding and to manage its financial structure properly in which it invests. For example, interest rate swaps are being used to manage the proportion of fixed interest rates necessary to meet the market trends.

Following interest rate benchmark reform, there will be cessation in several benchmark interest rates including LIBOR, which is applied by the Group as part of the variable rate calculation. The management is in the process of discussing with the financial institutions to use another benchmark interest rate for the loan agreements and related financial instruments. However, as at 31 December 2021, the impact of such change is immaterial to the Group.

Interest rate risk of long-term loans from financial institutions of the Group was disclosed in Note 20.

Instruments used by the Group

The Group used interest rate swaps contracts to hedge the interest risk.

As at 31 December 2021, the Group has no financial derivative used to hedge the interest rate risk (2020: the Group recognised financial derivative liabilities within level 2 of the fair value hierarchy of Baht 1.95 million).

Sensitivity

Profit or loss is sensitive to higher or lower interest income from cash and cash equivalents, and interest expenses from borrowings as a result of changes in interest rates.

	Consolidated financial statements	
	2021	2020
	Impact to net profit Baht'000	Impact to net profit Baht'000
Interest rate - increase 0.1%*	(10,935)	(4,581)
Interest rate - decrease 0.1%*	10,935	4,581

	Separate financial statements	
	2021	2020
	Impact to net profit Baht'000	Impact to net profit Baht'000
Interest rate - increase 0.1%*	(10,005)	(3,700)
Interest rate - decrease 0.1%*	10,005	3,700

* Holding all other variables constant

c) Price risk

The Group is exposed to coal and natural gas price risk which is fuel for electricity generation. To manage its coal price risk in the People's Republic of China which fluctuate from the domestic demand and supply, the Group monitors coal price index trends in order to plan an appropriate volume and price of coal purchase and adjusts the operation plan. To manage its natural gas price risk in the United State of America which fluctuate from the market price, the Group uses natural gas swaps to minimise its exposure to fluctuations in natural gas prices in its business operations.

In addition, the Group is exposed to electricity price risk in the United State of America since the spot price depends on demand and supply in the market and other factors, such as cost of fuel for electricity generation. The Group entered to electricity forward contracts to maintain the ability to generate income.

5.1.2 Credit risk

a) Risk management

The Group has no significant concentrations of credit risk. The Group has policies in place to ensure that sales of goods and services are made to customers with an appropriate credit history. Derivative counter parties and cash transactions are limited to high credit quality financial institutions. The Group has policies that limit the amount of credit exposure to any financial institution.

b) Impairment of financial assets

The Group and the Company has financial assets that are subject to the expected credit loss model as follows:

- Cash and cash equivalents
- Trade receivables
- Amounts due from related parties
- Short-term and long-term loans to related parties
- Dividend receivables from related parties

The impairment loss of trade receivables was disclosed in Note 12. The impairment loss of other financial assets was immaterial.

5.1.3 Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities and the availability of funding through an adequate amount of committed credit facilities to meet obligations when due and to close out market positions. Due to the dynamic nature of the underlying businesses, the Group Treasury maintains flexibility in funding by maintaining availability under committed credit lines.

As at 31 December 2021, the Group's financial liabilities into relevant maturity groupings based on their contractual maturities. The amounts disclosed in the table are the contractual undiscounted cash flows.

The maturity of financial liabilities	Consolidated financial statements			
	Within 1 year Baht'000	1 - 5 years Baht'000	Over 5 years Baht'000	Total Baht'000
31 December 2021				
Non-derivative financial liabilities				
Short-term loans from financial institutions	6,569,081	-	-	6,569,081
Trade accounts payable	331,090	-	-	331,090
Advances from and amounts due to related parties	586,203	-	-	586,203
Long-term loans from a related party	303,340	4,928,674	-	5,232,014
Lease liabilities	12,901	18,527	-	31,428
Long-term loans from financial institutions	1,714,860	6,367,110	4,632,646	12,714,616
Other financial liabilities	1,356,061	-	-	1,356,061
Other non-current financial liabilities	-	282,049	-	282,049
Total non-derivative financial liabilities	10,873,536	11,596,360	4,632,646	27,102,542
Derivative financial liabilities				
Electricity forward contracts	127,779	-	-	127,779
Total financial liabilities	11,001,315	11,596,360	4,632,646	27,230,321
31 December 2020				
Short-term loans from financial institutions	1,461,241	-	-	1,461,241
Trade accounts payable	169,964	-	-	169,964
Advances from and amounts due to related parties	244,964	-	-	244,964
Lease liabilities	12,613	6,821	1,426	20,860
Long-term loans from financial institutions	1,032,623	3,594,871	-	4,627,494
Other financial liabilities	934,361	-	-	934,361
Total financial liabilities	3,855,766	3,601,692	1,426	7,458,884

The maturity of financial liabilities	Separate financial statements			
	Within 1 year Baht'000	1 - 5 years Baht'000	Over 5 years Baht'000	Total Baht'000
31 December 2021				
Short-term loans from financial institutions	6,150,252	-	-	6,150,252
Advances from and amounts due to related parties	5,948	-	-	5,948
Lease liabilities	1,511	2,014	-	3,525
Long-term loans from financial institutions	1,123,456	5,583,133	4,632,646	11,339,235
Other financial liabilities	26,678	-	-	26,678
Total financial liabilities	7,307,845	5,585,147	4,632,646	17,525,638
31 December 2020				
Short-term loans from financial institutions	1,003,156	-	-	1,003,156
Advances from and amounts due to related parties	29,367	-	-	29,367
Lease liabilities	1,511	3,862	-	5,373
Long-term loans from financial institutions	772,390	3,104,860	-	3,877,250
Other financial liabilities	17,160	-	-	17,160
Total financial liabilities	1,823,584	3,108,722	-	4,932,306

Management monitors rolling forecasts of the Group's liquidity reserve cash and cash equivalents and undrawn borrowing facilities on the basis of expected cash flows. In addition, the Group's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets and maintaining financing plans.

5.2 Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

6. Fair value

The following table presents financial assets and liabilities that are measured at fair value, also stated fair value of each financial assets and liabilities, excluding financial assets and financial liabilities measured at amortised cost where the carrying value approximated fair value.

	Consolidated financial statements		
	Fair value level	Fair value through profit or loss (FVPL) Baht'000	Fair value through other comprehensive income (FVOCI) Baht'000
As at 31 December 2021			
Assets			
Debt instruments	Level 2	524,272	-
Note receivables	Level 2	-	5,600
Financial derivative assets			
- Natural gas swaps	Level 2	51,778	-
		576,050	5,600
Liabilities			
Financial derivative liabilities			
- Electricity forward contracts	Level 2	127,779	-
		127,779	-

	Fair value level	Consolidated financial statements		Separate financial statements
		Fair value through profit or loss (FVPL) Baht'000	Fair value through other comprehensive income (FVOCI) Baht'000	Fair value through profit or loss (FVPL) Baht'000

As at 31 December 2020

Assets

Debt instruments	Level 2	332,546	-	-
Note receivables	Level 2	-	10,392	-
		332,546	10,392	-

Liabilities

Hedging derivatives				
- Interest rate swaps	Level 2	1,949	-	1,949
		1,949	-	1,949

Note receivables represent note receivables from sales of power and steam of subsidiaries in the People's Republic of China which are issued by a financial institution to guarantee the possessors to get money on the maturity date of note receivables. Note receivables are non-interest bearing.

There were no transfers between Levels 1, 2 and 3 of fair value level during the year.

Valuation techniques used to measure fair value level 2

Valuation techniques used to measure fair value level 2 are as follows:

- Fair value of interest rate swaps agreements is determined using forward interests extracted from observable yield curves.
- Fair value of debt instruments and note receivables is determined from discounted contractual cash flows where discount rate quoted in an active market.
- The fair value of natural gas swaps and electricity forward contracts is determined by using forward price on the statement of financial position date, with the resulting value discounted back to present value.

7 Critical accounting estimates, assumptions and judgments

Estimates, assumption and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

During 2021, the Group makes estimates and assumptions concerning the future. The results of accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below.

7.1 Impairment assessment of investments in subsidiaries, associates, and joint ventures

The Group tested the impairment of investments in subsidiaries, associates, and joint ventures when events or changes in circumstances would indicate that the carrying value of the investment is higher than its recoverable amount by applying the value-in-use model. The value-in-use model involves management's significant judgments with respect to the future operating results of the business, projected cash flows, and the appropriate discount rate to be applied to the projected cash flows. Key assumptions applied to the value-in-use model are electricity tariffs, the assumed capacity of the power plants, growth rate, expected changes to operating expenditures, and the discount rate to be applied to the projected cash flows.

7.2 Fair value of certain financial assets and derivatives

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses judgement to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period. The significant assumptions are disclosed in Note 6.

7.3 Fair value of net identifiable assets acquired from the acquisition of investment in a joint venture and subsidiaries

The identification of fair values of net assets from the acquisition of investment in a joint venture and subsidiaries is based on significant judgement and assumptions made by the management. The significant assumptions applied by the management in the estimation of projected cash flows are the electricity tariffs, capacity of power plants, growth rate, operating costs, capital expenditures and discount rate.

8 Segment information - Consolidated financial statements

The Group has one operating segment which is the power business. Therefore, the Group presents the segment information based on geographical segment and considers the net profit (loss) from operating before interest expense and income taxes for each segment.

The segment information are as follows:

	Consolidated financial statements Baht'000						Eliminated entries	Total
	Power business			Head office	Total	Total		
	People's Republic of China	Thailand	Lao People's Democratic Republic					
For the year ended 31 December 2021								
Sales	6,111,973	-	-	-	672,524	-	6,784,497	
Cost of sales	(6,113,090)	-	-	-	(711,178)	-	(6,824,268)	
Gross loss	(1,117)	-	-	-	(38,654)	-	(39,771)	
Gross profit margin (%)	0%				6%		(1%)	
Share of profit (loss) from associates and joint ventures	(541,540)	(305,706)	3,611,712	210,429	-	(401)	2,974,494	
Selling expenses	-	-	-	-	(833)	-	(833)	
Administrative expenses	(662,491)	-	-	(65)	(57,823)	(162,700)	(883,079)	
Interest income	145,816	-	-	35	43,329	608,554	797,734	
Profit (loss) from operating before interest expenses and income taxes	(1,059,332)	(305,706)	3,611,712	210,399	(53,981)	445,453	2,848,545	
Others						(416,277)	(416,277)	
Net gains from changes in fair value of financial instruments							429,450	
Net gains on exchange rate							240,988	
Interest expenses							374,543	
Income taxes							(245,711)	
Non-controlling interests							(57,203)	
Profit for the year - owner of the Company							(47,308)	
							3,127,027	

	Consolidated financial statements Baht'000								
	Power business				United State of America	Head office	Total	Eliminated entries	Total
	People's Republic of China	Thailand	Lao People's Democratic Republic	Japan					
Total segmented assets	13,998,035	8,202,430	20,736,105	3,024,258	16,102,449	-	62,063,277	649,916	62,713,193
Total unallocated assets									12,153,572
Total assets									74,866,765
Timing of revenue recognition:									
Point in time	6,111,973	-	-	-	672,524	-	6,784,497	-	6,784,497
Total sales	6,111,973	-	-	-	672,524	-	6,784,497	-	6,784,497

	Consolidated financial statements Baht'000								
	Power business				Japan	Head office	Total	Eliminated entries	Total
	People's Republic of China	Thailand	Lao People's Democratic Republic	Thailand					
For the year ended 31 December 2020									
Sales	5,377,502	-	-	128,009	-	-	5,505,511	-	5,505,511
Cost of sales	(4,276,570)	-	-	(114,094)	-	-	(4,390,664)	-	(4,390,664)
Gross profit	1,100,932	-	-	13,915	-	-	1,114,847	-	1,114,847
Gross profit margin (%)	20%			11%			20%		20%
Share of profit (loss) from associates and joint ventures	76,073	253,763	3,222,613	20,629	(7,699)	-	3,565,379	-	3,565,379
Administrative expenses	(507,716)	-	-	(20,268)	(164,115)	-	(692,099)	-	(692,099)
Interest income	125,292	-	-	28	468,201	(219,082)	593,521	(219,082)	374,439
Profit from operating before interest expenses and income taxes	794,581	253,763	3,222,613	14,304	296,387	(219,082)	4,581,648	(219,082)	4,362,566
Others									382,176
Effect of change in investment types from the group restructuring									(577,138)
Net gains from changes in fair value of financial instruments									3,936
Net gains on exchange rate									148,066
Interest expenses									(236,091)
Income taxes									(300,491)
Non-controlling interests									(80,544)
Profit for the year owner of the Company									3,702,480

Consolidated financial statements Baht'000							
	Power business			Head office	Total	Eliminated entries	Total
	People's Republic of China	Thailand	Lao People's Democratic Republic				
Total segmented assets	12,302,445	7,482,618	17,061,106	52,083	-	608,141	37,506,393
Total unallocated assets							12,056,385
Total assets							49,562,778
Timing of revenue recognition:							
Point in time	5,377,502	-	-	128,009	-	-	5,505,511
Total sales	5,377,502	-	-	128,009	-	-	5,505,511

Major customers

During the year ended 31 December 2021, revenues from 5 major customers of approximately CNY 929.17 million or equivalent to Baht 4,614.76 million represented 68.02% of the Group's total revenues (2020: revenues from 3 major customers of approximately CNY 830.46 million or equivalent to Baht 3,769.04 million represented 68.46% of the Group's total revenues).

9 Financial assets and financial liabilities

As at 31 December 2021, the Group classified financial assets and financial liabilities as follow;

	Consolidated financial statements				
	Fair value through profit or loss Baht'000	Fair value of derivatives - Hedge Accounting Baht'000	Fair value through other comprehensive income Baht'000	Amortised cost Baht'000	Total Baht'000
31 December 2021					
Financial assets					
- Cash and cash equivalents	-	-	-	2,634,854	2,634,854
- Restricted deposits at financial institution	-	-	-	194	194
- Financial assets - investment in debt instruments	524,272	-	-	-	524,272
- Financial assets – note receivables	-	-	5,600	-	5,600
- Trade receivables, net	-	-	-	1,311,280	1,311,280
- Amounts due from related parties	-	-	-	869,310	869,310
- Dividend receivables from related parties	-	-	-	363,831	363,831
- Advances to related parties	-	-	-	2,761	2,761
- Short-term loans to related parties	-	-	-	2,363,615	2,363,615
- Financial derivative assets	51,778	-	-	-	51,778
- Other current assets	-	-	-	55,563	55,563
- Long-term loans to related parties	-	-	-	5,820,361	5,820,361
Financial liabilities					
- Short-term loans from financial institutions	-	-	-	6,551,133	6,551,133
- Trade accounts payable	-	-	-	331,090	331,090
- Advances from and amounts due to related parties	-	-	-	629,638	629,638
- Long-term loans from financial institutions, net	-	-	-	10,692,169	10,692,169
- Lease liabilities, net	-	-	-	31,024	31,024
- Financial derivative liabilities	127,779	-	-	-	127,779
- Other current liabilities	-	-	-	1,410,149	1,410,149
- Other non-current liabilities	-	-	-	282,049	282,049

	Consolidated financial statements				
	Fair value through profit or loss Baht'000	Fair value of derivatives - Hedge Accounting Baht'000	Fair value through other comprehensive income Baht'000	Amortised cost Baht'000	Total Baht'000
31 December 2020					
Financial assets					
- Cash and cash equivalents	-	-	-	2,169,033	2,169,033
- Restricted deposits at financial institution	-	-	-	88	88
- Financial assets - investment in debt instruments	332,546	-	-	-	332,546
- Financial assets - note receivables	-	-	10,392	-	10,392
- Trade receivables, net	-	-	-	927,226	927,226
- Amounts due from related parties	-	-	-	487,197	487,197
- Dividend receivables from related parties	-	-	-	438,831	438,831
- Advances to related parties	-	-	-	8,804	8,804
- Short-term loans to related parties	-	-	-	2,795,705	2,795,705
- Long-term loans to related parties	-	-	-	5,740,754	5,740,754
- Other current assets	-	-	-	42,101	42,101
Financial liabilities					
- Short-term loans from financial institutions	-	-	-	1,453,895	1,453,895
- Trade accounts payable	-	-	-	169,964	169,964
- Advances from and amounts due to related parties	-	-	-	244,964	244,964
- Long-term loans from financial institutions, net	-	-	-	4,431,606	4,431,606
- Lease liabilities, net	-	-	-	19,625	19,625
- Financial derivative liabilities	-	1,949	-	-	1,949
- Other current liabilities	-	-	-	934,361	934,361

	Separate financial statements				
	Fair value through profit or loss Baht'000	Fair value of derivatives - Hedge Accounting Baht'000	Fair value through other comprehensive income Baht'000	Amortised cost Baht'000	Total Baht'000
31 December 2021					
Financial assets					
- Cash and cash equivalents	-	-	-	1,141,799	1,141,799
- Amounts due from related parties	-	-	-	762,162	762,162
- Dividend receivables from related parties	-	-	-	170,000	170,000
- Advances to related parties	-	-	-	2,761	2,761
- Long-term loans to related parties	-	-	-	15,589,253	15,589,253
Financial liabilities					
- Short-term loan from financial institutions	-	-	-	6,134,199	6,134,199
- Advances from and amounts due to related parties	-	-	-	5,948	5,948
- Long-term loans from financial institutions, net	-	-	-	9,985,216	9,985,216
- Lease liabilities, net	-	-	-	3,658	3,658
- Other current liabilities	-	-	-	76,586	76,586
31 December 2020					
Financial assets					
- Cash and cash equivalents	-	-	-	1,595,569	1,595,569
- Amounts due from related parties	-	-	-	281,049	281,049
- Dividend receivables from related parties	-	-	-	346,033	346,033
- Advances to related parties	-	-	-	34,182	34,182
- Long-term loans to related parties	-	-	-	7,890,550	7,890,550
Financial liabilities					
- Short-term loan from financial institutions	-	-	-	1,000,000	1,000,000
- Advances from and amounts due to related parties	-	-	-	29,367	29,367
- Long-term loans from financial institutions, net	-	-	-	3,694,085	3,694,085
- Lease liabilities, net	-	-	-	4,976	4,976
- Financial derivative liabilities	-	1,949	-	-	1,949
- Other current liabilities	-	-	-	17,160	17,160

As at 31 December 2021, Financial assets and financial liabilities measured at amortised cost where the carrying value approximated fair value.

10 Cash and cash equivalents

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Cash on hand	209	189	5	5
Deposits held at call with banks	2,634,645	2,168,844	1,141,794	1,595,564
Total cash and cash equivalents	2,634,854	2,169,033	1,141,799	1,595,569

As at 31 December 2021, the interest rates on deposits held at call with banks were 0.13% to 2.02% per annum (2020: 0.15% to 1.00% per annum).

11 Financial assets measured at fair value through profit or loss

As at 31 December 2021, has financial assets measured at fair value through profit or loss which are debt instruments comprised of fixed deposits at financial institutions in the People's Republic of China amounting to CNY 99.85 million or equivalent to Baht 524.27 million bearing interest at the rates of 1.35% to 3.20% per annum and maturities within 180 days (2020: fixed deposits at financial institutions in the People's Republic of China amounting to CNY 72 million or equivalent to Baht 332.55 million bearing interest at the rates of 2.10% to 3.20% per annum and maturities within 180 days).

12 Trade receivables, net

As at 31 December, trade receivables consist of:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Trade receivables - third parties	1,315,717	935,828	-	-
Less Impairment loss	(4,437)	(8,602)	-	-
Trade receivables, net	1,311,280	927,226	-	-

Trade receivables are aged as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Trade receivables under credit term	1,291,440	728,015	-	-
Trade receivables overdue for payment				
- Less than 3 months	2,712	157,597	-	-
- Over 3 months but less than 6 months	21,394	50,066	-	-
- Over 6 months but less than 12 months	-	150	-	-
- Over 12 months	171	-	-	-
Total trade receivables	1,315,717	935,828	-	-
Less Impairment loss	(4,437)	(8,602)	-	-
Trade receivables, net	1,311,280	927,226	-	-

13 Other current assets

As at 31 December, other current assets consist of:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Prepaid expenses	150,122	17,108	8,523	5,314
Advance for prepayment	36,711	24,474	-	-
Accrued interest income	46	2,058	-	-
Value added tax receivables	157,219	64,818	109	605
Prepaid income tax	103,451	8,514	508	4,676
Other receivables	18,806	15,569	-	-
Total other current assets	466,355	132,541	9,140	10,595

14 Investments in subsidiaries, associates and joint ventures

Investments in subsidiaries, associates and joint ventures are as follows:

	Consolidated financial statements (Equity method)		Separate financial statements (Cost method)	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Subsidiaries				
Banpu Coal Power Ltd.	-	-	5,921,587	5,921,587
Banpu Power International Limited	-	-	12,196,769	11,192,315
Banpu Power US Corporation	-	-	1,933,992	-
Banpu Power (Japan) Co., Ltd.	-	-	4,815	4,815
Total investments in subsidiaries	-	-	20,057,163	17,118,717
Less Provision for impairment loss	-	-	(270,000)	-
Total investments in subsidiaries, net	-	-	19,787,163	17,118,717
Joint ventures				
BLCP Power Ltd.	6,089,171	6,089,171	-	-
Hongsa Power Company Limited	13,092,534	13,092,534	13,092,534	13,092,534
Phu Fai Mining Company Limited	836	836	836	836
Shanxi Luguang Power Co., Ltd.	2,379,627	2,093,204	-	-
Nakoso IGCC Management Co., Ltd.	2,688,394	-	-	-
Associates				
PT. ITM Banpu Power	-	22,408	-	22,408
Banpu Next Co., Ltd.	5,174,786	4,938,786	6,990,649	6,754,649
Total investments in associates and joint ventures - cost method	29,425,348	26,236,939	20,084,019	19,870,427
Add Cumulative equity account of investments in associates and joint ventures	4,340,932	401,577	-	-
Total investments in associates and joint ventures	33,766,280	26,638,516	20,084,019	19,870,427

As at 31 December 2021 and 2020, under the condition of loans for project finance of joint ventures, the Group pledged its investments in two joint ventures with a cost of US Dollar 370.82 million or equivalent to Baht 13,093 million, as collateral for loans from financial institutions of such joint ventures.

In addition, a subsidiary, who is the shareholder of a joint venture, guarantee for loans from financial institutions of such joint venture as at 31 December 2021 amounting to CNY 534 million or equivalent to Baht 2,804 million.

14.1 Changes in investments in subsidiaries, associates and joint ventures

Movements of investments in subsidiaries, associates and joint ventures for the years ended 31 December are as follows:

	Consolidated financial statements (Equity method)		Separate financial statements (Cost method)	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Opening balance	26,638,516	20,855,335	36,989,144	34,544,882
Additions of investments	236,000	2,426,630	3,174,446	2,426,630
Acquisition of investment in a joint venture	2,445,191	-	-	-
Dividend income from joint ventures	(862,282)	(775,094)	-	-
Disposal of investment in an associate	(6,245)	-	(22,408)	-
Impairment loss on investment in a subsidiary	-	-	(270,000)	-
Change in investment types from the group restructuring	-	921,724	-	17,632
Add Share of profit from associates and joint ventures	2,974,494	3,565,379	-	-
Share of other comprehensive income (expense) from associates and joint ventures				
- Remeasurement of post-employment benefit obligations	(34,574)	-	-	-
- Cash flow hedge reserve	901,623	(326,928)	-	-
- Gains (losses) on fair value of equity instruments	(439,797)	236,838	-	-
- Translation differences	1,913,354	(265,368)	-	-
Closing balance	33,766,280	26,638,516	39,871,182	36,989,144

a) Additional investments

Consolidated financial statements

The Group additionally invested in Banpu Next Company Limited, an associate, in the same proportion of shareholding, with a cost of Baht 236 million. The Group fully paid for these additional shares.

Separate financial statements

The Company additionally invested in Banpu Power International Limited, a subsidiary, in the same portion of shareholding by converting long-term loans to a related party of US Dollar 32.79 million or equivalent to Baht 1,004.45 million to investment in a subsidiary.

The Company additionally invested in Banpu Next Company Limited, an associate, in the same proportion of shareholding, with a cost of Baht 236 million. The Group fully paid for these additional shares.

b) Incorporation of a new subsidiary

Separate financial statements

The Company established Banpu Power US Corporation (BPP US) which is a limited company incorporated in the United States of America that invests in power business. The Company holds 100% of its registered share capital. The Company invested in BPP US with a total cost of US Dollar 58.20 million or equivalent to Baht 1,933.99 million and provided long-term loans amounting to US Dollar 171.90 million or equivalent to Baht 5,744.88 million to purchase shareholding in Temple Generation Intermediate Holdings, LLC (Note 14.1 d)).

c) Acquisition of investment in a joint venture

Consolidated financial information

Banpu Power Investment Co., Ltd, a subsidiary, purchased ordinary shares for 33.50% interest in Nakoso IGCC Management Co., Ltd (NIMCO), which holds 40% ownership in the Nakoso IGCC Power Plant, a 543 MW integrated gasification combined cycle plant, located in Fukushima, Japan. The purchase consideration paid was JPY 8,630.94 million or equivalent to Baht 2,445.19 million. The Group has classified investment in NIMCO as an investment in a joint venture.

The Group completely measured the fair value of the identifiable assets acquired and completed purchase price allocation. Details of investment are as follows:

	Million JPY	Million Baht
Portion of estimated fair value of net assets acquired	2,722.08	771.18
Right to operate the power plant (Presented in investment in a joint venture)	5,908.86	1,674.01
Purchase considerations	8,630.94	2,445.19

Right to operate the power plant will be amortised by straight-line method.

d) Acquisition of investment in subsidiaries

Consolidated financial information

The Group established BKV-BPP Power LLC (BKV-BPP), which is equally held interest at 50% by BPP US and BKV Corporation (BKV), a subsidiary of the Parent. The shareholder agreement between the shareholders' of BKV-BPP has determined the management structure which BPP US has right on strategic financial decision and operation. Thus, BPP US is a controlling entity and the Group classifies as investments in subsidiaries. During the year ended 31 December 2021, BPP US and BKV invested in BKV-BPP with a total cost of US Dollar 173.96 million or equivalent to Baht 5,813.86 million and provided long-term loan to BKV-BPP amounting to US Dollar 282 million or equivalent to Baht 9,424.41 million in the same proportion.

On 1 November 2021, BKV-BPP completed the purchase of all shares in Temple Generation Intermediate Holdings, LLC which holds 100% interest in Temple 1 gas-fired power plant located in Texas USA, with generation capacity of 768 MW. The total consideration is US Dollar 440.96 million or equivalent to Baht 14,764.57 million. This acquisition is an asset acquisition because substantially all of the fair value of the gross assets acquired is concentrated in property plant and equipment of the power plant amounting to US Dollar 452.93 million or equivalent to Baht 15,165.09 million (Note 15) the remaining is recognised in other related asset and liabilities.

e) Disposal of investments in an associate

Separate financial statements

The Company disposed 30% of shareholding in PT. ITM Banpu Power, an associate, to Banpu Next Co., Ltd., another associate, at the consideration of Baht 6 million. The Company recognised loss on disposal of Baht 0.25 million and 16.41 million in consolidated and separate statements of comprehensive income, respectively.

f) Impairment loss on investment in a subsidiary

Separate financial statements

The management assessed the indicator of impairment of investment in Banpu Coal Power Ltd. because the cost of investment in this subsidiary presented in the separate financial statements was higher than its net equity value. Management performed impairment testing on the investment by applying the value-in-use model to calculate the recoverable amount. The management applied significant judgments and recognized provision for impairment loss on investment in Banpu Coal Power Ltd. of Baht 270 million in the separate statements of comprehensive income.

g) Dividend receivables from a subsidiary and joint ventures

The movements of the dividend receivables can be analysed as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Opening balance	438,831	638,831	346,033	546,034
Dividends declared by a subsidiary and joint ventures	862,282	775,094	793,871	782,350
Dividends received from a subsidiary and joint ventures	(937,282)	(975,094)	(969,904)	(982,351)
Closing balance	363,831	438,831	170,000	346,033
Current portion	125,000	150,000	125,000	150,000
Non-current portion	238,831	288,831	45,000	196,033
Total dividend receivables from a subsidiary and joint venture	363,831	438,831	170,000	346,033

During the year ended 31 December 2021, dividend income from joint ventures in the consolidated financial statements represented the dividend income from BLCP Power Limited, Hongsa Power Company Limited and Phu Fai Mining Company Limited amounting to Baht 175 million, Baht 608.11 million and US Dollar 2.57 million or equivalent to Baht 79.17 respectively (2020: dividend income from BLCP Power Limited, Hongsa Power Company Limited and Phu Fai Mining Company Limited amounting to Baht 200 million, Baht 361.53 million and US Dollar 6.75 million or equivalent to Baht 213.56, respectively).

As at 31 December 2021 and 2020, the Company has provided standby letters of credit, issued by commercial banks on behalf of the Company, amounting to Baht 1,600 million and US Dollar 22 million or equivalent to Baht 735.24 million as a guarantee for lenders of Hongsa Power Company Limited. However, the Company considered that there are no financial liabilities expected from this financial guarantee.

14.2 Investments in subsidiaries

List of subsidiaries of the Group is disclosed in Note 14.4.

As at 31 December 2021 and 2020, the group had the following subsidiary that has significant non-controlling interests as follows;

Name of company	Country	Business	2021		2020	
			Proportion of ordinary shares held by the group (%)	Proportion of shares held by non-controlling interests (%)	Proportion of ordinary shares held by the group (%)	Proportion of shares held by non-controlling interests (%)
Zouping Peak CHP Co., Ltd.	People's Republic of China	Power and steam production and trading	70.00	30.00	70.00	30.00
BKV-BPP Power LLC and subsidiaries	United State of America	Investment in power	50.00	50.00	-	-

Summarised financial information of a subsidiary with material non-controlling interests

Set out below are the summarised financial information of a subsidiary that has non-controlling interests that is material to the Group. The information below is the amount before inter-company eliminations.

Summarised statements of financial position

As at 31 December	Zouping Peak CHP Co., Ltd		BKV-BPP Power LLC	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Current assets	818,244	541,618	1,201,693	-
Current liabilities	(392,937)	(334,477)	(804,313)	-
Total net current assets	425,307	207,141	397,380	-
Non-current assets	2,930,713	2,690,203	15,183,732	-
Non-current liabilities	-	(517)	(9,706,460)	-
Total net non-current assets	2,930,713	2,689,686	5,477,272	-
Net assets	3,356,020	2,896,827	5,874,652	-
Accumulated non-controlling interests	1,006,806	869,048	2,937,326	-

Summarised statements of comprehensive income

For the years ended 31 December	Zouping Peak CHP Co., Ltd		BKV-BPP Power LLC	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Revenue	2,163,477	1,811,523	672,523	-
Profit before income tax	69,390	342,181	57,167	-
Income tax expense	(6,976)	(73,700)	-	-
Post-tax profit from continuing operations	62,414	268,481	57,167	-
Other comprehensive income	396,780	178,536	3,627	-
Total comprehensive income	459,194	447,017	60,794	-
Total comprehensive income allocated to non-controlling interests	137,759	134,105	30,397	-
Dividend paid to non-controlling interests	-	-	-	-

Summarised statement of cash flows

For the years ended 31 December	Zouping Peak CHP Co., Ltd		BKV-BPP Power LLC	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Cash flow from operating activities				
Cash generated from (used in) operations	131,620	564,744	(127,258)	-
Interest paid	(87)	(11,904)	-	-
Income tax paid	(2,623)	(70,148)	-	-
Net cash generated from (used in) operating activities	128,910	482,692	(127,258)	-
Net cash receipts from (used in) investing activities	(18,352)	(83,280)	23,969	-
Net cash used in financing activities	(19,269)	(433,875)	-	-
Net increase (decrease) in cash and cash equivalents	91,289	(34,463)	(103,289)	-
Cash and cash equivalents at beginning of the year	35,817	66,223	619,274	-
Exchange differences on cash and cash equivalents	10,125	4,057	(4,147)	-
Cash and cash equivalents at end of the year	137,231	35,817	511,838	-

14.3 Investments in associates and joint ventures

Set out below are the joint ventures, which are material to the Group. The joint ventures as listed below are held directly by the Group and has voting right in proportion of the ordinary shares.

Name of company	Country	Business	Measurement method	Percent of ownership interest	
				2021 %	2020 %
BLCP Power Ltd.	Thailand	Power production and trading	Equity method	50.00	50.00
Hongsa Power Company Limited	Lao People's Democratic Republic	Power concession	Equity method	40.00	40.00

Commitments and contingent liabilities in respect of joint ventures

Significant commitments in the ownership proportion of joint ventures of the Group are as follows:

	Consolidated financial statements	
	2021 Million Baht	2020 Million Baht
Letter of Guarantee	68	68

Summarised financial information for joint ventures

Set out below are the summarised financial information which are significant joint ventures and accounted by using the equity method.

Summarised statements of financial position

As at 31 December	BLCP Power Limited		Hongsa Power Company Limited		Total	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Current assets						
Cash and cash equivalents	2,629,952	4,385,275	4,984,993	4,641,309	7,614,945	9,026,584
Deposits at financial institutions used as collateral	-	-	2,893,727	2,416,174	2,893,727	2,416,174
Current portion of finance lease receivable, net	549,037	571,923	6,601,210	5,645,274	7,150,247	6,217,197
Other current assets	6,574,815	3,966,589	7,764,037	6,851,274	14,338,852	10,817,863
Total current assets	9,753,804	8,923,787	22,243,967	19,554,031	31,997,771	28,477,818
Non-current assets						
Finance lease receivable, net	8,150,866	7,679,419	70,141,004	70,596,987	78,291,870	78,276,406
Property, plant and equipment, net	2,762,794	2,579,216	4,394,854	4,278,561	7,157,648	6,857,777
Other assets	1,746,992	2,260,366	15,467,084	13,832,434	17,214,076	16,092,800
Total non-current assets	12,660,652	12,519,001	90,002,942	88,707,982	102,663,594	101,226,983
Current liabilities						
Current portion of long-term loans, net	1,665,850	1,529,832	7,556,981	6,860,894	9,222,831	8,390,726
Other current liabilities (including trade payables)	2,004,495	1,412,074	3,049,352	2,720,456	5,053,847	4,132,530
Total current liabilities	3,670,345	2,941,906	10,606,333	9,581,350	14,276,678	12,523,256
Non-current liabilities						
Long-term loans, net	10,818,638	11,461,131	49,643,567	55,209,871	60,462,205	66,671,002
Other liabilities	1,016,867	1,233,830	1,405,785	1,725,727	2,422,652	2,959,557
Total non-current liabilities	11,835,505	12,694,961	51,049,352	56,935,598	62,884,857	69,630,559
Net assets	6,908,606	5,805,921	50,591,224	41,745,065	57,499,830	47,550,986

Summarised statements of comprehensive income

For the years ended 31 December	BLCP Power Limited		Hongsa Power Company Limited		Total	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Sales and services	14,264,945	12,179,220	20,767,978	19,545,992	35,032,923	31,725,212
Cost of sales and services	(12,365,745)	(11,946,304)	(8,862,821)	(7,626,543)	(21,228,566)	(19,572,847)
Depreciation and amortisation	(27,110)	(23,822)	(69,512)	(65,698)	(96,622)	(89,520)
Interest income	12,443	26,364	67,835	81,102	80,278	107,466
Interest expense not included other finance cost	(504,576)	(634,506)	(3,456,436)	(3,920,627)	(3,961,012)	(4,555,133)
Net unrealised gains (losses) on exchange rate	646,365	(283,433)	(2,833,886)	25,464	(2,187,521)	(257,969)
Profit before income tax	1,060,905	2,005,916	9,172,052	7,587,222	10,232,957	9,593,138
Income tax expense	(631,086)	(919,284)	(635,667)	-	(1,266,753)	(919,284)
Net profit	429,819	1,086,632	8,536,385	7,587,222	8,966,204	8,673,854
Other comprehensive income (expense)	1,022,866	(297,905)	1,830,054	(480,837)	2,852,920	(778,742)
Total comprehensive income	1,452,685	788,727	10,366,439	7,106,385	11,819,124	7,895,112
Declaration of dividends	350,000	400,000	1,520,280	903,825	1,870,280	1,303,825

The information above reflects the amounts presented in the financial statements of the joint ventures adjusted for differences in accounting policies between the Group and the joint ventures (and not the Group's share of those amounts).

Reconciliation of summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in joint ventures.

	BLCP Power Limited		Hongsa Power Company Limited		Total	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Opening net assets	5,805,921	5,417,194	41,745,065	35,542,505	47,550,986	40,959,699
Declaration of dividends	(350,000)	(400,000)	(1,520,280)	(903,825)	(1,870,280)	(1,303,825)
Profit for the year	429,819	1,086,632	8,536,385	7,587,222	8,966,204	8,673,854
Other comprehensive income (expense)	1,022,866	(297,905)	1,830,054	(480,837)	2,852,920	(778,742)
Closing net assets	6,908,606	5,805,921	50,591,224	41,745,065	57,499,830	47,550,986
Ownership percentage in joint ventures (%)	50	50	40	40	-	-
Interests in joint ventures	3,454,303	2,902,960	20,236,490	16,698,026	23,690,793	19,600,986
Impact of changes in functional currency of joint ventures	82,911	82,911	216,053	216,053	298,964	298,964
Closing carrying value	3,537,214	2,985,871	20,452,543	16,914,079	23,989,757	19,899,950

Individually immaterial associates and joint ventures

In addition to the interests in joint ventures disclosed above, the Group also has interests in a number of individually immaterial associates and joint ventures that are accounted for using the equity method.

	Consolidated financial statements	
	2021 Baht'000	2020 Baht'000
Aggregate carrying amount of individually immaterial associates and joint ventures, which are accounted for using equity method	9,776,523	6,738,566
Aggregate amounts of the reporting entity's share of:		
Net loss	(654,970)	(12,826)
Other comprehensive income (expense)	1,097,151	(14,171)
Total comprehensive income (expense)	442,181	(26,997)

14.4 List of subsidiaries, associates and joint ventures

Name of company	Country	Business	Percentage of direct shareholding	
			2021 %	2020 %
Direct shareholding				
Subsidiaries				
- Banpu Coal Power Limited	Thailand	Investment in power	100.00	100.00
- Banpu Power International Limited	Republic of Mauritius	Investment in power	100.00	100.00
- Banpu Power US Corporation	United State of America	Investment in power	100.00	-
- Banpu Power (Japan) Co., Ltd.	Thailand	Investment in renewable energy	100.00	100.00
Joint arrangement - Joint ventures				
- Hongsa Power Company Limited	Lao People's Democratic Republic	Power concession	40.00 ⁽¹⁾	40.00 ⁽¹⁾
- Phu Fai Mining Company Limited	Lao People's Democratic Republic	Mining concession	37.50 ⁽¹⁾	37.50 ⁽¹⁾
Associates				
- Banpu Next Co., Ltd.	Thailand	Investment in clean energy	50.00	50.00
- PT. ITM Banpu Power	Republic of Indonesia	Investment in power	-	30.00
Indirect shareholding				
1) Banpu Coal Power Limited and a subsidiary and a joint venture are as follows;				
A subsidiary				
- Power Vietnam Co., Ltd.	Thailand	Investment in power	100.00	100.00
Joint arrangement - Joint venture				
- BLCP Power Limited	Thailand	Power production and trading	50.00 ⁽¹⁾	50.00 ⁽¹⁾
2) Banpu Power International Limited and subsidiaries are as follows;				
- Banpu Power Investment Co., Ltd. and subsidiaries and joint ventures are as follows;	Singapore	Investment in power	100.00	100.00
Subsidiaries				
- Shijiazhuang Chengfeng Cogen Co., Ltd.	People's Republic of China	Power and steam production and trading	100.00	100.00
- Zouping Peak Pte. Ltd. and a subsidiary	Singapore	Investment in power	100.00	100.00
- Zouping Peak CHP Co., Ltd.	People's Republic of China	Power and steam production and trading	70.00	70.00
- Banpu Investment (China) Ltd. and subsidiaries	People's Republic of China	Investment in power	100.00	100.00
- Tangshan Banpu Heat & Power Co., Ltd.	People's Republic of China	Power and steam production and trading	12.08 ⁽³⁾	12.08 ⁽³⁾
- Banpu Power Trading (Shandong) Co., Ltd.	People's Republic of China	Power trading	-	100.00
- Banpu Power Trading (Hebei) Co., Ltd.	People's Republic of China	Power trading	-	100.00
- Pan-Western Energy Corporation LLC and a subsidiary	Cayman Islands	Investment in power	100.00	100.00
- Tangshan Banpu Heat & Power Co., Ltd.	People's Republic of China	Power and steam production and trading	87.92 ⁽³⁾	87.92 ⁽³⁾

Name of company	Country	Business	Percentage of direct shareholding	
			2021 %	2020 %
<u>Joint arrangement - Joint ventures</u>				
- Shanxi Lu Guang Power Co., Ltd.	People's Republic of China	Power and steam production and trading	30.00 ⁽¹⁾	30.00 ⁽¹⁾
- Nakoso IGCC Management Co., Ltd.	Japan	Investment in power	33.50 ⁽¹⁾	-
3) Banpu Power US Corporation and a subsidiary are as follows;				
<u>Subsidiary</u>				
- BKV-BPP Power LLC and subsidiaries	United State of America	Investment in power	50.00 ⁽²⁾	-
- Temple Generation Intermediate Holdings LLC and a subsidiary	United State of America	Investment in power	100.00	-
- Temple Generation I LLC	United State of America	Power production and trading	100.00	-

- (1) Shareholder agreement of joint ventures of the Group has determined the management structure including strategic financial decision and operation which has voting right from the shareholders or the representative of each parties. The Group classifies as investments in joint ventures.
- (2) Shareholder agreement of subsidiaries of the Group has determined the management structure which the Group has right on strategic financial decision and operation. Thus, the Group is a controlling entity and classifies as investments in subsidiaries
- (3) The Group holds investments in Tangshan Banpu Heat & Power Co., Ltd. 100% of registered shares by Banpu Investment (China) Co., Ltd. and Pan-Western Energy Corporation LLC in the proportion of 12.08% and 87.92%, respectively.

15 Property, plant and equipment, net

	Consolidated financial statements Baht*000						
	Building and infrastructures	Power plants and components of power plants and machinery and equipment	Furniture and office equipment	Tools	Motor vehicles	Construction in progress	Total
At 1 January 2020							
Cost	4,032,232	13,371,599	35,032	52,286	58,907	380,446	17,930,502
Less: Accumulated depreciation	(1,602,080)	(4,333,213)	(20,271)	(34,880)	(44,537)	-	(6,034,981)
Net book amount	2,430,152	9,038,386	14,761	17,406	14,370	380,446	11,895,521
For the year ended 31 December 2020							
Opening net book amount	2,430,152	9,038,386	14,761	17,406	14,370	380,446	11,895,521
Additions	751	10,682	1,645	669	2,942	314,626	331,315
Disposals - Net book value	(8,978)	-	(5,856)	(24)	-	-	(14,858)
Write-off - Net book value	(2,587)	(47,921)	-	(210)	-	(69)	(50,787)
Transfer in (out)	39,205	391,632	1,374	5,694	-	(437,905)	-
Reclassify to other non-current assets	-	-	-	-	-	(56)	(56)
Change in investment types from the group restructuring	(355,483)	(4,107,651)	(1,398)	(1,369)	(3,310)	(63,070)	(4,532,281)
Depreciation charge	(111,217)	(228,319)	(4,183)	(6,119)	(5,040)	-	(354,878)
Translation differences	160,611	540,743	424	1,243	894	23,427	727,342
Closing net book amount	2,152,454	5,597,552	6,767	17,290	9,856	217,399	8,001,318
At 31 December 2020							
Cost	3,909,939	9,607,481	25,990	59,128	56,155	217,399	13,876,092
Less: Accumulated depreciation	(1,757,485)	(4,009,929)	(19,223)	(41,838)	(46,299)	-	(5,874,774)
Net book amount	2,152,454	5,597,552	6,767	17,290	9,856	217,399	8,001,318

	Consolidated financial statements Baht'000							
	Land	Building and infrastructures	Power plants and components of power plants and machinery and equipment	Furniture and office equipment	Tools	Motor vehicles	Construction in progress	Total
For the year ended 31 December 2021								
Opening net book amount	-	2,152,454	5,597,552	6,767	17,290	9,856	217,399	8,001,318
Increase from acquisition of investment in subsidiaries (Note 14.1 d))	34,486	-	15,124,278	1,563	4,764	-	-	15,165,091
Additions	-	-	41,843	1,930	1,265	1,889	141,438	188,365
Disposals - Net book value	-	-	-	(9)	(15)	-	-	(24)
Write-off - Net book value	-	-	(11,375)	-	-	-	-	(11,375)
Transfer in (out)	-	42,020	320,735	605	4,106	1,983	(369,449)	-
Depreciation charge	-	(113,628)	(414,936)	(2,907)	(6,509)	(4,509)	-	(542,489)
Translation differences	(64)	290,324	698,440	796	2,314	1,312	17,131	1,010,253
Closing net book amount	34,422	2,371,170	21,356,537	8,745	23,215	10,531	6,519	23,811,139
At 31 December 2021								
Cost	34,422	4,476,558	26,382,019	31,407	75,182	64,147	6,519	31,070,254
<u>Less</u> : Accumulated depreciation	-	(2,105,388)	(5,025,482)	(22,662)	(51,967)	(53,616)	-	(7,259,115)
Net book amount	34,422	2,371,170	21,356,537	8,745	23,215	10,531	6,519	23,811,139

As at 31 December 2021, the Group mortgaged and pledged assets as collateral for long-term loans from financial institutions of a subsidiary in the People's Republic of China at the net book value amounting to CNY 396.71 million or equivalent to Baht 2,083 million (31 December 2020: CNY 391.68 million or equivalent to Baht 1,809.07 million).

	Separate financial statements Baht'000
	Furniture and office equipment
At 1 January 2020	
Cost	4,827
<u>Less</u> : Accumulated depreciation	(2,744)
Net book amount	2,083
For the year ended 31 December 2020	
Opening net book amount	2,083
Additions	489
Disposals - Net book value	(125)
Depreciation charge	(683)
Closing net book amount	1,764
At 31 December 2020	
Cost	4,901
<u>Less</u> : Accumulated depreciation	(3,137)
Net book amount	1,764
For the year ended 31 December 2021	
Opening net book amount	1,764
Additions	158
Disposals - Net book value	(9)
Depreciation charge	(517)
Closing net book amount	1,396
At 31 December 2021	
Cost	4,626
<u>Less</u> : Accumulated depreciation	(3,230)
Net book amount	1,396

16 Leases

16.1 Amounts recognised in the statements of financial position

The statement of financial position shows the following amounts relating to leases:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Properties	631,098	568,789	3,359	4,799
Total right-of-use assets	631,098	568,789	3,359	4,799
Lease liabilities, net				
Current	12,759	11,860	1,380	1,319
Non-current	18,265	7,765	2,278	3,657
Total lease liabilities, net	31,024	19,625	3,658	4,976

16.2 Amounts recognised in profit or loss and cash flows

Amounts charged to profit or loss and cash flows relating to leases are as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Depreciation charge of right-of-use assets - Properties	35,586	42,136	1,440	1,440
Addition to the right-of-use assets during the year	21,498	259,221	-	-
Total cash outflow for leases	13,319	15,114	1,511	1,511
Interest expense	700	3,429	191	249
Expense relating to short-term leases	14,231	15,003	-	-
Expense relating to leases of low-value assets	127	86	-	-

17 Deferred income taxes and income tax

Corporate income tax for the years ended 31 December 2021 and 2020 are calculated based on the net profit (tax base) which excludes the interests in joint ventures. The rates are as follows:

	2021	2020
Thailand	20%	20%
People's Republic of China	25%	0% to 25%
Mauritius Island	15%	15%
Singapore	17%	17%
United State of America	21%	-

17.1 Deferred income tax assets and liabilities

The analysis of deferred tax assets and liabilities is as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Deferred income tax assets	602,758	544,275	5,472	5,265
Deferred income tax liabilities	(24,776)	(966)	-	-
Deferred income taxes, net	577,982	543,309	5,472	5,265

The movements of deferred income tax assets and liabilities are as follows:

	Consolidated financial statements Baht'000				
	At 1 January 2021	Charged to profit or loss	Charged to other comprehensive income or expense	Translation differences	At 31 December 2021
Deferred income tax assets:					
Employee benefit obligation	5,303	539	-	-	5,842
Financial derivatives	390	-	(390)	-	-
Depreciation of building and machinery	481,566	(15,480)	-	65,239	531,325
Impairment loss	2,151	(1,281)	-	240	1,110
Accrued expense and others	54,865	1,968	-	7,648	64,481
Total	544,275	(14,254)	(390)	73,127	602,758
Deferred income tax liabilities:					
Fair value uplift from the business combination	(38,095)	-	-	(4,290)	(42,385)
Amortisation of fair value of plant and equipment from the acquisition of power plants	37,689	438	-	3,806	41,933
Investment in joint ventures	-	(24,174)	-	502	(23,672)
Others	(560)	(14)	-	(78)	(652)
Total	(966)	(23,750)	-	(60)	(24,776)
Net	543,309	(38,004)	(390)	73,067	577,982

	Baht'000						
	Impact from change in accounting policies	Charged to profit or loss	Charged to other comprehensive income or expense	Group restructuring	Translation differences	At 31 December 2020	
Deferred income tax assets:							
Employee benefit obligation			9,401	-	(5,159)	1,061	5,303
Financial derivatives			545	-	-	(155)	390
Depreciation of building and machinery			469,745	-	(21,232)	-	481,566
Impairment loss			-	2,603	(457)	-	2,151
Accrued expense and others			74,594	-	(21,780)	-	54,865
Total			554,285	2,603	(48,628)	906	544,275
Deferred income tax liabilities:							
Fair value uplift from the business combination			(85,229)	-	-	-	(85,229)
Amortisation of fair value of plant and equipment from the acquisition of power plants			32,860	-	2,585	(7)	37,689
Connection fee			(13,405)	-	14,863	-	1,458
Others			(3,888)	-	3,328	-	(560)
Total			(69,662)	-	20,776	(7)	(48,893)
Net			484,623	2,603	(27,852)	899	543,309

	Separate financial statements Baht'000			
	At 1 January 2021	Charged to profit or loss	Charged to other comprehensive income or expense	At 31 December 2021
Deferred income tax assets:				
Employee benefit obligation	5,302	539	-	5,841
Financial derivative	390	-	(390)	-
Other	(427)	58	-	(369)
Total	5,265	597	(390)	5,472

	Separate financial statements Baht'000			
	At 1 January 2020	Charged to profit or loss	Charged to other comprehensive income or expense	At 31 December 2020
Deferred income tax assets:				
Employee benefit obligation	8,285	(4,203)	1,220	5,302
Financial derivative	545	-	(155)	390
Other	(142)	(285)	-	(427)
Total	8,688	(4,488)	1,065	5,265

Deferred income tax assets are recognised for tax loss carry forwards only to the extent that realisation of the related tax benefit through the future taxable profit is probable. The Group did not recognise deferred income tax assets amounting to Baht 221.74 million from tax losses of Baht 1,108.69 million that could be carried forward against future taxable income, these tax losses will be expired in 2026 (2020: deferred income tax assets amounting to Baht 392.12 million from tax losses of Baht 1,960.59 million that could be carried forward against future taxable income, these tax losses will be expired in 2025).

17.2 Income taxes

Income taxes for the years ended 31 December are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Current tax	10,901	272,639	-	-
Withholding tax from dividends	8,298	-	-	-
Deferred tax	38,004	27,852	(597)	4,488
Total income taxes	57,203	300,491	(597)	4,488

The tax on the Group's profit before taxes differs from the theoretical amount that would arise using the basic tax rate of the home country of the company as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Profit before taxes	3,231,538	4,083,515	931,154	773,062
Tax calculated at a tax rate of 20%	646,308	816,703	186,231	154,612
Tax effect of:				
Income not subject to tax	(617,678)	(459,067)	(142,940)	(117,284)
Expenses not deductible for tax purpose	58,986	9,682	58,574	996
Withholding tax from dividends	8,298	-	-	-
Recognition of previously unrecognised tax losses	(101,865)	(33,303)	(101,865)	(33,303)
Group restructuring	-	(83,951)	-	-
Tax losses for which no deferred income tax asset was recognised	427	22,448	-	-
Tax effect from different tax rates of foreign entities	53,030	31,046	-	-
Others	9,697	(3,067)	(597)	(533)
Income taxes	57,203	300,491	(597)	4,488

Weighted average tax rate of the Group is 1.77% (2020: 7.36%).

18 Short-term loans from financial institutions

Consolidated financial statements

As at 31 December 2021, the Group had short-term loans from financial institutions amounting to Baht 5,800 million and CNY 79.41 million or equivalent to Baht 416.93 million and US Dollar 10 million or equivalent to Baht 334.20 million, totalling Baht 6,551.13 million (2020: Baht 1,000 million and CNY 98.27 million or equivalent to Baht 453.90 million, totalling Baht 1,453.90 million). These loans bore interest at the rates of 1.19% to 4.57% per annum (2020: 1.28% to 4.90% per annum) and due for repayment within one year.

Separate financial statements

As at 31 December 2021, the Company had short-term loans from financial institutions amounting to Baht 5,800 million and US Dollar 10 million or equivalent to Baht 334.20 million, totalling Baht 6,134.20 million (2020: Baht 1,000 million). These loans bore interest at the rates of 1.19% to 2.60% per annum (2020: 1.28% per annum) and due for repayment within one year.

The fair value of short-term loans from financial institutions approximated their carrying amount, as short-term borrowings had a short period of maturity.

19 Other current and non-current liabilities

As at 31 December, other current liabilities consist of:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Accrued expenses	1,051,946	506,751	76,586	17,160
Advance from customers	312,219	230,543	-	-
Value added tax payable	5,879	4,614	82	547
Withholding tax payable	147,180	7,400	3,308	2,137
Other payables for purchase of property, plant and equipment	358,203	427,610	-	-
Total other current liabilities	1,875,427	1,176,918	79,976	19,844

As at 31 December 2021, other non-current liabilities presented in consolidated financial statements are accrued expenses for long-term program agreement which provides inspection and outage services and parts and equipment for the power plant in the United State of America.

20 Long-term loans from financial institutions, net

Long-term loans from financial institutions consist of:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Long-term local currency loans	10,005,194	3,700,000	10,005,194	3,700,000
Long-term foreign currency loans	706,953	737,521	-	-
<u>Less</u> Deferred financing service fee	(19,978)	(5,915)	(19,978)	(5,915)
	10,692,169	4,431,606	9,985,216	3,694,085
<u>Less</u> Current portion of long-term loans from financial institutions	(1,439,380)	(950,774)	(850,260)	(698,415)
Long-term loans from financial institutions, net	9,252,789	3,480,832	9,134,956	2,995,670

Movement of long-term loans from financial institutions are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Opening balance	4,431,606	6,090,235	3,694,085	4,388,842
Cash flow:				
Additions	7,140,799	162,817	6,993,806	-
Repayments	(971,363)	(1,019,713)	(700,000)	(700,000)
Deferred charge for long-term loans	(17,598)	-	(17,598)	-
Other non-cash movements:				
Amortisation of deferred financing service fees	3,535	5,243	3,535	5,243
Gain on exchange rate	11,388	-	11,388	-
Translation differences	93,802	79,907	-	-
Change in investment types from the group restructuring	-	(886,883)	-	-
Closing balance	10,692,169	4,431,606	9,985,216	3,694,085

As at 31 December 2021 and 31 December 2020, long-term loans from financial institutions are unsecured liabilities except long-term loans of a subsidiary in the People's Republic of China are secured liabilities. The long-term loans are secured over assets as disclosed in Note 15 Details of loans are shown as follow:

Consolidated financial statements

No.	Currency	2021		2020		Due of loan payment	Due of loan payment
		Original currency (Million)	Million Baht	Original currency (Million)	Million Baht		
1	Baht	-	-	700.00	700.00	THBFIX plus applicable fixed margin	Repayment every 6 months commencing 27 June 2019 to expiry of agreement on 27 December 2021
2	Baht	1,500.00	1,500.00	1,500.00	1,500.00	THBFIX plus applicable fixed margin	Repayment every 6 months commencing 21 February 2022 to expiry of agreement on 21 August 2025
3	Baht	1,500.00	1,500.00	1,500.00	1,500.00	THBFIX plus applicable fixed margin	Repayment every 6 months commencing 20 June 2022 to expiry of agreement on 20 December 2025
4	Baht	5,000.00	5,000.00	-	-	BIBOR plus applicable fixed margin	Repayment every 6 months commencing 25 April 2024 to expiry of agreement on 27 October 2031
5	CNY	18.02	94.62	26.03	120.21	LPR plus applicable fixed margin	Repayment every 3 months commencing 29 March 2019 to expiry of agreement on 21 January 2024
6	CNY	79.61	418.02	97.33	449.54	LPR plus applicable fixed margin	Repayment every 6 months commencing 30 May 2020 to expiry of agreement on 30 May 2022
7	CNY	15.61	81.96	31.22	144.18	Fixed rate	Repayment every 6 months commencing 23 May 2020 to expiry of agreement on 23 May 2022
8	CNY	21.40	112.36	5.11	23.59	Fixed rate	Repayment every 3 months commencing 11 August 2020 to expiry of agreement on 1 July 2023
9	USD	60.00	2,005.19	-	-	LIBOR plus applicable fixed margin	Repayment every 3 months commencing 27 October 2022 to expiry of agreement on 27 October 2028
			10,712.15		4,437.52		

Separate financial statement

No.	Currency	2021		2020		Due of loan payment	Due of loan payment
		Original currency (Million)	Million Baht	Original currency (Million)	Million Baht		
1	Baht	-	-	700.00	700.00	THBFIX plus applicable fixed margin	Repayment every 6 months commencing 27 June 2019 to expiry of agreement on 27 December 2021
2	Baht	1,500.00	1,500.00	1,500.00	1,500.00	THBFIX plus applicable fixed margin	Repayment every 6 months commencing 21 February 2022 to expiry of agreement on 21 August 2025
3	Baht	1,500.00	1,500.00	1,500.00	1,500.00	THBFIX plus applicable fixed margin	Repayment every 6 months commencing 20 June 2022 to expiry of agreement on 20 December 2025
4	Baht	5,000.00	5,000.00	-	-	BIBOR plus applicable fixed margin	Repayment every 6 months commencing 25 April 2024 to expiry of agreement on 27 October 2031
5	USD	60.00	2,005.19	-	-	LIBOR plus applicable fixed margin	Repayment every 3 months commencing 27 October 2022 to expiry of agreement on 27 October 2028
			10,005.19		3,700.00		

Weighted average effective interest rate of long-term loans from financial institutions of the Group is as follows:

	Consolidated financial statements		Separate financial statements	
	2021 %	2020 %	2021 %	2020 %
Baht	2.21	1.69	2.21	1.69
CNY	5.21	5.24	-	-
USD	2.63	-	2.63	-

Interest rate risk of long-term loans from financial institutions of the Group is as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
At fixed rates	194,317	167,774	-	-
At floating rates	10,517,830	4,269,747	10,005,194	3,700,000
Total loans	10,712,147	4,437,521	10,005,194	3,700,000

The fair value of long-term borrowings approximated their carrying amount, as the impact of discounting is not significant. The fair values are based on discounted cash flows using a discount rate based upon the market borrowing rate as at the reporting date and are within level 2 of the fair value hierarchy.

Maturities of long-term loans from financial institutions are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Within 1 year	1,439,380	947,641	850,260	700,000
Later than 1 year but not later than 5 years	4,871,209	3,489,880	4,753,376	3,000,000
Later than 5 years	4,401,558	-	4,401,558	-
Total loans	10,712,147	4,437,521	10,005,194	3,700,000

The Group is required to comply with certain criteria and conditions; for example, maintaining debt to equity ratio.

21 Share capital and treasury shares

	Number of register shares Shares	Issued and paid-up share capital	
		Number of shares Shares	Ordinary shares Baht'000
As at 1 January 2021	3,104,492,000	3,051,021,700	30,510,217
Decrease in share capital	(3,290,000)	(3,290,000)	(32,900)
As at 31 December 2021	3,101,202,000	3,047,731,700	30,477,317

On 4 September 2020, the Company completed the repurchase of the ordinary share in accordance to the share repurchase project from the main board of the Stock Exchange of Thailand of Baht 41.69 million for the ordinary share of 3,290,000 shares. On 26 March 2021, the Company reduced the registered share capital in accordance with the treasury shares and registered the decreasing in registered share capital with the Ministry of Commerce.

22 Legal reserve

	Consolidated and separate financial statements Baht'000
As at 1 January 2020	1,561,200
Appropriation during the year	39,000
As at 31 December 2020	1,600,200
As at 1 January 2021	1,600,200
Appropriation during the year	47,000
As at 31 December 2021	1,647,200

Under the Public Limited Company Act, B.E. 2535, the Company is required to set aside statutory reserve of at least 5 percent of its net profit after accumulated deficit brought forward (if any) until the reserve reaches not less than 10 percent of the registered capital. The legal reserve is non-distributable.

23 Share-based payment

In 2016, the Company issued rights to purchase of ordinary shares to the directors and employees of Banpu Group (BPP-W) (excluding directors, management and employees of the Banpu Power Group). In 2017, the Company issued rights to purchase of ordinary shares to the directors and employees of Banpu Power Group (BPP-ESOP) based on their position, duty, and responsibility towards the Company and its subsidiaries. The Group has no legal or constructive obligation to repurchase or settle such rights in cash. The terms and conditions of the rights to purchase ordinary shares are summarised as follows:

Descriptions	Detail		
Number of issued and offered shares	Not exceeding 58,800,000 shares. As at 31 December 2019, 49,300,000 shares to be allocated and not exceeding 9,500,000 shares which the ad-hoc Compensation Committee will consider and allocate as appropriate.		
Term of the plan	Not exceeding 5 years from the date of approval by the shareholders' meeting of the Company. The offering will be completed within 19 October 2021.		
Exercise price, period and conditions	Exercise price (Baht per share)	Exercise period	Number of exercised shares
	23.10	The date of issue and offering ordinary shares to 19 Oct 2021	10% of the total allocated shares
	25.20	From 19 October 2017 to 19 October 2021	15% of the total allocated shares
	27.30	From 19 October 2018 to 19 October 2021	20% of the total allocated shares
	29.40	From 19 October 2019 to 19 October 2021	25% of the total allocated shares
	31.50	From 19 October 2020 to 19 October 2021	30% of the total allocated shares
Subscription dates	Can exercise 4 times a year on the last business day of March, June, September and December from the first exercise date, except for the last exercise date, which is 19 October 2021.		

The Company recognised and presented the rights to purchase ordinary shares for the selected directors and employees of Banpu Group under BPP-W and the rights to purchase ordinary shares for the directors and employees of Banpu Power Group under BPP-ESOP totalling of Baht 2.92 million in the statement of income and statement of changes in equity for the year ended 31 December 2020.

The number of the rights to purchase ordinary shares and the related weighted average exercise prices are as follows:

	Consolidated and Separate financial statements			
	2021		2020	
	Weighted average exercise price Baht per share	Unit	Weighted average exercise price Baht per share	Unit
At 1 January	28.92	43,970,300	28.92	43,970,300
Granted during the period	-	(43,970,300)	-	-
At 31 December	-	-	28.92	43,970,300

For the rights to purchase ordinary shares for the selected directors and employees of Banpu Group under BPP-W, the weighted average fair value of granted the rights to purchase determined using the Black-Scholes valuation model was Baht 0.19 per unit. The significant inputs into the model were a weighted average share price of Baht 21.00 at the grant date, exercise price was Baht 23.10 to Baht 31.50, volatility of 20%, dividend yield of 4.60%, an expected life of 5 years, and an annual risk-free interest rate of 1.78%.

For share-based payment to the directors and employees of Banpu Power Group under BPP-ESOP, the weighted average fair value of granted the rights to purchase determined using the Black-Scholes valuation model was Baht 2.11 per unit. The significant inputs into the model were a weighted average share price of Baht 25.75 at the grant date, exercise price was Baht 23.10 to Baht 31.50, volatility of 20%, dividend yield of 4.60%, an expected life of 5 years, and an annual risk-free interest rate of 2.13%.

24 Expenses by nature

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Coal consumption	4,636,301	2,938,086	-	-
Staff costs	1,028,798	747,168	85,652	100,111
Depreciation and amortisation	580,598	402,463	1,964	2,123
Professional fee	165,936	130,203	40,591	19,038
Management fee	171,937	173,887	168,116	170,297

25 Basic earnings per share

Basic earnings per share is calculated by dividing the net profit attributable to shareholders of the Company by the weighted average number of ordinary shares in issued and paid-up during the year.

Basic earnings per share for the years ended 31 December are as follows:

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Net profit attributable to ordinary shareholders of the Company (Baht'000)	3,127,027	3,702,480	931,751	768,574
Weighted average ordinary shares (Thousand shares)	3,047,732	3,049,224	3,047,732	3,049,224
Basic earnings per share (Baht)	1.026	1.214	0.306	0.252

There are no potential dilutive ordinary shares in issue for the years ended 31 December 2021 and 2020.

26 Dividend paid

For the year ended 2021

At the Annual General Shareholders' meeting on 2 April 2021, the shareholders approved a payment of final dividends of 2020 of Baht 0.35 per share for 3,047,731,700 shares, totalling of Baht 1,066.70 million. The Company paid such dividend to the shareholders on 28 April 2021.

At the Board of Directors' meeting on 27 August 2021, the Board of Directors approved a payment of interim dividends of 2021 of Baht 0.30 per share for 3,047,731,200 shares, totalling of Baht 914.32 million. The Company paid such dividend to the shareholders on 21 September 2021.

For the year ended 2020

At the Board of Directors' meeting on 8 April 2020, the Board of Directors approved a payment of interim dividends of 2019 of Baht 0.30 per share for 3,049,571,700 shares, totalling of Baht 914.87 million. The Company paid such dividend to the shareholders on 28 April 2020 and at the Annual General Shareholders' meeting on 19 June 2020, the shareholders acknowledged such interim dividend payment.

At the Board of Directors' meeting on 28 August 2020, the Board of Directors approved a payment of interim dividends of 2020 of Baht 0.30 per share for 3,047,731,200 shares, totalling of Baht 914.32 million. The Company paid such dividend to the shareholders on 23 September 2020.

27 Related party transactions

The Company is controlled by Banpu Public Company Limited (the Parent), which is domiciled in Thailand. The Parent holds 78.66% of the Company's shareholding.

In considering each possible related party relationship, attention is directed to the substance of the relationship, and not merely the legal form.

The pricing policies for transactions between the Parent, subsidiaries, associates, joint ventures and related parties are set out below:

- Management income represents fee charged to the parent company, a subsidiary, joint ventures, and related parties for rendering the management services in the normal course of business. The fees are based on the service provided and the agreed rate in accordance with the conditions in agreement.
- Management expenses represent fee charged from the parent company and a subsidiary for rendering the management services in the normal course of business. The fees are based on the service provided and the agreed rate in accordance with the conditions in agreement.
- For loans, borrowings, interest income and interest expenses, the Group charges interest by considering the average cost of borrowings and market interest rate.
- Advance to/from related parties represent the advance payment for related parties which will be reimbursed within the normal credit term.

The following significant transactions were carried out with related parties:

27.1 Transactions during the years ended 31 December are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Purchases of goods from related parties	3,516,121	1,532,011	-	-
Dividend income				
- Subsidiary	-	-	106,589	207,256
- Joint ventures	-	-	687,282	575,094
Total dividend income from related parties	-	-	793,871	782,350
Interest income				
- Subsidiaries	-	-	211,928	127,984
- Associates	293,427	278,193	232,087	220,124
- Joint venture	68,425	36,421	-	-
Total interest income from related parties	361,852	314,614	444,015	348,108
Interest expense to a related party	43,319	-	-	-
Management fee				
- The Parent	-	16,069	-	-
- Subsidiary	-	-	249	-
- Associates	82,260	73,974	2,608	8,233
- Joint ventures	15,614	14,902	14,000	14,000
- Related parties	105,410	105,236	-	-
Total management fee charged to related parties	203,284	210,181	16,857	22,233
Management and service expenses				
- The Parent	160,150	169,000	160,150	169,000
- Subsidiary	-	-	57	1,297
- Associate	-	4,887	-	-
- Related parties	11,787	-	8,158	-
Total management and service expenses to related parties	171,937	173,887	168,365	170,297

27.2 Amounts due from related parties as at 31 December consist of:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Interest receivables				
- Subsidiaries	-	-	355,510	124,328
- Associates	783,421	431,703	398,535	154,031
- Joint venture	55,420	29,817	-	-
Total Interest receivables	838,841	461,520	754,045	278,359
Other receivables				
- Joint ventures	1,750	1,336	1,248	1,248
- Associates	6,869	9,305	6,869	1,442
- Related parties	21,850	15,036	-	-
Total other receivables	30,469	25,677	8,117	2,690
Total amount due from related parties	869,310	487,197	762,162	281,049
Dividend receivables				
Dividend receivables - Current				
- Subsidiary	-	-	125,000	150,000
- Joint venture	125,000	150,000	-	-
	125,000	150,000	125,000	150,000
Dividend receivables - Non-current				
- Subsidiary	-	-	45,000	196,033
- Joint venture	238,831	288,831	-	-
	238,831	288,831	45,000	196,033
Total dividend receivables from related parties	363,831	438,831	170,000	346,033

27.3 Advances to and loans to related parties as at 31 December consist of:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Advances to - Current				
- The Parent	-	4,097	-	4,097
- Subsidiary	-	-	-	29,385
- Associates	2,761	4,707	2,761	700
Total advances to related parties	2,761	8,804	2,761	34,182
Short-term loans to				
- Joint venture	1,714,103	1,531,567	-	-
- Associate	649,512	1,264,138	-	-
Total short-term loans to related parties	2,363,615	2,795,705	-	-
Long-term loans to related parties:				
Current-portion of long-term loans				
- Associate	341,296	-	-	-
Long-term loans to				
- Subsidiaries	-	-	10,110,188	2,473,105
- Associates	5,479,065	5,740,754	5,479,065	5,417,445
	5,479,065	5,740,754	15,589,253	7,890,550
Total long-term loans to related parties	5,820,361	5,740,754	15,589,253	7,890,550

Short-term loans to subsidiaries are unsecured promissory notes which details are as follows:

Consolidated financial statements

Currency	2021			2020			Repayment term
	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	
CNY	123.70	649.51	4.35%	273.70	1,264.14	4.35%	Repayment commencing 6 February 2022 to expiry of agreement on 13 September 2022
CNY	90.00	472.57	4.30%	90.00	415.69	4.30%	Repayment at expiry of agreement on 15 December 2022
USD	37.15	1,241.54	4.15%	37.15	1,115.88	4.15%	Repayment at expiry of agreement on 13 May 2022
Total		2,363.62			2,795.71		

Movements of short-term loans to related parties for the years ended 31 December are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Opening balance	2,795,705	98,235	-	-
Cash flows:				
Additions	-	1,599,096	-	1,587,661
Repayments	(744,980)	(179,270)	-	-
Other non-cash movements:				
Change in investment types from the group restructuring	-	1,301,425	-	-
Transfer to long-term loans to a related party	-	-	-	(1,488,338)
Gains (losses) on exchange rate	312,890	(23,781)	-	(99,323)
Closing balance	2,363,615	2,795,705	-	-

Long-term loans to related parties are unsecured promissory notes which details are as follows:

Consolidated financial statements

Currency	2021			2020			Repayment term
	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	
Baht	4,967.12	4,967.12	4.25%	4,967.12	4,967.12	4.25%	Repayment at the end of contract 30 November 2023 to 27 May 2024
CNY	162.50	853.24	4.75%	167.50	773.63	4.25% - 4.75%	Repayment at the end of contract 28 July 2022 to 30 November 2023
Total		5,820.36			5,740.75		

Separate financial statement

Currency	2021			2020			Repayment term
	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	
Baht	4,967.12	4,967.12	4.25%	4,967.12	4,967.12	4.25%	Repayment at the end of contract 30 November 2023 to 27 May 2024
US Dollar	302.52	10,110.19	4.50%	82.34	2,473.11	4.50%	Repayment at the end of contract 17 October 2023 to 8 April 2026
CNY	97.50	511.94	4.25%	97.50	450.32	4.25%	Repayment at the end of contract 30 November 2023
Total		15,589.25			7,890.55		

The fair values of long-term loans to related parties are based on discounted cash flows using a discount rate based upon the market borrowing rate as at the reporting date and are within level 2 of the fair value hierarchy. As at 31 December 2021 and 2020, the fair values of long-term loans to related parties approximated their carrying amount.

Movements of long-term loans to related parties for the years ended 31 December are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Opening balance	5,740,754	-	7,890,550	7,489,367
Cash flows:				
Additions	-	-	8,301,759	62,040
Repayments	(24,833)	(1,255,438)	(15,940)	(1,255,438)
Other non-cash movements:				
Change in investment types from the group restructuring	-	6,919,270	-	-
Transfer from short-term loans to a related party	-	-	-	1,488,338
Conversion to investment in a subsidiary (Note 14)	-	-	(1,004,454)	-
Gains on exchange rate	104,440	76,922	417,338	106,243
Closing balance	5,820,361	5,740,754	15,589,253	7,890,550

27.4 Advances from and amounts due to related parties

As at 31 December	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Advances from				
- The Parent	24,718	24,268	-	24,268
- Associates	-	11,367	-	5,099
- Related parties	41,775	15,793	-	-
Total advances from related parties	66,493	51,428	-	29,367
Accrued management fee to				
- Associate	-	1,372	-	-
- Related party	5,948	-	5,948	-
Total advances from related parties	5,948	1,372	5,948	-
Accrued interest expense due to a related party	43,436	-	-	-
Amounts due to related parties	513,762	192,164	-	-
Total advances from and amounts due to related parties	629,639	244,964	5,948	29,367
Long-term loans from a related party	4,712,206	-	-	-

Long-term loans from a related party are unsecured promissory notes which details are as follows:

Consolidated financial statements

Currency	2021			2020			Repayment term
	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	Currency in promissory note (Million)	Million Baht	Average interest rate per annum	
US Dollar	141.00	4,712.21	5.44%	-	-	-	Repayment at the end of contract 1 November 2023
Total		4,712.21			-		

Movements of long-term loans from related parties for the years ended 31 December are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Opening balance	-	-	-	-
Cash flows:				
Additions	4,721,033	-	-	-
Other non-cash movements:				
Gain on exchange rate	(8,827)	-	-	-
Closing balance	4,712,206	-	-	-

27.5 Key management compensation

Key management compensation for the years ended 31 December are detailed as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Salary and other short-term benefits	57,480	40,098	57,480	40,098
Post-employment benefits	1,905	1,815	1,905	1,815
Other long-term employee benefits	-	39	-	39
	59,385	41,952	59,385	41,952

In addition, the Group paid management fee to the Parent for the year ended 31 December 2021 of Baht 160.15 million (2020: Baht 169 million). Part of the fee is considered as performing key management activities of the Group.

28 Commitment and contingent liabilities

28.1 Letter of Guarantee

As at 31 December, the Group has obligations with banks as follows;

	Consolidated and separate financial statement	
	2021 Million (Original currency)	2020 Million (Original currency)
Letter of Guarantee		
- US Dollar	22	22
- Thai Baht	1,600	1,601

28.2 Capital commitments

As at 31 December, the Group had capital expenditure and capital commitments to provide funding that were not recognised in the financial statement is as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Baht'000	2020 Baht'000	2021 Baht'000	2020 Baht'000
Property, plant and equipment	41,130	127,870	-	-





BANPU POWER PUBLIC COMPANY LIMITED

26th Floor, Thanapoom Tower, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400

Tel: +66 2007 6000

Fax: +66 2007 6060

Website: www.banpupower.com

Email: info@banpupower.co.th