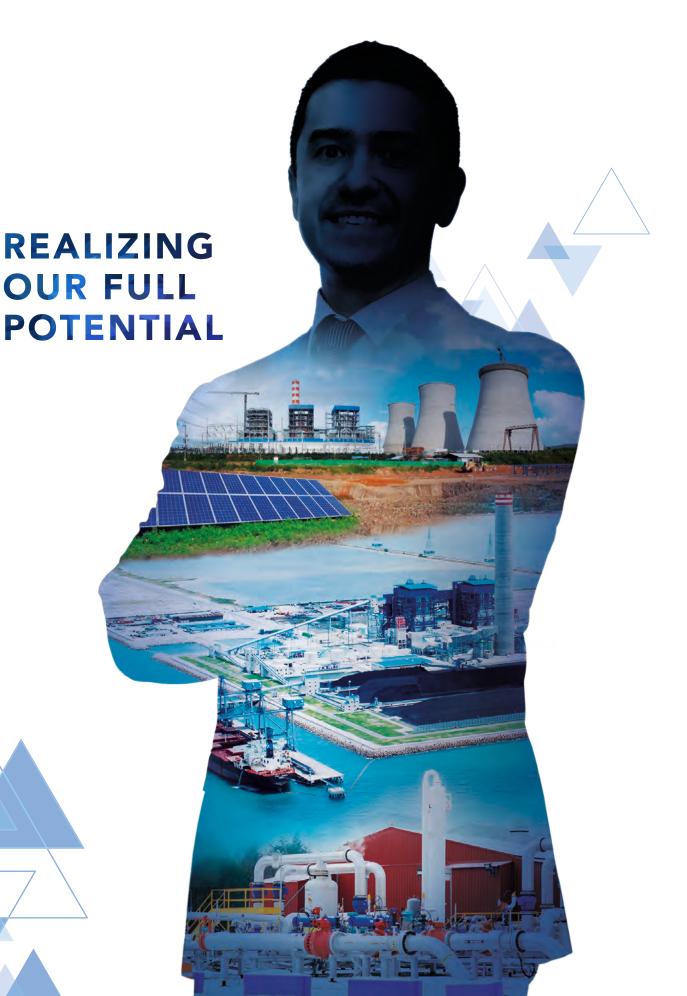


# 2016



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Additional information is available in the Annual Registration Statement (Form 56-1) posted on www.set.or.th or www.banpu.com.



# Policy and Business Overview



Banpu Public Company Limited was incorporated on 16 May 1983 with the name 'Ban Pu Coal Company Limited' with THB 25 million registered capital. The Company was founded by members of the Vongkusolkit and Auapinyakul families in order to sub-contract a coal mining operation at Banpu Mine (BP-1 Mine) located in Li District, Lamphun Province from Department of Alternative Energy Development and Efficiency.



On 4 May 1989, Banpu was listed in the Stock Exchange of Thailand (SET). The Company was later converted into a public limited company on 29 July 1993 and named "Banpu Public Company Limited."

Banpu went on to expand its coal operations both in Thailand and Indonesia to produce and sell coal locally and overseas. Aside from producing and distributing coal, the Company entered other business areas, including removing overburden and coal for the Electricity Generating Authority of Thailand (the contract ended in September 2001), producing and selling

industrial minerals, operating a port business (Banpu subsequently sold both the port and the industrial mineral businesses), and investing in power and steam generation and distribution business.

At present, Banpu has a clear policy and management that demonstrate its commitment to sustainability. The Company pursues operations mainly in coal, power generation, and integrated energy sectors in Thailand, Indonesia, China, Australia, Lao PDR, Mongolia, Singapore, Japan and United States of America.





### Vision

The Asian energy company at the heart of innovation, technology, and sustainability



### Mission

- Build sustainable value for all our stakeholders as a trusted partner,
   with emphasis on care for the earth and society
- Promote innovation, synergy, sustainability, and integration across the energy supply chain, between conventional and new energy technologies
- Foster our corporate values, operational excellence, and uphold
   Banpu's reputation for integrity, professionalism and best practices

## Financial Highlights

		As at 31-Dec-16	As at 31-Dec-15	As at 31-Dec-14
Financial Position				
Total Assets	(Million USD)	6,973	6,553	6,903
Total Liabilities	(Million USD)	4,235	4,488	4,517
Total Shareholders' Equity	(Million USD)	2,738	2,065	2,386
Issued and Paid-up share Capital	(Million USD)	143	76	76
		For the years ended 31-Dec-16	For the years ended 31-Dec-15	For the years ended 31-Dec-14
Operational Results				
Sale Revenues	(Million USD)	2,259	2,477	3,145
Cost of Sales	(Million USD)	(1,511)	(1,672)	(2,138)
Gross Profit	(Million USD)	748	804	1,007
Selling and Administration Expenses	(Million USD)	(340)	(395)	(451)
Royalty Fee	(Million USD)	(219)	(239)	(303)
Other Revenues	(Million USD)	33	51	47
Other Expenses	(Million USD)	(44)	(61)	(5)
Profit from Operation	(Million USD)	178	160	296
Share of Profit from Joint Ventures	(Million USD)	118	52	87
Interest Expenses	(Million USD)	(127)	(123)	(121)
Financial Expenses	(Million USD)	(3)	(8)	(11)
Corporate Income Tax	(Million USD)	(69)	(98)	(70)
Reversal of Deferred Income Tax Assets for the Minerals Resource Rent Tax in Australia	(Million USD)	-	-	(24)
Non-Controlling Interests	(Million USD)	(50)	(26)	(74)
Net Profit Attributable to the Owners of the Parent	(Million USD)	47	(43)	83
EBITDA	(Million USD)	540	469	643

		31-Dec-16	31-Dec-15	31-Dec-14
Financial Ratios				
Gross Profit Margin	(%)	33	32	32
Net Profits to total revenues	(%)	2	(2)	3
Returns on Assets	(%)	1	(1)	1
Returns on Equity	(%)	2	(2)	3
Interest Coverage Ratio	(Times)	5.33	5.89	5.50
Net Debt to Equity	(Times)	0.99	1.40	1.18
Data per Share				
Earnings per Share	(USD)	0.013	(0.017)	0.03
Book Value per Share	(USD)	0.25	0.37	0.92
Dividend per Share	(THB)	0.50	1.00	1.20

<sup>\*</sup> The Company announced a total dividend of THB 0.50 per share arising from its performance during the period from 1 January 2016 to 31 December 2016, of which THB 0.25 was paid on 23 September 2016. The remaining dividend of THB 0.25 per share for 2016 performance will be paid on 28 April 2017

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

### Annual Report 2016 Banpu Public Company Limited

## Operational Results

	For the years ended		
	31 - Dec - 2016	31 - Dec - 2015	31 - Dec - 2014
Coal Sales Volume (Million Tonnes)			
Indominco	15.41	13.00	15.27
Trubaindo	5.97	7.10	6.92
Bharinto	2.50	2.76	2.45
Jorong	1.15	1.26	1.23
Kitadin-Embalut	0.87	1.21	1.24
Kitadin-Tandung Mayang	0.05	2.42	1.86
Sources - Indonesia	25.96	27.76	28.97
Sources - Australia	13.20	12.99	15.47
Sources - Thailand		-	0.02
Other sources	0.87	0.39	-
Total Coal Sales Volume	40.03	41.15	44.45
Coal Sales Revenue (Million USD)			
Coal Business:			
Indominco	722	699	960
Trubaindo	391	478	545
Bharinto	162	177	187
Jorong	42	46	52
Kitadin-Embalut	42	65	76
Kitadin-Tandung Mayang	2	145	129
Revenue from Indonesia	1,362	1,610	1,950
Revenue from Australia	660	646	957
Revenue from Thailand		-	47
Revenue from other sources	41	29	
Total Revenue from Coal Business	2,063	2,285	2,953
Revenue from Power Business	155	169	168
Revenue from Gas Business	15	-	-
Revenue from Other Businesses	26	22	24
Total Coal Sales Volume	2,259	2,477	3,145

	For the years ended		
	31 - Dec - 2016	31 - Dec - 2015	31 - Dec - 2014
Gross Profit Margin (%)			
Indominco	38	31	32
Trubaindo	38	41	37
Bharinto	44	38	37
Jorong	40	40	46
Kitadin-Embalut	26	27	24
Kitadin-Tandung Mayang	12	36	30
Gross Profit Margin - Indonesia	38	35	34
Gross Profit Margin - Australia	23	25	28
Gross Profit Margin - Thailand	-	-	24
Gross Profit Margin - other sources	3	50_	
Gross Profit Margin - Coal Business	33	32	32
Gross Profit Margin - Power Business	35	38	33
Gross Profit Margin - Gas Business	44	-	-
Gross Profit Margin - Other Businesses	51	-10	70
Total Gross Profit Margin (%)	33	32	32

## Board of Directors' Review



A continuous decline in coal prices since 2015 due to excess coal supply cast gloomy outlook on the coal industry in the first half of 2016. However, the latter half of the year saw a brighter balance between coal demand and production thanks to several factors, namely the restructuring of coal business in China and heavy rainfall in Indonesia, which hindered coal production and transportation. Another factor is the temporary shutdowns of nuclear power plants in Japan, South Korea and France, leading to high demand on thermal coal for power generation. These factors significantly affected the global coal market and have raised the coal prices to the highest peak over the past five years.

In spite of the volatile scenarios in coal industry, the Board of Directors and the Management have adhered to the philosophy of sustainable growth and development. We are committed to corporate governance and being a leading company in management by underlining high innovations and building competent leaders to ensure uninterrupted succession. To prepare for changes caused by external factors, we have accommodated ourselves and developed our strategic plan with flexibility both in reactive and proactive stances. Additionally, we have expanded our medium-term and long-term investments by steering our business from upstream to downstream at full speed in response

to future trend of growing power demand, both in terms of quantity and diversity, which will lead us to achieve our goal of balanced and sustainable growth. Not only does this strengthen Banpu and its subsidiaries' financial security but also fosters our shareholders' confidence in our potential to create added value and continued good returns in the next steps of our business.

Banpu Public Company Limited has been recognized locally and globally for our continuous business operation based on the principle of sustainable development. The awards we have received clearly demonstrate that we have placed great importance on the balance of interests of shareholders, stakeholders, the environment and society where we operate.

On this occasion, the Board of Directors would like to express our sincere appreciation to all our supporters, stakeholders and related parties in both Thailand and overseas for their unwavering support. We pledge our full efforts to keep moving forward based on good governance, transparency and accountability to pursue our goal of enhancing energy security for the Asia-Pacific region and promoting development in every country we operate while creating a balance of the economy, society and environment in a sustainable manner.

Mr. Chanin Vongkusolkit

Cl Chykur

Chairman of the Board of Directors

### Chief Executive Officer Review



In 2016 Banpu delivered on three important promises made in the previous year. All three promises were made with a view to establishing a more sustainable platform for building long-term value for stakeholders and shareholders.

First, we successfully completed the floatation of our power business on the Thai stock market. Going forward Banpu Power will pursue a regional growth strategy in both conventional and renewable energy with direct accountability to the investment community. Second, we announced a new long-term investment strategy designed to make the Banpu group greener and smarter in the years ahead. The new strategy includes both the expansion of our renewables business under Banpu Power as well as investment in shale gas and other new energy sectors. Third, we achieved a significant reduction in consolidated net gearing through equity issuance and stronger cashflow performance.

### Summary of group financial performance in 2016

Banpu's financial performance improved significantly in 2016 with 15% growth in consolidated EBITDA<sup>1</sup> year-on-year to USD 540 million. Coal business EBITDA accounted for just over two-thirds of the total at USD 378 million, up 8% on the previous year, with the rest

coming from the power business which achieved 31% EBITDA growth to USD 155 million - and a new shale gas business which contributed USD 7 million in EBITDA for the year.

Banpu consolidated net profit after tax before exceptional items and foreign exchange translations more than doubled in 2016 to USD 101 million. After exceptionals and foreign exchange, the result for the group was transformed from a net loss of -USD 43 million in 2015 to +USD 47 million.

Increased cashflow plus proceeds from the Banpu Power initial public offering and a Banpu PLC rights offering and warrants meant that the Banpu group was able to reduce consolidated net gearing (net interest-bearing debt to book value of shareholders' equity) from 1.4X at the end of 2015 to under 1X at year-end 2016.

### Banpu coal business

### Analysis of our coal sales and the thermal coal market

Banpu group coal sales in 2016 totaled 44.5 Mt comprising 26.8 Mt from our Indonesian mines (100% basis), 13.2 Mt from Australia (equity basis) and 4.5 Mt from China (equity basis). Although sales from our

<sup>&</sup>lt;sup>1</sup> Earnings before interest, tax, depreciation and amortization

### Annual Report 2016

Banpu Public Company Limited

Indonesia mines were down slightly, coal sales from our Australian and Chinese mines increased versus 2015.

Australia and China were also the main growth areas in terms of destination markets for our coal in 2016, with sales up 0.4 Mt in Australia to 8.4 Mt and in China up 2.5 Mt to 11.2 Mt. Group sales to other markets in north, southeast and south Asia fell by an aggregate 3.1 Mt year-on-year, with the biggest fall in India (-2.6 Mt).

The benchmark NEX2 Index, based on spot FOB3 thermal benchmark prices at Newcastle in Australia for high-grade export coal, increased by 11% to an average USD 65.7 per tonne in 2016. While the year started with the index below USD 50, by mid-year it was rising quickly, reaching over USD 100 in November, before correcting back to about USD 88 per tonne in December. Supply tightness from the Chinese regulatory intervention to limit production days, heavy rains in Indonesia and other factors were the main reason for stronger coal prices. On the demand side, although thermal imports to India and Europe fell in 2016, Chinese import demand increased dramatically due to the domestic output constraints. Certain southeast Asian markets also saw significant increases in coal imports in 2016, particularly Vietnam, Philippines and Malaysia.

In the first two months of 2017 the NEX Index has stabilized in a range of around USD 80-85 per tonne. Some further softening in benchmark prices is possible but Banpu does not expect a fundamental reversion to the lows seen in 2015 and the first half of 2016.

### Banpu's Indonesia coal business: ITM

Although Indominco registered a strong performance in 2016, with output up 16% at 15.4 Mt, other mines were impacted by heavy rainfall with aggregate ITM saleable production down 10% versus 2015 at 25.6 Mt.

ITM achieved further cost improvements in 2016 with unit costs cut by a further 12% to USD 44 per tonne. This is the fourth consecutive year that costs have been reduced and compares to an average of around USD 70 per tonne in 2012. Thanks to these efforts ITM's EBITDA increased by 6% to USD 272 million despite lower output. In 2017, ITM is targeting a similar level of output at 25.5 Mt and further cost improvements.

### Banpu's Australian coal business: Centennial

Centennial's output from its operations in New South Wales was down slightly in 2016 at 12.4 Mt (equity basis) due to Angus Place being placed on care and maintenance and adverse geological conditions at Mandalong and Clarence.

Unit costs were held roughly in line with the previous two years at AUD 50 per tonne. Centennial EBITDA increased in Australian dollar terms but decreased slightly in US dollar terms to USD 113 million. Going forward Centennial will focus on increasing production and on rail logistics optimization.

### Banpu's China and Mongolia coal businesses

The Gaohe operation in Shanxi province (45%-owned by Banpu) reported strong performance, with output up by 15% at 10.5 Mt in 2016 supported by the tight supply situation in China and higher demand during the summer.

Gaohe will benefit from the Shanxi Lu Guang power project being developed three kilometers from the mine site which will buy around 0.6 Mtpa from the mine transported via a conveyor belt after it is commissioned in 2018.

At Hebi Zhong Thai (40%-owned by Banpu) in Henan province, output fell slightly to 1.1 Mt from 1.2 Mt in the previous year.

In Mongolia at the Tsant Uul pilot project, Banpu completed batch operations and a commercial scale

<sup>&</sup>lt;sup>2</sup> The Newcastle Export Index (previously known as the Barlow Jonker Index or 'BJI')

<sup>&</sup>lt;sup>3</sup> Free-0n-board a vessel for export.

technical pre-feasibility study. At Unst Khudag and Altai Nuurs the Mineral Resources Authority of Mongolia approved mining licenses. Development studies were completed and preliminary feasibility work was conducted for coal conversion and power project scenarios.

### Banpu Power IPO

Banpu Power was successfully listed on the Stock Exchange of Thailand on 28 October 2016 in an initial public offering ('IPO') raising THB 13.2 billion (USD 389 million) at the top-end of the target IPO pricing. Banpu PLC shareholders were given pre-emptive rights to subscribe to around a third of the offering with 93% take-up. The IPO proceeds were used to settle an intercompany loan from the Banpu group and to reduce Banpu Power net gearing from 1.15X at the end of 2015 to just above zero at year-end 2016.

### Banpu Power's operations and projects in the Greater Mekong region

BLCP (50%-owned by Banpu Power) reached the tenth year of strong operational performance. Due to a higher EAF<sup>4</sup> of 95%, EBITDA in 2016 increased by 9% to USD 228 million.

In Laos, Hongsa (40%-owned by Banpu Power) achieved full operation with the final unit commissioned in March 2016. EBITDA for the year reached USD 260 million, more than double the result from the previous year.

### Banpu Power's operations and projects in China

Although all three of Banpu's combined heat and power plants (Luannan, Zhengding and Zouping) reported strong performance, with higher utilization and a 10% increase in steam sold, the EBITDA contribution declined slightly to USD 56 million before overheads due to rising coal prices.

Development of Shanxi Lu Guang project made good

progress in 2016, reaching 35% construction completion in December 2016. The 1,320 MW plant is due for commissioning in 2018.

In 2016, Banpu Power made a first investment in the solar PV sector in China by acquiring five projects in Shandong province with a total capacity of 140 MW  $_{\rm DC}$ , of which 120 MW  $_{\rm DC}$  is already in operation with the remaining 20 MW  $_{\rm DC}$  due to commence operation in the first quarter of 2017. Banpu's new China solar business generated its EBITDA contribution in the second half of 2016 of USD 2 million.

### Banpu Power's operations and projects in Japan

In Japan, Banpu Power has now secured agreements to develop ten solar PV projects with total equity capacity of 103.6 MW $_{\rm AC}$ , of which 6.6 MW $_{\rm AC}$  is already in operation. The total equity capacity includes two new projects secured in 2016, Kurokawa and Shirakawa, with total capacity of 28.9 MW $_{\rm AC}$  (100% equity). The non-operational capacity will be commissioned in phases between 2017 and 2020.

### Strategic review

In 2016 Banpu delivered on the three key promises we made in the previous year. All three were made with a view to establishing a more sustainable platform for building long-term value for our stakeholders and shareholders.

First was execution of the power business IPO. Going forward we will aim to unlock the full value potential of our skills and competitive advantages in the power sector beyond the previous focus on coal-fired power. Banpu Power will pursue a growth strategy in both conventional and renewable energy sectors throughout the Asia-Pacific region with direct accountability to the international equity capital markets.

In 2016 we added 323 MWe in equity capacity to our

<sup>&</sup>lt;sup>4</sup> Equivalent Availability Factor (EAF) measures the potential amount of energy that could be produced by the unit after all planned and unplanned losses are removed

regional power portfolio, an increase of 21% to 1.93 GWe. We already have an additional 651 MWe due for commissioning by Banpu Power between now and 2020, over a quarter of which is solar power. We are targeting acquisition or development of at least an additional 1.72 GWe in new equity capacity by 2025 to a total of around 4.3 GWe, of which a fifth or more will be renewables-based. For this incremental growth we are currently targeting Japan, China, Indonesia and the Greater Mekong countries<sup>5</sup>. And in terms of power technology for the new growth we are concentrating on gas-fired, high-efficiency low-emissions coal-fired power, solar and wind opportunities.

Second, we announced and took our first steps towards a new 'future-proof' long-term investment strategy designed to make Banpu both greener and smarter in the years ahead. By 'smarter' we mean taking a more innovative approach to the potential of synergistic supply-chain integration opportunities and new technologies. The new strategy is based the objective of navigating around, and where possible harnessing, three of the great mega-trends of our time: digital empowerment, ecological primacy and a new supply risk paradigm.

The development of a lower emissions power business under Banpu Power is a core part of the greener-smarter strategy downstream - but we will go much further than this. Our upstream resources business has been focused on coal since the early 1980s and we continue to see responsibly-mined coal as playing a critical role in ensuring affordable and reliable baseload energy supplies to the Asia-Pacific power sector. Going forward, however, we will also be evaluating new strategic energy resources needed to supply new energy technologies in the coming decades. With this in mind we took our first step into the shale

gas sector in 2016, with a second announced in early 2017. These investments are in operations in the northeast of the Marcellus Shale in Pennsylvania in North America with attributable proved reserves totaling nearly 290 billion cubic feet in dry natural gas.

Beyond this we are looking at ways we can generate value-creating vertical and horizontal integration around our existing businesses and related supply-chains with an emphasis on procurement, logistics, blending, trading and marketing innovation.

Third, in 2016, as promised, we achieved a significant reduction in consolidated net gearing through equity issuance (from the Banpu PLC rights and warrants issue and from the Banpu Power IPO proceeds) - as well as from stronger cashflow performance. With stronger coal prices, continued cost and productivity improvements at our coal operations and growth in power business earnings we expect our balance sheet to strengthen further in 2017. With lower gearing we are in a better position to take advantage of new growth opportunities in all sectors of interest to us: coal, power and new energy.

All three initiatives have had greater sustainability as their primary goal - and we deeply appreciate the recognition and awards we have received from our sustainability-related achievements. We were selected for the third consecutive year in 2016 as a member of the Dow Jones Sustainability Indices ('DJSI') and were awarded Gold Class with recognition as an 'Industry Mover' in the Coal & Consumables Fuels sector by RobecoSAM. We also received the SET Sustainability Award in 2016 and were included on the SET's 'Thai Sustainability Investment' list for the second year running.

<sup>&</sup>lt;sup>5</sup> Thailand, Cambodia, Laos, Myanmar and Vietnam

Banpu Public Company Limited

A philosophy of sustainability will continue to guide us in the decades ahead. We envisage Banpu being at the heart of the Asia-Pacific region's transition to greater energy sustainability. And we believe by taking this approach we will also build sustainable value for all our immediate stakeholders: superior returns for our shareholders, flexibility and reliability for our

customers, employee motivation, collaboration with suppliers, a trusted partner for host communities and governments - and environmental care.

On that note I would like to thank all our stakeholders for their support and engagement in 2016 and look forward to working with you all again in 2017.

Ms. Somruedee Chaimongkol

**Chief Executive Officer** 

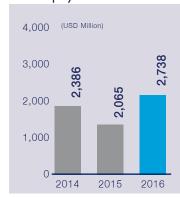
## **Key Financial Results**

#### Total Assets



Total assets as of 31 December 2016 were USD 6,973 million, a year-on-year increase of USD 420 million or 6%. This was largely due to an increase of USD 59 million in cash, an increase of USD 247 million in joint venture investment in the power and solar-energy businesses, a net increase of USD 104 million in value of machinery and equipment, an additional investment of USD 107 million in machinery and equipment at Indonesian and Australian mines, and a business acquisition of USD 181 million. Depreciation expenses were USD 154 million; amortization was USD 5 million, and losses incurred from foreign exchange translation and other costs were USD 25 million.

### Total Equity



Equity amounted to USD 2,738 million, a year-on-year increase of USD 673 million or 13% primarily due to an increase of USD 49 million in net profit of 2016, an increase of USD 335 million from capital increase, an increase of USD 42 million in non-controlling interests, and an increase of USD 360 million from the change in shareholding interest of subsidiaries.

There were also a decrease of USD 86 million in dividend payment and a decrease of USD 27 million from loss on subsidiaries' foreign exchange translations and others.

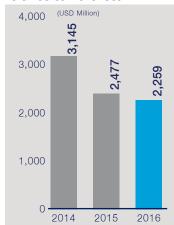
### Net Debt to Equity Ratio



Net debt equaled USD 2,716 million, decrease of USD 177 million over the past year, which was largely due to a decrease of USD 163 million in loan, a debenture redemption of USD 58 million, the loss incurred from foreign exchange translation of USD 46 million at the end of the year, and a decrease of USD 66 million in cash and short-term investment.

Net debt-to-equity ratio decreased from 1.40 times in 2015 to 0.99 times in 2016.

#### Total Sales Revenues

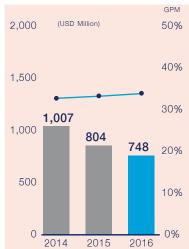


Total sales revenues were USD 2,259 million, a decrease of 9% or USD 218 million over the past year due largely to a decline in coal sales and the average selling prices of coal. The decline in the average selling prices of coal especially at mines in Indonesia was caused by a decline of the global coal prices in the first three quarters of this year.

Coal sales volume in 2016 amounted to 40 million tonnes, comprising 26.8 million tonnes from mines in Indonesia and 13.2 million tonnes from mines in Australia.

The average sales prices of coal from Indonesia and Australia mines in 2016 were USD 52.45 per tonne and USD 67.31 per tonne, respectively.

### Gross Profit and Gross Profit Margin



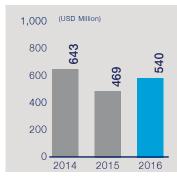
Gross profit for 2016 equaled USD 748 million, a year-on-year decrease of USD 56 million.

2016 gross profit margin was calculated at 33%, derived from 35% of coal business and 44% of power business.

An increase in coal business gross profit margin this year was driven by measures for higher production and better cost saving as well as declining gas prices in the global market.

However, power business's gross profit margin decreased from last year, due to a decrease in power tariff rate and steam price and an increase in production cost caused by higher coal cost during the fourth quarter of 2016.

#### EBITDA\*



Earnings before tax, interest, depreciation and amortization (EBITDA) was USD 540 million, increasing 15% or USD 71 million over the previous year. EBITDA from coal business was USD 378 million, EBITDA from power business was USD 155 million and EBITDA from natural gas business was USD 7 million.

\*Adjusted non - recurring items

#### Net Profit



Total net profit for the year ended 31 December 2016 was USD 47 million, representing a turnaround from a net loss of USD 43 million in the previous year due primarily to improvement in coal business. Excluding Foreign Exchange translation impact, net profit improved to USD 59 million against a net loss of USD 67 million in the previous year. The net profit in 2016 also included an additional tax expense of USD 9 million resulting from the settlement of a long running tax dispute in Australia relating to a period prior to 2010.

### Earnings Per Share



For the year ended on 31 December 2016, earnings per share was of USD 0.013, increasing from the previous year, when loss per share was of USD 0.017.

### Annual Report 2016 Banpu Public Company Limited



## Summary of Major Changes and Development in the Past Year and Major Current Events

- The Board of Commissioners of PT. Indo Tambangraya Megah Tbk. (ITM), a subsidiary of Banpu in the Republic of Indonesia, approved share repurchases from the Indonesia Stock Exchange as follows:
  - a) Repurchase between 25 February 2016 to 25 May 2016 of 112,992,500 shares with total value not exceeding IDR 1.36 trillion, and
  - b) Repurchase between 26 May 2016 to 25 August 2016 of 89,678,400 shares with total value not exceeding IDR 1.19 trillion.
    - ITM repurchased 33,369,100 shares with total value of IDR 0.26 trillion, or USD 19.21 million, from the Indonesia Stock Exchange. The repurchases resulted in the increased proportion of shareholding of the Company from 65.14% to 68.09%.
- On 2 March 2016, Hongsa Power Co.,Ltd. (Hongsa), a joint venture of Banpu Power Public Company Limited (BPP) (which was wholly owned by the Company at the time) with a 40% portfolio, started a commercial operation of its Unit 3 of power generation as set on schedule. This was the start of complete operation of all three power stations of Hongsa Power Plant, with the total generating capacity of 1,878 MW, which was from the generation capacity of 626 MW each.
- On 10 March 2016, the Board of Directors' meeting approved the following proposals to be submitted to the Annual General Meeting of Shareholders in 2016:
  - 1) The capital reduction of THB 823,026,240, from THB 3,404,904,790 to THB 2,581,878,550, by reducing 823,026,240 registered shares (at a par value of THB 1 per share) which have never been offered to the public.

- 2) The issuance and allocation of warrants representing the right to purchase ordinary shares of the Company No. 3 ("Warrants BANPU-W3") at the maximum amount of 1,290,939,275 units. The warrants will be allocated to existing shareholders of the Company who have subscribed in proportion to their respective shareholdings (Right Offering) at the ratio of 1 newly issued ordinary shares to 1 unit of warrants at no cost, at the exercise price of THB 5 per share.
- 3) The increase of registered capital of THB 2,581,878,550 from THB 2,581,878,550 to THB 5,163,757,100 by issuance of 2,581,878,550 ordinary shares at a par value of THB 1 per share. The Company allocated no more than 1,290,939,275 shares at a par value of THB 1 per share to be offered to existing shareholders in proportion to their respective shareholding (Rights Offering: RO) at the ratio of 2 existing shares to 1 new share at the exercise price of THB 5 per share. The Company also allocated shares under the RO in the amount not exceeding 1,290,939,275 shares, at a par value of THB 1 per share, to accommodate the exercise of the Warrants BANPU-W3 that will be issued and offered to entitled and allotted existing shareholders who have subscribed.
- On 11 March 2017, the Company acknowledged the resignation of Mr. Krirk-krai Jirapaet, Chairman of the Board, and Mr. Anothai Techamontrikul, Vice Chairman and Chairman of the Corporate Governance and Nomination Committee. The resignations of the Board directors were effective since 20 April 2016 and are in accordance with the Company's Corporate Governance Principles that require the Board members to retire at the age of 72.

on 19 April 2016, the Company presented a strategic plan for foreign investment in natural gas business while maintaining strong presence in the coal mining and coal-fired power plant. The strategic plan stresses more emphasis on innovative energy generation technology, eco-friendly energy source development, and networking of energy supply chain. To implement the strategic plan, the Company still maintains investment in power plants with high efficiency and low emissions (HELE) as well as investment in renewable energy. The Company is also interested in investment opportunities in natural gas extraction from shale gas and other businesses, which contribute to added values in the energy supply chain and innovative energy technology.

The Company invested USD 109.53 million in natural gas production to acquire 29.4% stake in the Chaffee Corners Joint Exploration Agreement (JEA), which runs a low-cost unconventional shale gas operation in the Marcellus shale in northeastern Pennsylvania. The Marcellus shale is the biggest source of natural gas in the U.S. and among the world largest sources of natural gas. Banpu's net interest in Chaffee Corners JEA's asset is equivalent to proven (P1) reserves of 156 billion cubic feet of dry natural gas.

- On 19 April 2016, the Annual General Meeting of Shareholders approved of capital reduction, capital increase, issuance and allocation of warrants representing the right to purchase ordinary shares as follows:
  - a) The capital reduction of THB 823,026,240 from THB 3,404,904,790 to 2,581,878,550, by cutting back 823,026,240 registered shares, at a par value of THB 1 per share, that had never been offered to the public.
  - b) The capital increase of THB 2,581,878,550 by issuance of 2,581,878,550 ordinary shares at a par value of THB 1 per share. The Company allocated no more than 1,290,939,275 shares to be offered to existing shareholders (Right Offering) at the ratio of 2 existing shares per 1 new share at an offering price of THB 5 per

share. No more than 1,290,939,275 shares will be allocated by issuance of BANPU-W3 warrants to existing shareholders at the ratio of 1 warrant per 1 share, and the exercise price was THB 5 per share. The Company was paid for the new 1,290,939,725 capital increase shares from the existing shareholders (Right Offering) for THB 6,454.7 million. The Company registered capital increase with the Ministry of Commerce on 7 June 2016, resulting in the increase of the company's registered capital to THB 3,872,817,825 (at a par value of THB 1 per share).

- On 28 April 2016, the Board of Directors appointed Mr. Chanin Vongkusolkit as Chairman of the Board and Mr. Rutt Phanijphand as Vice Chairman. The appointments are effective from 28 April 2016 onwards.
- On 3 May 2016, the Company registered a capital decrease for THB 823,026,240 from THB 3,404,904,790, resulting in the new registered capital of THB 2,581,878,550 by cutting off the unsold ordinary shares with the amount of 823,026,240 shares, at a par value of THB 1 per share. The registered capital, valued THB 2,581,878,550, was increased by THB 2,581,878,550, resulting in the new registered capital with a total value of THB 5,163,757,100 at a par value of THB 1 per share.
- On 10 May 2016, BPP Renewable Investment (China) Co., Ltd., a subsidiary company of Banpu, entered into a share purchase agreement to buy 100% shares of the four future solar power plant projects in Shandong Province in the People's Republic of China. The project will have the electricity generation capacity of 78.5 MW. The condition of this contract is that the future stock purchase will be done only when all the power plants are completed and start electricity distribution to the power grids.
- On 7 July 2016, 3 out of 4 solar power plant projects in Shandong, China, which have potential capacity of 90 MW, started commercial operations as planned

### Annual Report 2016

Banpu Public Company Limited

with total generation capacity of 70 MW as detailed in the following:

- 1) Jinshan Project, with a capacity of 30 MW, started commercial operations on 29 April 2016.
- 2) Huineng Project 1, with a capacity of 10 MW, started commercial operations on 29 April 2016, and project 2, with a capacity of 10 MW, started commercial operations on 8 June 2016.
- 3) Haoyuan Project, with a capacity of 20 MW, started commercial operations on 30 June 2016. Hui'en Project, with a capacity of 20 MW, was expected to start commercial operations in the third guarter of 2016.
- On 6 June 2016, the Company issued BANPU-W3 warrants with an exercise period of 1 year since the issuance date. Exercise dates for purchasing new ordinary shares were scheduled on 5 September 2016, 2 December 2016, 3 March 2017, and 5 June 2017 at the exercise price of THB 5 per share.

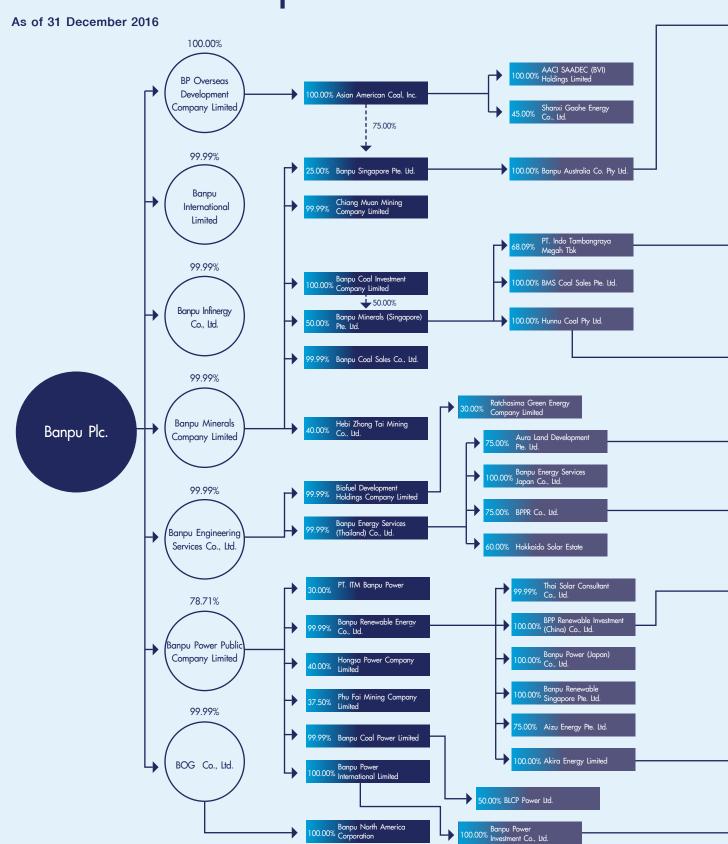
On 5 September 2016, the amount of BANPU-W3 warrants exercised for the first time was 993,887,223 units or 76.99% of the total issued and offered warrants, with a total value of THB 4,969.44 million. This resulted in the THB 993.83 million increase in the company's paid-up capital. The Company registered the capital increase with the Ministry of Commerce on 8 September 2016 so the Company's paid-up registered capital increased to THB 4,866,705,048 million (a par value of THB 1 per share).

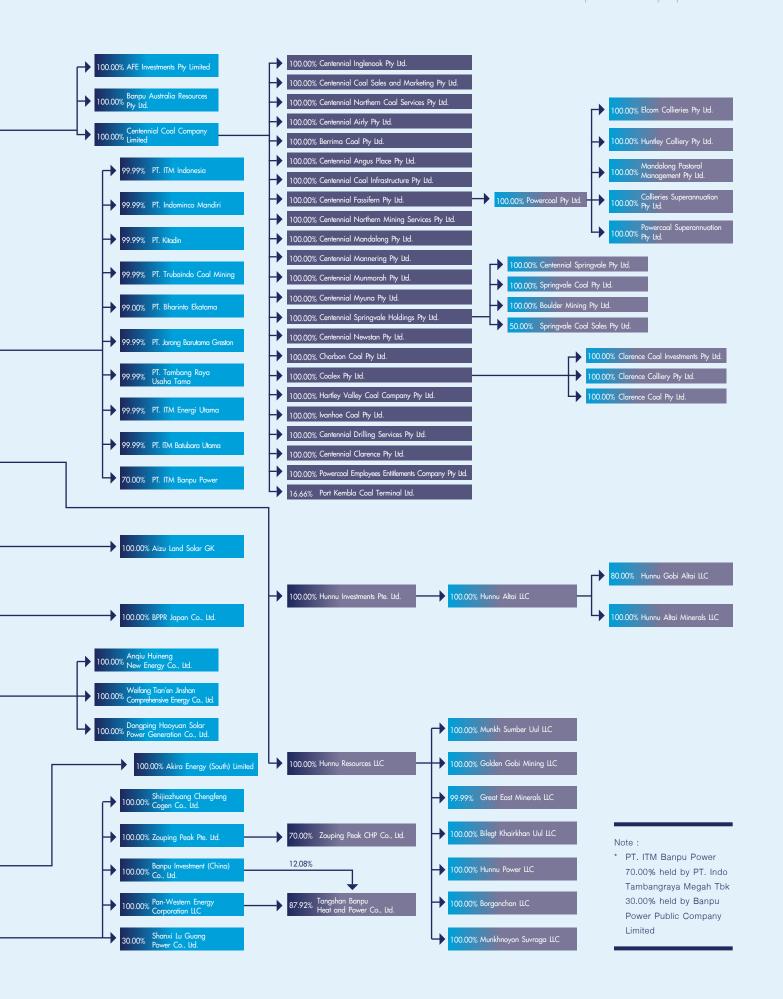
On 2 December 2016, BANPU-W3 warrant holders exercised their rights for the second time with the amount of 70,464,974 units or 5.46% of the total issued and offered warrants, with a total value of THB 352.32 million. The two exercises of the warrants are equal to 1,064,352,197 units or 82.45% of the offered warrants. This resulted in the THB 70.46 million increase in the company's paid-up capital. The Company registered the capital increase with the Ministry of Commerce on 8 December 2016, which increased the amount of company's paid-up capital to THB 4,937,170,022 million (a par value of THB 1 per share).

- On 25 August 2016, the Board of Directors meeting approved an interim dividend payment from retained earnings and the operating profit during the sixmonth period ending 30 June 2016 for 4,866,705,048 eligible shares at the rate of THB 0.25 per share or THB 1,216.64 million in total. The dividend payment was appropriated from the corporate income tax-exempted profit, on which shareholders are not be entitled to tax credits. The interim dividend was paid on 23 September 2016.
- On 28 October 2016, Banpu Power Plublic Company Limited (BPP), a subsidiary of Banpu, was on its first day of trading in the Stock Exchange of Thailand. At the initial public offering, 648,492,500 shares were offered at THB 21 per share. 195,072,871 ordinary shares were offered to the eligible existing shareholders. 453,419,629 ordinary shares were offered to the public. After the public listing, Banpu's shareholding proportion of BPP has dropped from 100% to 78.71%.
- On 27 December 2016, TRIS Rating announced the unchanged rating for the corporate credibility and senior unsecured debentures of Banpu Plc. at "A+" with a "Stable" outlook. This credit rating reflects the leading position of Banpu in the coal industry in the Asia-Pacific region, resulting from diverse customer base and coal resources, increased financial flexibility gained after its subsidiary was listed in the stock market, and predictable dividends from its power business.
- On 23 February 2017, the Company's Board of Directors recently agreed to approve the annual dividend payment at THB 0.50 per share for the period during 1 January 31 December 2016, of which THB 0.25 per share was paid as interim dividend on 23 September 2016. Thus, the remaining THB 0.25 dividend would be further paid out of the retained earnings and profits from the operation during the period of 1 July 31 December 2016. The remaining THB 0.25 dividend is appropriated from the corporate income tax exempted profit on which shareholders are not entitled to tax credits. The dividend payment is scheduled on 28 April 2017.



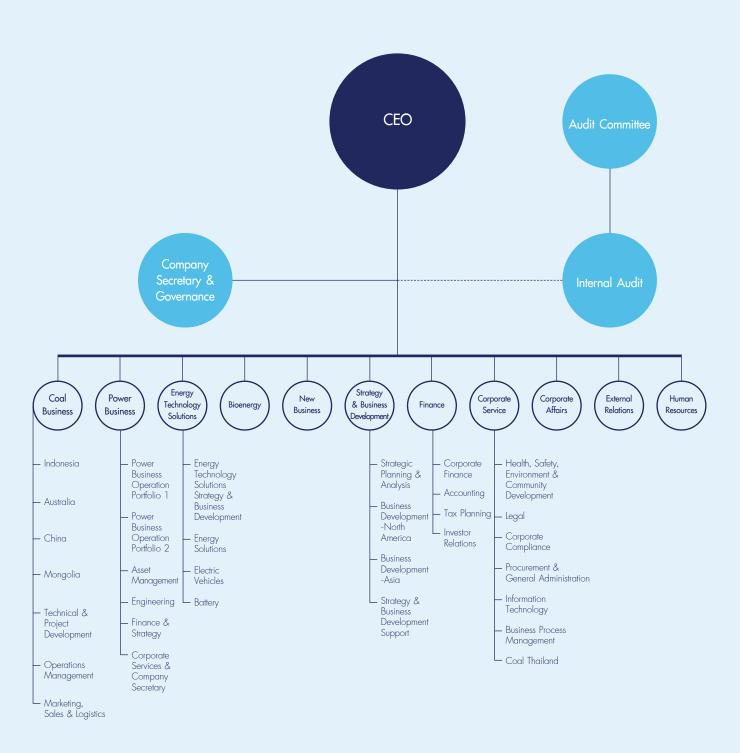
## **BANPU Group Structure**





## Organizational Structure

As of 1 January 2017



### A Management Structure

The Company's management structure as of 31 December 2016 consists of the Board of Directors and executive officers. The Board of Directors consists of independent directors, non-executive directors and executive directors. Independent directors account for 33% of the Board membership.

The Board set up three sub-committees, namely, the Audit Committee, the Corporate Governance and Nomination Committee and the Compensation Committee.

The Board also requires that 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.

#### 1. The Board of Directors consists of:

1) Mr. Chanin Vongkusolkit	Chairman of the
	Board of Directors
2) Mr. Rutt Phanijphand	Vice Chairman/
	Independent Director
3) Mr. Teerana Bhongmakapat	Independent Director
4) Mr. Suthad Setboonsarng	Independent Director
5) Mr. Sudiarso Prasetio	Independent Director
6) Mr. Anon Sirisaengtaksin	Director
7) Mr. Metee Auapinyakul	Director
8) Mr. Ongart Auapinyakul	Director
9) Mr. Rawi Corsiri	Director
10) Mr. Buntoeng Vongkusolkit	Director
11) Mr. Verajet Vongkusolki	Director
12) Ms. Somruedee Chaimongkol	Director

Remarks: Annual General Meeting of shareholders for 2016 appointed Mr. Anon Sirisaengtaksin to be a new director, effective from 19 April 2016 onwards.

### Authorized Signatory Directors on behalf of the Company

Any two of the following five board members have the authority to sign on behalf of the Company: Mr. Chanin

Vongkusolkit, Mr. Metee Auapinyakul, Mr. Ongart Auapinyakul, Mr. Rawi Corsiri and Ms. Somruedee Chaimongkol. The two individuals are authorized to sign jointly on a document affixed with the Company's seal.

### Duties and Responsibilities of the Board of Directors

The Board of Directors is accountable to shareholders with respect to managing the Company and supervising its management so that the firm achieves its goals while shareholders' interests are maximized. At the same time, the Board of Directors makes sure that the Company's business operations are in compliance with the Code of Conduct while the interests of all stakeholders are considered.

The Board of Directors has a duty to comply with the laws, objectives and regulations of the Company and with resolutions of the shareholders' meeting. It must perform duties with integrity and must safeguard short- and long-term interests of shareholders. 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.

The Board formulated the "Banpu Public Company Limited Board of Directors' Practice" in 2009 as a guideline for the Board of Directors. The handbook 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. It was amended and edited in 2011, 2012 and 2014 to reflect changing responsibilities, business climates and to enhance good corporate governance of the Board of Directors.

### Annual Report 2016 Banpu Public Company Limited

To comply with the practices, the Board entrusts the CEO to run the Company's business and to supervise the Company's operations.

The Board has also formulated a charter for the Audit Committee, the Corporate Governance and Nomination Committee and the Compensation Committee as a guideline for their duties.

The Board also organizes an orientation session for new directors so that they are aware of what Banpu expects from them. Through orientation, the directors learn about their roles and responsibilities, Banpu corporate governance policy and practices, and Banpu business and operations. In addition, visits to the Company's operational units are arranged for new directors. These activities are carried out in order to prepare them thoroughly for their role as Banpu directors.

The Board of Directors has a policy to expand all directors' horizons on corporate governance, industrial outlook, businesses, new technology and innovations. Directors are encouraged to attend seminars or training held by the Thai Institute of Directors (IOD) and other reputable institutions to sharpen their performance. In addition, seminars for the Board of Directors by the management are held to transfer technical knowledge and experience directly related to the Company's business as well as to share knowledge about new energy and technology. In 2016, the Board of Directors attended seminar and training as follows:

Name	Training course	Institution
Mr. Rutt Phanijphand	- Corporate Governance for Capital Market Intermediaries (CGI) 14/2016	Thai Institute of Directors (IOD)
Mr. Teerana	- IT Governance (ITG) 2/2016	Thai Institute of Directors (IOD)
Bhongmakapat	- Audit Committee Forum 2016	The Federation of Accounting
		Professions under the Royal Patronage
		of His Majesty the King and Thai
		Institute of Directors Association (IOD)

The Board of Directors also holds a joint meeting between independent directors and non-executive directors

at least twice a year to allow directors to freely express and discuss opinions related to management. The Company Secretary is required to submit a summary report of these meetings to all directors.

In addition to the Board of Directors' meeting, the Board also requires a "Board Retreat" to be held annually to provide directors an opportunity to raise issues of interest, express opinions or provide recommendations with the aim of improving teamwork

and planning administrative direction.

The Board of Directors requires that the Board itself be subject to a performance evaluation once a year. The Board starts individual director self-assessment in 2014. This duty is entrusted to the Corporate Governance and Nomination Committee.

The Board has required the three sub-committees to do their own self-assessment. The forms are provided

by the Corporate Governance and Nomination Committee and each has the same standard. These forms focus on roles and responsibilities corresponding to each Committee's charter. The sub-committees have used the assessment forms as part of their performance report presented to the Board annually since 2012.

3 The Corporate Governance and Nomination

banpu.com/en subcommittee.php)

more information in Banpu's website at http://www.

### 2. The Audit Committee consists of:

1) Mr. Teerana Bhongmakapat	Chairman of the Audit
	Committee
2) Mr. Rutt Phanijphand	Member
3) Mr. Suthad Setboonsarng	Member
,	Member

The Audit Committee's term of office is three years from April 2016 to April 2019. The Audit Committee has knowledge and experience in accounting and finance, Mr. Rutt Phanijphand, a member of the audit committee has a duty to review the Company's financial statements with his knowledge, expertise and adequate experience.

In the 5/2015 Audit Committee meeting, held on 11 May 2015, Mr. Vorravit Varutbangkul was appointed as Head of the Internal Audit Department and Secretary of the Audit Committee. This appointment has been effective since 1 April 2015. Mr. Vorravit Varutbangkul has more than 13 years of experience in managing and conducting professional internal audit to international standards. He is a Certified Public Accountant (CPA). Moreover, he has excellent understanding of the Company's operations.

### Duties and Responsibilities of the Audit Committee

The Audit Committee has a duty to review the Company's financial statements, its adequacy of internal control and risk management systems, and compliance with applicable laws and regulations. The Audit Committee is also required to prepare a report or to give opinions to the Board of Directors for approval or for submission to the shareholders' meeting, as appropriate. (See

### 3. The Corporate Governance and Nomination Committee consists of:

1) Mr. Rawi Corsiri	Chairman of the
	Corporate Governance
	and Nomination
	Committee
2) Mr. Sudiarso Prasetio	Member
3) Mr. Verajet Vongkusolkit	Member
4) Mr. Anon Sirisaengtaksin	Member

The Corporate Governance and Nomination Committee's term of office is three years from April 2016 to April 2019.

### Duties and Responsibilities of the Corporate Governance and Nomination Committee

According to its charter, the Corporate Governance and Nomination Committee has two major duties. Firstly, to review the Corporate Governance Policy and the Code of Conduct and monitor compliance of the policy and practices within Banpu's Code of Conduct. Secondly, to nominate directors and the Chief Executive Officer, to review a succession plan in order to nominate appropriate persons to fill the management positions (for department head level and higher), and to submit recommendations to the Board of Directors for approval or for submission to the shareholders' meeting, as appropriate. (See more information in Banpu's website at http://www.banpu.com/en\_subcommittee.php)

#### 4. The Compensation Committee consists of:

1) Mr. Rutt Phanijphand	Chairman of the
	Compensation
	Committee
2) Mr. Buntoeng Vongkusolkit	Member
3) Mr. Teerana Bhongmakapat	Member

The Compensation Committee's term of office is three years from April 2016 to April 2019.

### Duties and Responsibilities of the Compensation Committee

The Compensation Committee's duty is to provide advice related to compensation management to the Board of Directors for approval or for submission to the shareholders' meeting, as appropriate. (See more information in Banpu's website at http://www.banpu.com/en\_subcommittee.php)

### 5. The Management\* consists of:

The Management contents	011
1) Ms. Somruedee Chaimongkol	Chief Executive
	Officer
2) Mr. Somyot Ruchirawat	Chief Operating
	Officer Deputy Chief
	Executive Officer
3) Mr. Voravudhi Linananda	Chief Operating
	Officer
4) Mr. Peter Parry	Chief Financial Officer
5) Mr. Sathidpong Wattananuchit	Assistant Chief
	Executive Officer -
	Corporate Services
6) Mr. Akaraphong Dayananda	Assistant Chief
	Executive Officer
	- Strategy and
	Business
	Development
7) Ms. Udomlux Olarn	Senior Vice President
	- Corporate Affairs
8) Mr. Aphimuk Taifayongvichit	Chief Commercial
	Officer - BMS Coal
	Sales Pte. Ltd.
9) Mr. Varoj Limjaroon	Senior Vice President
	- Human Resources

Note: \*After the CEO, the next four executives are as announced in the company's organization structure effective from 1 January 2017.

### Duties and Authority of Chief Executive Officer

The Board of Directors sets operational goals for the CEO and evaluates her performance every year. The CEO then evaluates the performance of executive officers and senior executive officers by using goals

and evaluation criteria linked closely with Banpu's strategic plan and annual operating plan, and uses this information to set appropriate and attractive compensation packages and incentives. (For more information, please see 56-1 Form: CEO's duties and responsibilities)

### 6. The Independent Directors, who account for 33% of the Company's Board of Directors, are as follows:

1) Mr. Rutt Phanijphand	Independent Director
2) Mr. Teerana Bhongmakapat	Independent Director
3) Mr. Suthad Setboonsarng	Independent Director
4) Mr. Sudiarso Prasetio	Independent Director

Banpu has defined the qualifications of "Independent Directors" according to the Notification of the Capital Market Supervisory Board No. TorJor. 39/2559 dated 16 November B.E. 2559. (For more information, please see 56-1 Form and the Notification of Capital Market Supervisory Board No. TorJor. 39/2559 dated 16 November, B.E. 2559.)

### 7. Company Secretary

The Board of Directors has appointed Ms. Boonsiri Charusiri as Company Secretary, whose duties and responsibilities are 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 to 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, the Banpu Annual Report, invitation letters to attend the shareholders' meeting and records of its minutes, the report on conflict of interest of directors or executive officers and other duties as required by the Capital Market Supervisory Board.

(The qualifications of Company Secretary stated in 56-1 report regarding the details of the Board of Directors and the Management.)

## 2 1 3 Marketing and Competition

### Marketing

### 1. Global Coal Market

The demand for imported thermal coal reached its new low in the first quarter of 2016 and began to recover in the second quarter owing to many factors, such as coal business restructuring in China, heavy rainfall in China and Indonesia, which affected coal production and deliveries. The shutdowns of nuclear power plants in Japan, South Korea and France also resulted in high demand for coal. Amid solid demand, tight supply, the coal price at the Newcastle port in Australia reached its highest at USD 116 per tonne in early November 2016 from USD 49 per tonne in early 2016, or increased by 137%.

Coal business restructuring in China has had a significant impact on the global coal market. In February 2016, the Chinese government announced its policy to reduce 500 million tonnes of coal surplus capacity by 2020. The government also enforced the 276 working days per year policy to decrease working days of coal mine operations from the previous 330 workings days per year. This cut instantly caused a 16% decrease in coal production. The policy became effective in March for the government's mines and became effective nationwide in June, and there has been an intensive tracking and monitoring system. In addition, the enforcement of strict safety measures to prevent mining accidents caused temporary shutdowns of many coal mines for the purpose of safety system check and resulted in a sharp decline in coal supply. Additionally, heavy rain in southern China hindered delivery of coal to power plants and seaports. This caused rapid depletion of their coal stocks, which subsequently led to coal shortages and coal price doubling in five months. China imported more coal in response to the shortage, and thus coal prices in the global market increased in the same direction as in the Chinese market.

Later in September 2016, the Chinese government relaxed its strict 276-day annual operating limit on coal mines. It allowed 74 advanced coal mines and other 791 coal mines that passed safety standard to increase working days to 330 per year until the end of 2016. This relaxation aimed to increase coal supply in the market in order to make coal prices more stable. However, coal prices kept increasing because it took time to expand the supply before it can be delivered to coal users. Consequently, the Chinese government furthered permitted all mines that passed safety standard to extend annual working days from 276 to 330 until March 2017. Additionally, the government intervened the announcement of private company pricing index by hiring external experts to audit the methods of price indexing of a private company which launches the nationwide Thermal Coal Indices (CCI), used as reference price index all over China, to ensure its accuracy and transparency. The intervention temporarily halted the company's announcement of coal price index.

The Chinese government asked major coal producers to decrease coal prices and speed up sales contracts with large power plants for the delivery in 2017. The pricing structure is set by fixing 50% at CNY 535 per tonne, which is much lower than the spot price, and the other 50% is adjustable to the spot price. The structure allowed major power plants to purchase coal at a lower price than the spot market price. To benefit from the government's pricing structure, buyers gradually entered into a contract with coal producers. It is estimated that approximately 75% of the thermal coal demand in China for 2017 had been forwardly bought through sales contracts in 2016. Subsequently, the coal demand in spot market dropped dramatically, resulting in price decline in China and in the global market, respectively.

### Annual Report 2016

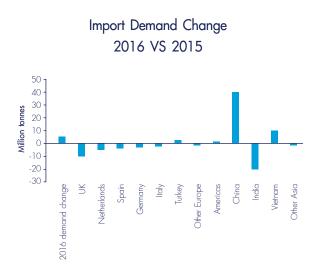
Banpu Public Company Limited

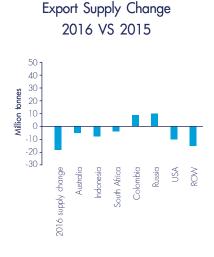
The Republic of India, which was the biggest coal importer in 2015, reduced its imports of coal in 2016 in response to decreasing demand for coal due to the economic slowdown and surplus electricity generated by hydro-powered dams. Besides, the Indian government has a policy to promote production of coal in the country and encourage the use of local coal supply in power plants. This lowered the imports of coal for power plants. Meanwhile, other coal purchasers in India were waiting for the best coal prices. Accordingly, more purchasers turned to the local supply rather than the imported coal when global coal prices soared last year. In addition, the abrupt cancellation of 500 and 1,000 rupee banknotes around the end of last year affected small businesses that normally use cash transactions, resulting in decline in their use and imports of coal.

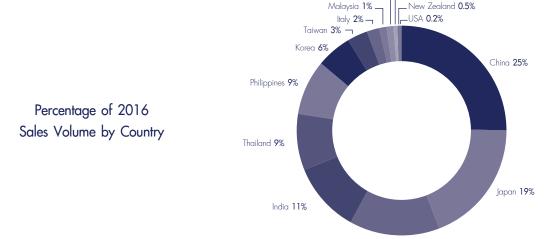
In 2016, there was a decrease in coal imports into North Asian market, especially Japan, due to maintenance shutdowns of many coal-fired power plants. In the meantime, renewable energy generation has been a rising trend. South Korea imported slightly lower amount of coal last year due to the economic slowdown and the improvement of power system efficiency also

stabilized the power demand while the country's renewable and nuclear power plants generated more electricity. Moreover, there was no significant increase in coal use despite temporary maintenance shutdowns after the earthquake in September 2016. In 2016, South Korea had to postpone the commercial operation date of its new power plant with total 5 GW capacity due to the delay of the power plant and high-voltage power grids construction. The estimated coal imports of the Republic of China (Taiwan) in 2016 were expected to remain at the same level as the previous year due to the economic slowdown and more output from renewable power generation. However, the amount of coal used in power plants was higher than the amount imported means the power plants used their coal stocks when the price in the coal market was very high.

Southeast Asian market is a fast-growing market, especially in the Socialist Republic of Vietnam, the Republic of Philippines and the Federation of Malaysia, where new power plants have gradually started their operations. The markets in the Islamic Republic of Pakistan and the Socialist Republic of Sri Lanka are also emerging markets with high growth potential.







Bangladesh 1% -

\_Hong Kong 0.6%

Indonesia and Australia are major coal producers and exporters in Asia, yet the two countries could not increase enough production outputs to meet China's instant rising demand during the second half of 2016. In fact, the coal producers in both countries had cut production cost at the time of coal price decline and delayed new investments; they were thus unable to drastically increase the coal supply in a very short time. Furthermore, heavy rainfall in Indonesia almost all year round in 2016 hindered productivity increase, resulting in small increase in exports in the latter half of the year. Overall, Indonesia's coal exports in 2016 suffered. Coal exports in Australia also suffered because coal production in Australia was affected by occasional rainfalls, and railways and seaport maintenance. Besides, during the second half of 2016, exporters focused on exports of coking coal, which is much expensive than high-heat coal, resulting in slight decrease in thermal

The European coal market experienced a recession in 2016 due to the fact that the United Kingdom had used coal from its stocks from the previous year before the increase of carbon tax. This caused a sharp drop in coal imports in 2016. Additionally, the price of natural gas in the UK was so low that the production cost of coal-fired power plants exceeded that of natural gasfired power plants. Meanwhile, in other European

coal exports.

countries where carbon tax was postponed, the production cost of coal-fired power plants was also lower than that of natural gas-fired power plants. However, around the end of last year, coal prices rose so high that the coal-fired power plants could not compete with natural gas-fired power plants, leading to higher natural gas generation. Major coal importers, namely Germany, Italy, Spain and the Netherlands, decreased import volume, except for Turkey, who imported more coal for its new power plant. Apart from that, old coal-fired power plants in the European Union had gradually been decommissioned in accordance with the Industrial Emission Directive (IED), and renewable power generation continued to increase, thus resulting in lower demand for coal in Europe.

Indonesia 14%

Major coal producers and exporters to Europe are Colombia, Russian Federation, South Africa and the U.S. As a result of decline in coal demand, Russia and South Africa diverted more of their coal exports to Asia. In 2016, Colombia followed suit exporting more coal to Asia due to lower freight costs. Accordingly, Colombia will not be able to compete in the Asian market if the freight costs increase. As for the U.S., the production cost was so high that they could not compete so they needed to scale down their generation capacity.

### Annual Report 2016

Banpu Public Company Limited

In 2016, Banpu sold a total of 26.8 million tonnes of the coal produced in Indonesia, equal to 25% of total sales volume, to the Chinese market. Next largest markets are Japan and Indonesia with sales volumes of 19% and 14%, respectively. The Company could export more coal to China in the second half of last year because of sharp increase in coal prices there. The Company still focuses on Japan as it is a high-paying market, while keeping Indonesia as production base. Southeast Asia is also a focused market because the region is closer to the Company's production site and has high growth potential.

#### **Competitive Strategies**

In 2016, the coal surplus in the global market decreased dramatically, returning to equilibrium, because of the abrupt change in China's coal policy. The Company has adapted its major competitive strategies to global market conditions as follows:

### • Focus on high value-added coal production

The Company has focused on high quality coal production to serve the market with high purchasing power. Good quality coal was bought from external sources in order to improve the general quality of the Company's own coal reserve. In this manner, the Company could increase coal sales volume to the high-paying markets.

### Focus on High-Paying Market

In 2016, the Company started exporting good quality coal into such high-paying markets as Japan, and has increased sales volume in China where coal prices increased sharply. Also, the Company lowered sales volume in India, which is a highly competitive market. By appropriate adjustment of market shares, the Company realized revenue from increased coal prices in the global market in the second half of last year.

#### Customer Relationship Management

The Company conducted a customer satisfaction survey by sending out questionnaires and having one-on-one interactions with customers via meetings, telephone calls, or e-mail. In doing so, the Company is able to learn the customers' problems and worries and educate them with the aim of creating long-term trust and partnership for success with customers. The Company also has a customer database, which is used in analyzing customer data for the improvement of products and services to meet the customers' needs in the long run. Moreover, the Company has promoted good relationships with customers through various activities, including regular reporting of performance, exchange of information on coal market, visits by customers, provision of technical support and customer visits by executives in order to build closer relationship with customers and establish long-term partnership.

#### Quality Management System and Delivery

The Company has installed a computer system for the management of the entire supply chain, which enables efficient management of its production plan, quality control, stockpiling, coal transportation and blending and ensures accuracy of coal delivery to customers both in terms of quality and volume. Moreover, the Company has its own coal terminal so it can guarantee on-time delivery of coal as promised to the customers. This has earned the Company trust from its customers, and image as a reliable coal producer and supplier who provides secure delivery and quality coal as promised. The customers are thus willing to pay more for the security of delivery.

#### 2. Coal Market in Indonesia

Although Indonesian coal production has been decreasing for the past two years due to the sharp decline in coal demand in the global market, coal producers in Indonesia have been trying to lower the production cost by decreasing the strip ratios, closing the high cost production sites, and delaying new investments. However, the country's domestic coal production started to recover in the latter haft of 2016 as there was a sharp increase in coal demand, resulting in the rise of coal prices. The total coal production in Indonesia last year was approximately 460 million tonnes, increasing by 0.6 tonnes over the previous year. The Indonesian coal producers could not increase much production

in the latter half of the year because there had been rainfall almost all year round. Moreover, as the coal producers have postponed new investments during the past two years, the production could not be increased in a very short time. The coal producers also delayed their plan to increase production due to the uncertain future of coal prices.

In 2016, Indonesia's coal exports were expected to reach 365 million tonnes, decreasing by 1.8% over the previous year, which amounted to 79% of the total coal production in Indonesia. The coal was exported to China, India, Japan, South Korea, Taiwan, and most of Southeast Asian countries. Domestic coal demand was at 95 million tonnes, increasing by 11% over the previous year, pushed by the commercial operations of the government's new power plants. More than 80% of domestic coal was used in power generation, 10% in cement industry, and the rest in other industries.

In 2016, Banpu sold 3.7 million tonnes of domestic coal in Indonesia, which amounted to 14% of the total sales volume of coal produced in Indonesia, and a market share of only 3.9% of domestic coal demand. The majority of the Company's coal was sold to coal-fired power plants, comprising 82% of the domestic sales volume. The rest was sold to paper and cement industries at 12% and 6% respectively.

In 2016, the Indonesian government successfully controlled illegal miners with the enforcement of strict measures issued in 2015. The coal prices in the global market that had plummeted also helped decrease the coal production from the illegal mines because they had to close down when coal prices were lower than the production cost.

The Indonesian government has planned to use an online system in 2017 to monitor and audit licenses and tax records of coal mining companies. The system will improve control over illegal mining. Additionally, the Indonesian government will start using cashless system to enable faster monitoring and auditing of mineral loyalty and tax payment. This will significantly reduce coal production from illegal mines in the future.

#### **Major Competitors**

The Company's major competitors in Indonesia are leading coal producers in the country, such as PT. Kaltim Prima Coal, PT. Bukit Asam, PT. Adaro Indonesia, PT. Kideco Jaya Agung, PT. Arutmin Indonesia, PT. Berau Coal, PT. Golden Energy Mines, and a large number of small-scale coal miners. Those coal producers who cannot provide stable delivery to large power plants. Besides, the power plants are required to purchase coal only from legal mines as its major power purchaser, the state-owned Indonesian Electricity Authority, takes part in negotiation of coal purchase. Consequently, competition in this market is mild because it is limited to major producers, whose prices are based on the government reference price with less competition. On the contrary, the competition is stronger when selling to other buyers due to the larger number competitors in the market.

Major competitors in the global market other than coal producers in Indonesia include a large number of leading coal producers and traders in Australia, South Africa, and Russia, most of whom are the same competitors. In 2016, there were more competitors from Colombia in the Asian market owing to the low freight costs.

#### **Pricing Policy**

Coal prices are determined based on the prices in the global market at the time of contract negotiations. Prices are adjusted for quality of the coal being sold but shall not be lower than the Indonesia's reference coal price. Good quality coal will be sold to markets where extra price is added to the reference price while low quality coal will be sold at a lower price based on its actual quality. Coal prices can be fixed or floated linked to indexes, and sales are adjusted to market conditions. The Company increased the index-linked sales and sales to the spot market in the latter half of 2016 in order to realize the increased coal prices in the global market. The Company's coal prices in Indonesia are based on the government reference price, which is adjusted for changing coal prices in the global market. Apart from that, the Company used coal swap to reduce price risk from market volatility.

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#### **Customer Profiles**

The Company has sold a majority of its coal to largescale power plants in Japan, South Korea, Taiwan, China, India, Malaysia, the Philippines, Indonesia and some European countries, who bought coal in large quantities. These highly stable companies follow a strict and transparent process to select reliable coal traders who provide stable delivery. Most of the companies are listed companies on the stock markets so they adhere to good corporate governance. Hence, they prefer traders who carry out good governance practices and ethical business. Additionally, the Company sells coal to other industries, including cement, petrochemical, paper, plastic and chemical producers. These customers buy a lower amount than large-scale power plants and generally make shortterm contracts with producers and traders. These customers purchase less amount of coal than the large-scale power plants. Generally, they entered into a short-term coal purchase agreement with the coal producers or traders while some prefer buying coal from the spot market.

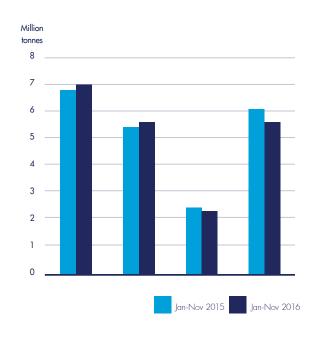
#### **Distribution Channel**

Coal trading to foreign markets has been operated by BMS Coal Sales Pte. Ltd., which is Banpu's subsidiary established in Singapore. Coal may be sold directly to end-users or coal traders in the targeted countries or via sales agents who handle transactions with customers. The majority of sales are by direct offer to coal users, through bidding contracts and direct negotiations with customers. In some countries, the Company will offer coal through trading companies, who handle sales to end-users, in order to reduce marketing cost.

#### 3. Coal Market in Thailand

Most of the coal used in Thailand is imported coal as Thailand has limited coal reserves. The largest coal user is cement industry, which consumed 7.04 million tonnes of coal in the first 11 months of 2016, increasing by 0.09 million tonnes year-on-year. The competition in cement industry was stronger due to supply surplus and decline in exports. The new start of commercial

### Coal Consumption by Sector



Source: Marketing, Sales and Logistics Analyst, Banpu

operations of cement producers invested by Thailand's large cement producer in neighboring countries decreased the import demand from Thailand. Meanwhile, Thailand has been suffering from an economic downturn and the government infrastructure projects are still in the beginning; the cement demand increased only slightly. The cement industry's demand for coal remained broadly at the same level as the previous year. Independent Power Producers (IPPs) are the second largest consumer of coal after the cement industry. During the first 11 months of 2016, they consumed 5.64 million tonnes of coal, a year-on-year decrease of 0.25 million tonnes. This gain was from the restart of commercial operations of the BLCP Power Plant after the maintenance shutdown last year.

The Small Power Producers (SPPs) consumed 2.08 million tonnes during the first 11 months of 2016, decreasing by 0.04 million tonnes year-on-year. Others are such coal users as paper, petrochemical, textile and food industries. In addition, the inventory of coal

traders totaled 5.77 million tonnes in the first 11 months of 2016, decreasing by 0.60 million tonnes year-on-year. The decline in consumption of these two groups originated from the economic downtown, which resulted in less production of industries. Moreover, coal users or traders delayed their coal purchases due to the sharp increase of coal prices in the latter half of 2016.

Coal markets in Thailand can be grouped into three categories according to buying behaviors:

- 1. Major coal users consist of cement industry, petrochemical industry, pulp and paper industry, including Small Power Producers (SPPs). Users in this group are reliable large factories with stable consumption, and have standard procurement system. Most buyers in this group have potential to directly import coal from overseas. This allows major overseas coal traders to compete in the market. However, coal buyers in this group want to enter into a contract with coal producers who provide reliable and regular delivery, thus limiting the chance for small traders to enter the market.
- 2. Independent Power Producers (IPPs) constitute a group of large power plants whose coal consumption is large and stable. IPPs normally entered into a long-term contract with overseas producers and thus buy much less from the spot market. Accordingly, there is low competition in this segment.
- 3. **Small-sized coal users** constitute the major part of the coal market. Most customers in this segment are small factories which consume small quantity of coal and have less space for stockpiling. They need to buy small quantity at a time and cannot import directly from overseas traders. Instead, they rely on traders who can deliver coal in installments. Since there are a lot of sellers in this market, competition in this market is intense.

#### **Competitive Strategies**

Thailand is a market with strong competition due to a large number of coal traders selling imported coal from

various sources, which enables new traders to easily enter the competition. The Company adopted the following strategies for retaining competitive edge.

#### • Focus on Long-Term Customers

The Company has its own coal mines in Indonesia with enough reserves to satisfy long-term customer's demand, and over the past years, the Company has been recognized by its customers for its reliability and stability of delivery in all aspects, namely quantity, quality and punctuality. This has earned the Company trust from its major buyers and a competitive edge over other competitors.

#### • Customer Relationship Management

The Company uses that same approach to customer relationship management as BMS Coal Sales Pte. Ltd., who oversees its coal sales. The Company relies on its sales representatives to offer sales terms and communicate with customers, and to monitor sales and coordinate with the customers on coal delivery. Apart from that, the Company prioritizes cultivation of good relationship with customers through various activities, such as regular notification of the Company's plans and operations to customers, rapport with executive officers, and joint meetings. These activities enhance mutual trust and development of long-term business partners.

# Quality Management System and Coal Distribution Center

The Company has two coal distribution centers as hubs for distributing coal to customers, satisfying their needs to reduce stockpiled quantity and stock-carrying burden. The Company's supply chain management ranges from importing coal from mines in Indonesia, vassel ship charter, coal transportation to distribution centers and management of distribution centers availability and to ensure an adequate coal supply for that customers' consumption. In addition, the Company strictly controls operations in the stockpile area to meet environment protection requirements. There is a continuous monitoring of

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environmental quality as well as concerns for impacts on neighboring communities so as to set the Company's distribution centers as exemplary distribution centers that meet international standards. All is done to assure that customer's needs will be met in a sustainable fashion.

#### **Major Competitors**

Major competitors include both coal traders in Thailand and overseas, who have different strengths and weaknesses. In 2016, there were six major domestic traders in competition with the Company as follows: SCG Trading Co., Ltd., Lanna Resources Plc., Asia Green Energy Plc., Energy Earth Plc., Eastern Pearl Co., Ltd. and Sing Heng Seng Co., Ltd. Apart from that, there were several small traders. Some traders do not import coal from overseas but buy it from other importers to resell to customers. Many traders have coal depots for stockpiling, allowing them to sell coal to customers in installments. In this fashion, depotowning traders can satisfy needs of small buyers. The majority of domestic coal traders do not have their own mines and must rely on other producers, thus facing difficulty of cost control. Traders may suffer uncertainty in coal quality, quantity and delivery time. Thus, the bigger coal traders enjoys more competitive edge in dealing with major coal consumers due to higher reliability and stability of delivery. The overseas coal traders will focus only on the major coal users because the coal must be delivered in one vessel, the amount of which is higher than the small buyers' need. The competitors in this group include Rio Tinto, Glencore, PT. Swiss Singapore, Mitsui, AVRA and coal producers in Indonesia.

#### **Pricing Policy**

Coal prices in Thailand are based on global coal prices and adjusted to actual quality of coal being sold, quantity, quality requirements and other terms set forth in the agreement made with customers. Prices can be fixed or floated based on global market prices or linked to global indexes depending on the terms agreed with each customer.

#### **Customer Profiles**

Banpu's customers are mainly in the industries of cement, power and steam, paper, and textile. Most of them are large and highly stable companies whose demand for coal is stable. Therefore, they buy coal from coal producers or traders with high credibility, and generally they entered into a coal purchase agreement, in which quality and quantity are set forth. Only few customers buy coal in the spot market where small coal traders can offer their coal sales. Some customers prefer buying coal in installments to relieve their burdens on stockpiling, stock management, inventory cost so they entered into an installment contract. These customers also place importance on the social and environmental responsibility, and subsequently motivate the coal entrepreneurs to follow their practices. Apart from that, they periodically and closely monitor the operations of those entrepreneurs to prevent the impact that may have on them.

### Competition

#### 1. Competition in the Coal Industry

During the first half of 2016, market competition had been strong due to large coal surplus. The second half of the year saw less competition as demand started to recover, influenced by more imports from China to substitute for inadequate domestic production. However, coal exporters could not increase much productivity due to lack of new investments, and some countries suffered setbacks from heavy rainfall and periodic maintenance of machinery. These contributed to a 100% increase in coal prices of FOB Newcastle, Australia at the end of the year compared to that at the beginning of the year. Likewise, coal prices in European market (CIF ARA) increased by 94% despite the sharp decline in coal demand there.

Overall, demand for thermal imported coal this year grew by 4 million tonnes, or 0.4%. The total imports were 929 million tonnes, 80% of which was imported by Asia, with total imports of 744 million tonnes, rising 3.7% over the past year.



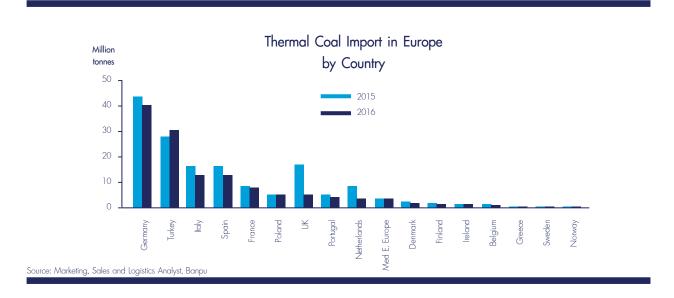
Source: Marketing, Sales and Logistics Analyst, Banpu

In 2016, China imported 197 million tonnes of thermal coal, increasing by 41 million tonnes or 26% over the previous year in spite of the economic slowdown. Its strict policy to control coal surplus and heavy rainfall across southern China hindering coal delivery resulted in coal shortage. Coal prices in China surged to its peak in November and declined afterward due to policy relaxation on production control and price intervention from the government. Coal users in China increase more imports from overseas during the second half of 2016 causing the coal prices overseas to rise sharply. Competition in China is not played by just overseas exporters, Chinese coal producers also joined the fray. Furthermore, coal prices are usually intervened by the government, making it out of sync with market prices. However, the government-targeted price is quite high and satisfying for exporters.

In 2016, India coal imports amounted to approximately 145 million tonnes, decreasing by 19 million tonnes or 12% due to the economic slowdown and more electricity output generated from hydro-powered dams in the middle of the year, resulting in decrease coal consumption. The government's policy to reduce coal imports and the global coal prices that rose sharply also caused demand of imported coal to decrease. The competition thus remained high.

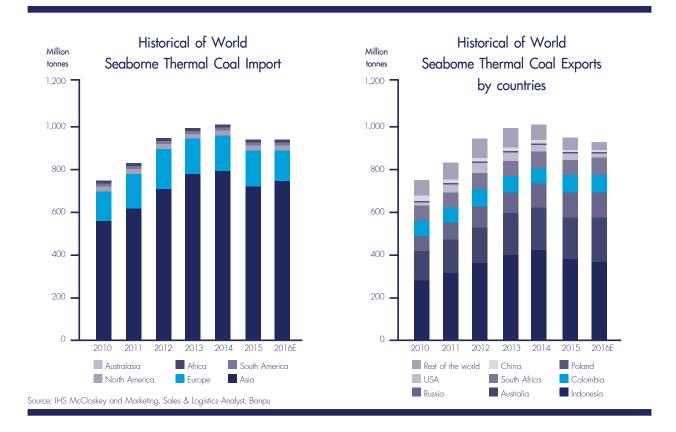
In 2016, coal imports into North Asian market, especially Japan, had been expected to decrease due to the economic downturn and maintenance shutdowns of coal-fired power plants. Japan was estimated to import 129 million tonnes of coal, decreasing by 3.7% over the previous year due to maintenance shutdowns of

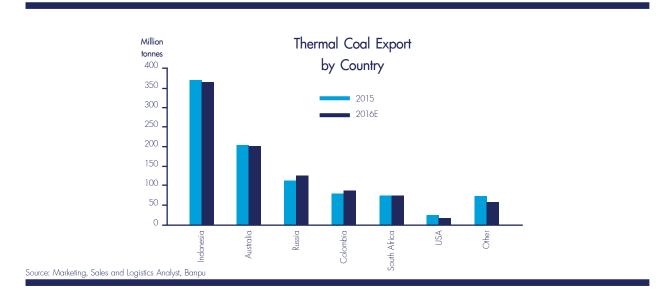
Banpu Public Company Limited



many coal-fired power plants. The competition in Japan in not so strong because most coal buyers had entered into a coal purchase agreement since the beginning of the year and there were only few buyers left in the market in the latter half of the year. Moreover, those buyers bought most of their coal from the coal traders whom they had agreement with so there was only little quantity left for the spot market.

The total imports of South Korea decreased by 0.4% over the past year despite the shutdown of many coal-fired power plants. This was because they used the coal from their reserves to delay the purchase of coal when the global coal prices increased sharply. Major coal buyers in South Korea had attempted to increase the competition by buying from other quality sources. In 2016, South Korea also bought coal from Russia,





Colombia, South Africa, and the U.S. while decreasing imports from Australia.

Southeast Asia is a fast-growing market and it was expected to grow approximately 11 million tonnes or 17.4% over the previous year. The fast-growing markets include Vietnam, the Philippines and Malaysia, where the competition decreased dramatically in the latter half of the year due to a tight market situation. Although the coal buyers tried to delay the purchase of coal during the time when coal prices were surging, the imports slightly decreased because of the continuous demand for coal consumption from the coal users.

Coal demand in Europe in 2016 was expected to lower by 27 million tonnes, or 16.9% over the previous year. The UK is the country where coal imports reached the lowest level at 12 million tonnes or a 70.6% decrease. Imports into other major countries, such as Germany, Italy and Spain also declined, except for Turkey, where coal imports were expected to rise by approximately 9.8% over the previous year. Even though coal demand in Europe contracted drastically, market competition was not very strong during the second half of last year as coal producers shifted more coal exports to Asia, thus balancing the supply of coal in Europe with the demand.

Exports of thermal coal in 2016 amounted to approximately 922 million tonnes, decreasing by 2.0% over the past

year. Six major thermal coal exporters are Indonesia, Australia, Russia, Colombia, South Africa and United States, covering 93% of global exports. In the second half of 2016 when coal prices surged sharply, coal producers could not raise much productivity because of adverse climate and lack of investment to expand production in the past few years during which coal prices declined. In addition, the coal producers were unconfident with unstable prices so they tended to delay new investments. The increase of productivity thus need a longer time.

Indonesia is the biggest exporter of thermal coal with total exports in 2016 of 365 million tonnes, decreasing by 7 million tonnes or 1.8% over the past year. India's import cut affected Indonesia greatly but China's soaring coal demand in the latter half of last year contributed to recovery of Indonesia's export. As coal production output increased only slightly, the market became strained with less competition.

Australia remained the second largest exporter of thermal coal after Indonesia with total exports in 2016 of about 198 million tonnes, decreasing by 3 million tonnes or 1.7% over the previous year. Its major markets were still Japan, China, South Korea and Taiwan. Competition among coal producers in Australia was not so strong in the latter half of 2016 because the productivity could not fill the increasing demand.





Source: IHS Energy

Russian coal export to Non-CIS countries this year was expected to grow by 8.2% because Russian rubles softened. Although rubles became slightly stronger, Russian market was still competitive. Russia exported larger amount of coal to Asia after the European market had contracted by entering into South and Southeast Asia. During winter, Russia faced difficulties in exporting coal from heavy snowfall and a shortage of rail cars, resulting in lower coal shipments. Russian coal exports remained subdued around the end of the year.

Colombia is another country which exported more coal last year and was expected to raise exports by 10% over the previous year despite heavy rainfall around the end of the year. Colombia is a major coal exporter to Europe, with the least production cost among all competitors. Due to economic recession in Europe, Colombia has diverted more of its coal exports to Asia.

In 2016, South Africa's coal exports were expected to decrease by about 2 million tonnes or 2.1%, over the past year owing to increased domestic demand.

In early 2016, there was an agreement between coal users in Japan and major coal producers in Australia called the Australia-Japan Reference Price, presetting

a price for coal purchase which will be delivered in 2016 (April, 2016 to March, 2017) at USD 61.60 a tonne, decreasing by 9.1% over the previous year. After the agreement was signed, coal price in the global market started to recover in the second quarter and rose drastically in the latter half of the year. Productivity cut by China pushed coal prices to the highest peak in November and declined around year-end because the government began relaxing restrictive measures to reduce surplus production of coal. However, coal prices at the end of year remained high when compared to the beginning of the year.

Competition in 2017 is expected to be weaker as the Chinese government set a goal in the 13th Economic Development Plan (2016-2020) to reduce surplus coal by 800 million tonnes, which is higher than the previous goal by 300 million tonnes. The government aims to limit coal imports at the same level as last year. It is expected that China's coal imports will remain high. Apart from that, the Chinese government announced a policy to stabilize coal prices by setting reference price at around CHY 500-570 a tonne. The Chinese government will intervene when coal prices fluctuate and become lower or higher than the reference price. The high reference price will assure that the prices

Unit: Million Tonnes

will not be as low as they had been during the last few years. India's demand for thermal coal is expected to decline, but this will be compensated by the greater demand in North Asian and Southeast Asian countries. To increase productivity, coal producers will have to expand new investments so it will take some time for the productivity to increase. Therefore, it is expected that the competition in the Asian market will remain low.

Competition in Europe is expected to be stronger than in Asia because coal demand is expected to grow only slightly, but the increased coal prices will attract producers from Colombia, Russia and the US to export more coal to Europe. The increase in freight rates will lessen the chance for Colombia to compete in Asia. However, the U.S. is the most disadvantaged competitor in the European market because the production cost in the U.S. is higher.

#### 2. Competition in Thailand

The coal demand in the private sector in Thailand for the first 11 months of 2016 was at 20.5 million tonnes, decreasing by 0.30 million tonnes over the past year. The total coal imports for the first 11 months of 2016 amounted to 20.0 million tonnes, decreasing by 0.26 million tonnes over the past year. The price surge starting from the middle of last year delayed coal purchase from buyers who, instead of ordering new lots, depended on their stockpiles. The total coal production in Thailand for the first 11 months amounted to 0.53 million tonnes, decreasing by 0.04 million tonnes depended on their stockpiled coal, due to scarce resources and small coal reserves. Market competition in Thailand remained strong although the global coal market has entered equilibrium. This is because Thailand is an open market and there are several traders who are permitted to import coal for reselling. However, those traders who own overseas mines maintain a competitive edge as they have cost control, delivery stability and consistent coal quality. Therefore, major coal buyers prefer traders with their own mines. Small buyers tend to buy coal in the highly competitive spot market where there are many traders who mainly use low pricing strategy.

#### Demand for Coal from Private Sector in Thailand

(Excluding EGAT's Mae Moh Power Plant)

					11 months				Gro		
	2012	2013	2014	2015	2015	2016	2012	2013	2014	2015	2016 (11 months)
Domestic coal	1.61	1.78	1.36	0.62	0.57	0.53	-43.6%	10.2%	-23.6%	-54.4%	-7.1%
Imported coal	18.58	17.99	20.89	21.91	20.26	20.00	14.5%	-3.2%	16.1%	4.9%	-1.3%
Total	20.19	19.77	22.25	22.53	20.83	20.53	5.8%	-2.1%	12.6%	1.2%	-1.4%

Source: Energy Policy and Planning Office, Ministry of Energy

Coal demand in 2017 is expected to grow slightly in line with the economic recovery. Cement demand is expected to increase due to increased state infrastructure construction projects. However, cement exports tend to drop due to commercial operations of the cement producers in neighboring countries. Coal demand in other industries tends to improve, and competition will remain strong because there are many coal traders in the market. Coal prices in the global market will remain relatively high and stable compared to the previous year thanks to China's measures to maintain price stability.



### For the previous 3 years ended 31 December

Banpu Public Company Limited

			2016		201	5	2014		
Products/Services	Conduct by	% of shareholding	Revenue (USD Million)	%	Revenue (USD Million)	%	Revenue (USD Million)	%	
Sales Revenues:									
1. Domestic Coal	Banpu	-	0.09	0.12	0.47	0.32	0.15	0.21	
2. Imported Coal	Banpu	-	77.88	99.33	146.05	99.44	71.33	99.52	
3. Other Revenues	Banpu	-	0.43	0.55	0.35	0.24	0.19	0.27	
Total Sales Revenus			78.40	100.00	146.87	100.00	71.67	100.00	

Banpu Public Company Limited and Its Subsidiaries

		% of sharehold- ing	201	6	201	5	2014	
Products/Services	Conduct by		Revenue (USD Million)	%	Revenue (USD Million)	%	Revenue (USD Million)	%
Sales Revenues - Domestic								
1. Domestic Coal in Thailand	Banpu	-	77.97	3.45	146.52	5.92	61.98	1.97
	BMC	99.99	54.72	2.42	41.37	1.67	-	-
	BPI	99.99	-	-	6.68	0.27	27.87	0.89
	CMMC	100.00	-	-	0.02	0.00	94.43	3.00
2. Domestic Coal in Indonesia	Indominco	68.08	107.39	4.75	150.60	6.08	183.93	5.85
	Kitadin	68.08	-	-	-	-	5.32	0.17
	Bharinto	67.41	19.18	0.85	21.41	0.86	25.10	0.80
	Trubaindo	68.08	46.36	2.05	24.71	1.00	19.22	0.61
	Jorong	68.08	14.82	0.66	17.33	0.70	22.69	0.72
3. Domestic Coal in Australia	CEY	100.00	379.16	16.78	343.74	13.88	496.97	15.80
4. Other Revenues			25.00	1.11	22.39	0.90	27.92	0.89
Total Sales Revenues - Domestic			724.60	32.07	774.77	31.28	965.43	30.70
Sales Revenues - Overseas								
1. Coal - International Trade	Indominco	68.08	610.02	27.00	599.62	24.21	914.40	29.08
	Kitadin	68.08	9.26	0.41	31.18	1.26	40.18	1.28
	Bharinto	67.41	117.60	5.21	131.30	5.30	111.58	3.55
	Trubaindo	68.08	328.72	14.55	432.55	17.47	471.05	14.98
	Jorong	68.08	16.50	0.73	14.14	0.57	14.40	0.46
	CEY	100.00	281.27	12.45	302.42	12.21	459.80	14.61
	BMC	99.99	-	-	21.49	0.87	-	-
2. Power	BIC	78.71	156.60	6.93	169.11	6.83	168.09	5.34
3. Gas	BNAC*	100.00	14.64	0.65	-	-	-	-
Total Sales Revenues - Overseas			1,534.61	67.93	1,701.81	68.72	2,179.50	69.30
Total Sales Revenues			2,259.21	100.00	2,476.58	100.00	3,144.93	100.00
Participating Profit (Loss) from Investi	ment Joint Ve	ntures						
(Equity Method)		118.37		51.87		86.55		
Total Revenues**			2,377.58		2,528.45		3,231.48	

#### Notes:

- 1. Other revenues consist of other services.
- 2. The Company did not realize sales revenue from its power business in Thailand as its shareholding is not more than 50%
  - \* BNAC : Banpu North America Corporation
  - \*\* Revenues exclude interest, administrative expenses etc.



# Risk Management and Risk Factors

Banpu and its group of companies emphasize the importance of risk management to achieve business goals and objectives by reducing the likelihood of risks or mitigating their associated consequences in order to gain business opportunities that add value to the Company. Business risk is under the management of all executive levels and also supervision of committees such as the Risk Management Committee (RMC) which convenes on a quarterly basis to monitor and implement a risk management plan. The meeting of the Financial Management Committee (FMC) is aimed at managing financial risk every month, and the meeting of the Commodity Risk Management Committee, convenes every two weeks to discuss coal and oil price fluctuation, which is one of the key factors affecting the Company's profitability. In addition, the review of organizational risk management is reported to the Audit Committee and the Board of Directors on a quarterly basis. The Company also set up Business Continuing Management (BCM) as part of a contingent plan to promptly respond to crisis. There is a Business Continuing Management Steering Committee in charge of formulation and review of policy and strategies on business continuity management as well as Business Continuity Plan (BCP) to have the Company's operations continue in critical time without causing adversary effects on or interrupting the businesses of the Company, customers and stakeholders.

#### 1. Strategic Risk

### 1.1 Risk in Strategic Planning and Implementation

In response to the fast-changing global economy, energy situation, and technologies as well as the higher expectations of investors and stakeholders, the Company has created systems and processes to manage the risk in strategic planning. It periodically reviews the Company's strategy to revise its vision, direction and business strategy to appropriately respond to change

and launch a counteractive plan in preparation for future uncertainties. The meeting is held on a monthly basis to assess the situation, trends and scenarios based on the comparison of information from credible institutions and sources, and to develop tools to help systematically forecast economic trends for accurate business decision making and future planning.

# 1.2 Risk in Human Resource (HR) Management and Development to Facilitate Future Growth

To facilitate future growth, the Company not only improved the recruiting and HR development processes, but also reviewed the organizational structure and analyzed the workforce and HR development plans to align with its long-term strategies of business expansion. Additionally, the Company implemented a succession plan by developing knowledge and expertise of its personnel to prepare them for their future senior management positions. This was carried out through individual development plan, job rotation, and in-house knowledge sharing activities in order to ensure that its personnel have relevant knowledge and abilities to the Company's business and can lead the Company to achieve sustainable growth.

#### 1.3 Corporate Reputation Risk

Since a negative reputation could have a tremendous and rapid effect on the Company's prestige and image, in both the short and long terms, the Company places importance on the management of reputation risk. It focuses on its sustainability development policy combining appropriate business strategy, transparency and fairness in business practices, workplace safety, and responsibilities to the environment, communities and society. Above all, for mutual development, the Company has been striving to improve employee capacity, create sustainable value to stakeholders and build good relationships with all partners. The Company

Banpu Public Company Limited

has supported various activities that benefit the communities, the environment and development of youth potential, for instance, Ban Khao Samorkhon Sustainable Development Project and Power Green Camp. The Company has also carried on its key business practice to improve the welfare of all communities both in Thailand and other countries where it operates.

Moreover, the Company has implemented effective communication strategies in order to convey fast and accurate information to stakeholders. Quarterly conferences on the Company's performance for investors and analysts and a direct communication channel via the Investor Relations Department attest to this for all domestic and international investors. The Company also focuses on good community relations, maintaining effective communication and aligning work procedures with its Corporate Social Responsibility (CSR) values. Additionally, the Company periodically conducts community and stakeholders' satisfaction surveys and customer satisfaction surveys to gain information for the improvement of the Company's business.

# 1.4 Risk from the Inability to Increase Coal Reserve for Commercial Purpose

As of 31 December 2016, the Company has a total amount of coal reserve of 718.42 million tonnes in Indonesia, Australia and China. The coal reserves by countries are as follows: Indonesia 197.46 million tonnes, Australia 347.5 million tonnes and China 173.46 million tonnes. The quantity of coal reserve has been audited and certified by a consultant company adopting the reporting standard of the Australian Code for Reporting Mineral Resources and Ore Reserves, or "2012 JORC Code". The Company has a plan to assess and evaluate the quantity of coal reserve when some commercial factors significantly change and show tendency to affect the existing reserve. Such commercial factors include coal price trend, cost factors and development of coal production technology. The Company always prioritizes the use of effective technology to reduce production cost and studies the

opportunities for coal mine acquisitions in order to increase coal reserve and to maximize the life cycle of mines

#### 1.5 Risk from Investing in New Business

In managing this risk, Banpu has strived to ensure that its new investments create value to the Company no less than what had been estimated prior to the acquisition. In doing so, the Company has set the investment decision-making process in which the Investment Committee, comprising executive officers and experts, carefully considers and provides opinions on new investments with respect to alignment with the Company's growth strategies, return on investment according to the Company's criteria, and investment risk assessment. Furthermore, Banpu also focuses on the management to achieve the synergy between the Company and the new entities via resource planning, staff capacity development, and appropriate restructuring to facilitate change management, which will ensure smooth investment and sustainable growth and secure investment return according to the strategic plan. In 2016, the Company adjusted its strategic plan in response to changes in global energy and technology trends to facilitate the supply chain management from upstream to downstream and to diversify businesses that are safe and environmentally sound. The Company capitalizes on existing skills and strengths and has continuously strived for innovation, shown by its new investment in solar power business in Japan and China and shale gas production in the U.S.

#### Financial Risk

# 2.1 Risk from Failure to Secure Financial Resources as

Banpu manages this risk to ensure that the Company has sufficient funds at an appropriate cost to its financial structure. A strategic financial plan has been formulated in accordance with the Company's strategic plan. Various scenarios relating to both internal and external sources of funds are carefully analyzed. The Company places great emphasis on maintaining good relationships with financial institutions in order to ensure access to funding, which allows the Company to efficiently and

constantly manage cash flow. The Company also strictly complies with its agreement with the financial institutions.

#### 2.2 Exchange Rate Risk

The Company follows risk mitigation plans to reduce impacts associated with fluctuating exchange rates at both corporate and group levels in Thailand, Indonesia, China and Australia. The Company strives to create a balance between its foreign-currency assets and liabilities (Natural Hedging) and has adjusted its foreign currency forward contracts based on its estimated revenues, expenses, and loan payments. Other financial instruments are chosen as appropriate.

As of 31 December 2016, 18% of the Company's debt was dominated in Thai Baht; 71% in US dollars; 10% in Japanese Yen; and 1% in Chinese Yuan. The Company also allocated funds in US dollars, or converted them into other foreign currencies as necessary to accommodate overseas investments.

#### 2.3 Interest Rate Risk

The Company manages interest risk by closely monitoring the trend of interest rates in the world's markets as well as in Thailand. The Company allocates its debt portfolio, both short and long term contracts, for loans with fixed and floating interest rates corresponding to their types of investments. The Company has chosen financial instruments to create alternative sources of funding to appropriately manage its financial structure in each country of investment. For example, interest rate swaps are being used to reduce the interest rate risk from fluctuations in consistence with the trend.

As of 31 December 2016, the Company's proportion of fixed rate loans and floating rate loans was 70% and 30%, respectively.

#### 2.4 Taxation Risk

To mitigate taxation risk, Banpu and its group of companies paid tax within the period of time specified by law. The Company has created tax guidelines and prepared complete documents for settling tax payment.

The investment structure has constantly been reviewed. Also, all executives in each country are assigned to closely monitor changes in rules and policies of their country, both at central government and at local level. This includes hiring local legal consulting firms to provide legal advice complying with local laws.

In case there are taxation disputes with the government offices, the Company shall provide such offices factually accurate tax information related to its business. If necessary, the Company shall hire expert tax consultants to offer opinions and handle the disputes.

#### 2.5 Risk from Volatility in Coal and Gas Prices

To manage the risk from price fluctuations affecting financial performance, the Company has set up a Commodity Risk Management Committee (CRMC) to analyze coal and gas price trends and partly manage risk by using financial derivative tools, such as coal and gas swaps to minimize negative impacts and to retain margins. Moreover, the Company closely monitors and assesses the global market situation to seek the most opportune timing to settle customer sales contracts. The proportion of coal sold on an index-linked basis to that sold on a fixed-price basis is constantly adjusted to suit the market situation.

## Operational Risk

#### 3.1 Risks in Coal Business

#### 3.1.1 Risk in Coal Delivery

To ensure that the Company can punctually deliver coal to customers with right quality and quantity as set forth in the agreement, the Company managed delivery risk in 2016 as follows:

- Improvement of communication between operations and sales to help devise a more effective and efficient plan for coal production and sales, which can facilitate a more flexible sales strategies, both qualitative and quantitative, which are responsive to changing situations.
- Improvement of conveyor loading system and reclaim system at Bunyut Port, which can reduce time used for loading coal into each cargo ship.

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- Installation of a magnetic catcher on the conveyor before loading coal onto a ship, including traceable measure to solve problems at root cause.
- Improvement of supply chain management process by using an optimization system to support decision-making for provision of guideline to operation units to adjust an appropriate production plan in advance, to effectively respond to coal delivery demand in the future.
- Setting minimal quantity of safety stock to lessen the severity of volatile demand which depends on production situations in different periods of time.
- Continuous maintenance of the roads used to transport coal.

#### 3.1.2 Risk from Rising Production Cost

Production cost is a significant factor affecting the profitability of the Company. Thus, Banpu places importance on managing risk from production cost to ensure the achievement of its operating results and profits. In 2016, the Company managed this risk by analyzing production cost of each operation and formulating a more efficient and effective production management. The risk has been managed in the following manners:

- Plan the process of coal digging in order to minimize the distance coal and reject soil is transported, and set a production plan to reduce the quantity of coal in stockpiles to the appropriate level.
- Study feasibility of using additional technologies to transport coal such as adapting an electric overland conveyor system at Indonesian mines.
- mprove In-pit Crushing and Conveying (IPCC) system in the eastern part of Indominco mine in order to shorten the transport distance, which enhances machine availability to the higher level than planned.
- Reduce minimum payment obligations on Take-or-pay Contracts in order to decrease

- the logistic cost of coal to the port in the New South Wales, Australia.
- Reduce fuel cost for tug boats, as well as negotiating adjustments to hire contracts for coal barging in order to reflect the actual cost.
- Introduce Step Change Program to improve effectiveness and reduce cost in Indonesian and Australian mines.
- The Company regularly organizes training for its employees on how to handle heavy machinery with optimal fuel consumption. The efficiency of electricity generators is also inspected, and the water management systems in coal mines are set to minimize the use of water pumps.

#### 3.1.3 Risk from Contractors' Operations

Contractors' operations substantially affect production and performance of coal mines. The major risk is when the contractors cannot operate as planned due to such problems as late arrival or installation of machinery, maintenance issues, ineffective operation planning, or labor problems both in terms of efficiency and quantity. To address such risk, a Contractor Management System (CMS) has been introduced to more efficiently and closely manage, control, and monitor the performance of contractors. The system helps select appropriate contractors before entering into a contract based on their past performance. Additionally, the Company has applied the total productive maintenance (TPM) system in identification of problems and improvement and development of operations in a sustainable fashion. The Company's operating units and contractors have joined hands to find preventive measures against potential problems.

#### 3.2 Risk in Power Business

#### 3.2.1 Risk from Power Buyer

The Company's BLCP and Hongsa Power Plants are investment under Independent Power Producer (IPP) scheme. The BLCP Power Plant's electricity is solely supplied to the Electricity Generating

Authority of Thailand (EGAT) under a long-term Power Purchase Agreement (PPA) with EGAT. Similarly, the Hongsa Power Plant entered into a long-term PPA with EGAT and Electricité du Laos (EDL). The agreement guarantees stable electricity prices as it stipulates that pricing structure may be adjusted changes in fuel price, Thai baht exchange rates, and inflation rate. Accordingly, the Company's power plants face very low risk in power purchase.

China, on the other hand, has no long-term purchase agreement; therefore the risk in power and steam purchase there is higher than in Thailand. However, as the Company's combined heat and power (CHP) plants are highly efficient, the Chinese government granted them sole distributor rights to supply steam and heat in designated areas. The plants have also been accorded privileges to supply electricity to local electricity authorities and have been subsidized by the local governments, which is a beneficial factor for managing risks. According to the Chinese government's energy efficiency and environmental conservation policies, relevant rules and regulations have been amended in such a way that may affect the power business in China. In response to the policy change, the Company has implemented various risk management measures such as increasing the efficiency of energy usage within the plants and controlling environmental impacts in compliance with the government policy. In 2016, the Company's power business in China yielded higher revenue from selling of electricity and steam than expected in its plan.

### 3.2.2 Risk in Coal Supply

The BLCP Power Plant entered into a long-term contract to purchase coal from major and reliable suppliers, with clearly specified amount and quality of coal, to ensure sufficient supply for electricity generation in accordance with the PPA signed with EGAT. Accordingly, the risk associated with the failure to access good-quality coal is low. However, under certain circumstances, it may be necessary for BLCP to procure coal outside of

the said contract. For example, the supplier may be unable to deliver coal as planned due to an event of force majeure such as flooding in Queensland, Australia. In such cases, BLCP may purchase coal from other suppliers in the coal market. To date, the amount of coal purchased outside of the long-term contract has not exceeded 5% of the amount of coal needed each year, which is relatively low and has no significant impact on its profits. In addition, the BLCP Power Plant has closely and regularly monitors coal production and coal prices to mitigate the risk in coal supply.

In sourcing its coal supply, the Hongsa Power Plant leased a lignite mine concession from the license holder awarded by the Laos government. Before the launch of the project, a feasibility study was conducted to assess quantity, quality, production, and coal transportation plan for the entire project period. Therefore, the risk in accessing quality coal is low and the cost can be controlled in corresponding to the generation plan of the plant. Besides, the Company has prepared a coal reserve plan to cope with operational disruptions due to uncontrollable factors, including poor climate conditions, natural disasters, transport delays, accidents, and others.

The Company's power plants in China encounter the risk caused by uncertainty of policy on coal business in China, the world largest coal consumer, which led to coal price fluctuations in 2016, with a gradual increase since August. China's policy to reduce 500 million tonnes of coal production in five years caused coal prices to soar. The Company has managed the risk from rising production cost by closely monitoring the coal prices and developing its procurement plan according to its generation cost and plan. The Company also entered into an agreement to sell electricity to some clients. According to the agreement, pricing structure of electricity and steam can be adjusted based on the actual fuel costs at that time.

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#### 3.2.3 Risk in Power Generation Operations

There is a potential risk that the Hongsa Power Plant may fail to commence its operations as planned. The causes may come from machinery, equipment, or people as the plants are still in the initial phase of commercial operations. To manage the risk, the Company has closely and carefully monitored the operations, improved system stability, prepared adequate critical spare parts for the power plants, and organized staff's capacity development training and knowledge sharing among the companies in its group.

# 3.2.4 Risk from the Construction and Management of Power Plants

In 2016, the Company successfully managed the risk from the construction of the solar power plant project in China, and could commence the commercial operations in Shandong Province with a total power generating capacity of 90 MW. The Company managed to achieve this by its close monitoring of the project's progress, and coordination with the contractors to ensure that the construction quality is met.

#### 3.2.5 Risk from Solar Power Generation

The major factors affecting solar power generation are the intensity of the sun's radiation and leakage quantity from the power plant system. The Company manages these risks by using statistics of intensity of the sun's radiation to estimate the minimum amount of electricity the plant can generate and compare with the actual amount of electricity output. The Company also uses advanced technologies for solar power plants and carries out regular maintenance to control leakage levels within acceptable limits.

# 3.3 Risk in Shale Gas Business Risk from the Volatility of Natural Gas Price

The Company has diversified business in the shale gas production in the Marcellus Shale in Pennsylvania State of the U.S. The volatility of natural gas prices thus became a major factor affecting the Company's performance. Throughout 2016, the prices of

natural gas had greatly fluctuated and the average price was higher than the estimated level of USD2.5 per MMBtu while the price at NYMEX, the futures exchange, was USD3.72 per MMBtu. To prevent such risk, the Company used a financial derivative called Gas Collar to sell natural gas in the future exchange at the amount of 75% of the total natural gas production from Marcellus Shale.

#### Risk from Gas Producers' Operations

Because the Company's investment in natural gas business has been conducted through an investment fund, the Company's role in the investment is mainly about the approval of budget and annual operation plan agreed upon among producer and investors as stipulated in the contract. The Company has no authority over production outputs or production-related activities, which poses risk from the performance of gas producer. The Company managed this risk by focusing on the selection of gas assets in order to get good assets operated by reliable producers. After the investment, the Company reviews monthly performance and maintains good relationship with the gas producers to reduce the operation risk.

# 3.4 Occupational, Health and Environmental Risks

Banpu recognizes the importance of occupational health, environment and safety as a major factor affecting the Company's sustainable development. Therefore, it stipulated the "Sustainable Development Policy" as a framework for its safety and environmental practices. The Sustainable Development Committee, chaired by the Chief Executive Officer, was appointed to supervise and monitor the environmental and safety performance within the Company and entrusted the Health, Safety, Environment and Community Development (HSEC) Department to manage, coordinate and assist other units to ensure safety and environmental practices and alignment of the policy. The Company is also committed to continual improvement of its practices to meet international standards, including the ISO 9001 Quality Management System, the OHSAS 18001 Occupational Health & Safety Management System, and the ISO 14001 Environmental Management System.

#### 3.4.1 Occupational Health and Safety Risks

Due to the nature of coal mining and power plant activities which involve the use of heavy machinery and vehicles, the risk of accidents in the workplace is relatively high. In 2016, the Company has followed a work safety policy and promoted a safety culture among its staff at all levels and all contractors under the "3 ZEROs" policy which include:

- 1) Zero Incident: Preventing and altering unsafe behaviors and work conditions
- Zero Repeat: Taking all necessary action to address the root causes of any problems in order to prevent a recurrence of incidents
- 3) Zero Compromise: Strictly adhering to safety rules and standards without compromise
  - In 2016, the Company carried out the following activities to prevent and reduce workplace accidents:
- Promotion of Occupational Health and Safety Culture
- A Health, Safety, Environment and Community Summit (HSEC Summit) has been held for six consecutive years to share, discuss and brainstorm HSEC topics among all top executives of the Banpu Group. The objective is to define directions and set implementation guidelines in health, safety, and environment.
- Integration of safety system and safety culture to shape a holistic approach to occupational health and safety
- Determination of occupational health and safety indicators to assess the organization's safety potentials and continuous improvement

- Addition of lagging indicators of occupational health, such as sickness rate or occupational disease rate
- Site visits to Banpu group's power plants to learn about best practices in occupational health and safety and to enhance good corporate culture
- Executive safety training programs for executive officers from the level of vice president up, and supervisor-level safety training programs for managers and new staff
- Communication of safety information through various channels, such as emails, "Safety Girls" and video alerts via television screens installed on every floor in the office building.
- Emergency Response Preparation

Additionally, over the past years, the Company has applied a Business Continuity Management System to prepare itself for effective management of potential emergencies while being able to execute continuous operations and alleviate the impact of emergencies or crises that may occur, including accidents, natural disasters, or man-made crises, such as fires, chemical spills, floods, earthquakes, epidemics, protests or riots. The Company formulated the Business Continuity Plan (BCP), which focuses on the preparation of necessary resources, and organizing annual drills at operational and management levels to ensure the ability to handle emergencies and crises.

In 2016, the Bangkok office of the Company has been externally certified by ISO22301 Business Continuity Management System, which demonstrates that the Company's business continuity management system meets the international standard.

#### 3.4.2 Environmental Risk

The Company complies with environmental laws and regulations and strives to maximize effectiveness of resource utilization so as to preserve natural resources and to control direct and indirect environmental impacts, such as climate change, land utilization, water resources utilization and biodiversity.

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### Monitoring Environmental Changes to Determine Organizational Development Policy

The Company keeps close watch on environmental changes related to business operation throughout the value chain in order to formulate policy and investment scheme in accordance with such changes. In recent year, the climate change is a significant challenge to the physical environment and the economy. Natural catastrophes due to the climate change have become more extensive both in terms of frequency and intensity. The society expects alternative uses of energy use with lower emissions of greenhouse gas to lessen the negative impact on the climate change.

All of the Company's production activities, which include coal mining, electricity and heat generation, rely on energy as a major resource of production; the release of greenhouse gas into the atmosphere is thus inevitable. Realizing its responsibility in reducing the greenhouse gas emissions, the Company identified corporate policies and goals in greenhouse gas management in 2010 to enhance energy efficiency and promote the use of cleaner technology. The Company is now in the process of setting new goals in accordance with international agreements, such as the Conference of the Parties (COP). Furthermore, the Company has closely monitored the laws and regulations related to greenhouse gas emissions to accommodate for climate change impacts on the environment and the economy, and to align its climate strategies with the Paris Agreement, which is the outcome of the 21st Conference of Parties (COP 21), other agreements resulting from the COP 22, and the Company's policy on energy and reduction of greenhouse gas emissions in the countries it operates. The Company also follows legal updates to prepare for business operations impacted by the climate change, both physically and economically.

In 2016, Banpu revised its carbon-reduction policy, which prescribes greenhouse gas emissions in three areas: lower greenhouse gas emissions, adaptation, and research and development of

products to serve low-carbon societies of the future. The Company set a five-year goal 2016 to 2020 to reduce greenhouse gas emissions by 25% from coal production and by 15% from electricity generation from a 2012 baseline.

In terms of the investment strategy, the Company has been looking into renewable and alternative energy in response to the forthcoming low-carbon society, especially China, which has a clear policy to reduce greenhouse gas emission and increase the proportion of renewable energy by 15% of total energy use within the next five years.

#### **Environmental Compliance**

The Company takes compliance issues seriously. It strictly complies with applicable environmental laws and regulations, for instance, Environmental Quality Standards Regulations and environmental impact reduction measures, both of which are addressed in the environmental impact report. Last year the Company's environmental compliance performance remained high and continued to improve. Banpu focuses on managing major risks as follows:

- Soil erosion: The Company takes preventive
  measures to make sure that after mining, pits
  are filled as much as possible. Planting of
  vegetation will be undertaken as soon as the
  land refilling and grading are complete in order
  to decrease soil erosion and restore the land
  to a condition suitable for the planting of large
  trees.
- Water management: The Company has implemented a plan to reduce the amount of water used in its operation, including various water treatment processes, such as settling basins, and constructed wetlands, which are attuned to fit the space limitations, and water quality. The quality of water discharged from mines to public waterways is determined by the pH value and the turbidity. As for the pH value, the Company implements Acid Mine Drainage Programs to prevent water acidity by

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treating water that becomes acidic due to mining processes at mine sites, covering all stages of mining from mine exploration to production planning, land management and rehabilitation. A Successive Alkalinity Production (SAP) system for acidic water treatment has been implemented, resulted in approximately 50% reduction of calcium carbonate usage. Furthermore, treated water can be reused many ways within the operation sites, such as spraying for dust-control, coal-washing, and mine restoration. The Company invested in the construction of waste water treatment plant at Newstan Mine in Australia to treat underground water before discharge to supplement community use. Apart from that, the Company cleaned of the Wollangambe River affected by sediment leak from Clarence Mine. The effective performance was confirmed and commended by the state sector. The Company will keep monitoring the situation and maintaining the river for the next two years as well as setting additional safety standards to ensure an effective prevention of such incident in the future.

- Water Quality Management: The cooling water
  used in the Company's power plants is designed
  to be a semi-closed cooling system to reduce
  water discharge to the external environment.
  Outgoing waterways are designed for water to
  flow and be exposed to the air for as long as
  possible in order to lower the temperature to
  the level required by law.
- Air Quality Management: The quality of air exiting to the atmosphere is determined by the quantities of sulfur dioxide, nitrogen oxides and particulate matter. At its power plants in Thailand, Lao PDR, and China, the Company has installed various treatment and disposal technologies to reduce sulfur dioxide and nitrogen oxides, including the Low NOx burners, the circulating fluidized bed (CFB), The Electrostatic Precipitators (ESP) used for trapping fly ash, and the flue gas desulphurization (FGD) system, both semi-dry and wet, the selective non-catalytic reduction (SNCR), and selective

catalytic reduction (SCR). A continuous emission monitoring system (CEMS) was installed in chimneys and in the communities surrounding the plants to ensure that ambient air quality meets the standards required by law. In particular, the Company has improved its air treatment system at the power plants in China to meet the stricter air quality standards and to reduce urban air pollution. The Company has set its five-year plan 2013-2018 with a budget of approximately USD43 million, which could reduce air pollution levels to meet air quality standards set by the Chinese government.

- Dust management: Dust is naturally generated by mining activities such as pit opening, coal mining, coal preparation, and coal transportation. The Company has implemented several measures appropriate to each specific operation area, for example, planting trees as a wind-blocking barrier in high risk areas, reducing the vehicle speed in mining areas to reduce dust and for safety reason, and spraying roads and coal stockpiles with water. Dust levels in mining areas and nearby communities are also regularly measured to ensure effective control of dust.
- Hazardous Waste Management: All business sections of Banpu take appropriate measures to ensure the proper management of waste, especially the hazardous waste, in compliance with the local laws so that the waste will not pose a threat to the environment. In some cases, the Company may sell the waste, such as used lubricants, automobile batteries, and fly ash, to government-authorized buyers for recycling. As for fly ash from coal-fired power generation, the Company sold it to buyers who recycle it as building material. The Company also separated fly ash according to size in order to meet the market needs and to increase the sales price.

#### **Effective Resource Utilization**

Effective resource utilization plays a vital role in environmental conservation and cost reduction. Banpu focuses on the four areas of resource

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#### management as follows:

- 1. Climate Change: The Company is committed to taking its part in reducing greenhouse gas emissions. Thus, it has implemented an energy conservation project, and conducted a feasibility study to assess the use of alternative fuels in place of diesel. In addition, the Company also looks for opportunities to invest in alternative energies. Moreover, the company has supported construction of a community biogas plant near the Kitadin-Embalut communities so that people can learn to build their own source of energy for community use. The Company also has disclosed its carbon emissions information through its Carbon Disclosure Project (CDP), and its Sustainability Report.
- 2. Fuel Reduction in Power and Steam Production:
  - The Company also incorporated High Efficiency Low Emissions (HELE) technology in the Shanxi Lu Guang Power Plant, which is scheduled to commence operations in 2018. In addition, there were some improvements on machinery in other power plants, and recycling of toxic gas from steel production process in customer's factories as an alternative fuel, which helps reduce greenhouse gas emissions.
- 3. Land Use and Biodiversity: Recognizing the importance of land use, the Company has carefully planned its mining businesses in order to minimize its impact on the geography, biodiversity and ecology. Mine rehabilitation planning has been in place since the initial phase of projects, and it can be effectively used for land rehabilitation and community development. In order to effectively manage biodiversity, PT. Indo Tambangraya Megah Tbk (ITM), Banpu's subsidiary in Indonesia, in collaboration with Purwodadi Botanical Gardens since 2010 has conducted a survey and an in-depth study of biodiversity at the Bharinto mine located in Kalimantan. In 2012 and 2013, the study was expanded to the Indominco mine, which has made good progress in the study of biodiversity. The study was later expanded to other areas. The findings obtained

- from this study will be used to construct a model for future land and biodiversity rehabilitation. In 2016, the Company has started using a holistic approach to biodiversity assessment to quantify impacts of project operations and mine rehabilitation. Based on appropriate indicators selected for calculation, the Company is able to measure the overall impact and formulate a rehabilitation plan in the mining areas and might expand the plan to surrounding areas to compensate for impacts. This is aimed at creating positive effects to the Company's mining areas in terms of biodiversity.
- 4. Water Resource Utilization: The Company places a high priority on preservation of water resources, which can be seen from the Company's projects to reduce water use in production processes, recycle water, and prevent surface waters from being contaminated by waste water. Apart from this, waste water from underground mines is treated and distributed to supplement community use.

#### 3.5 Risk from Social and Community Impact

While emphasizing preventive measures to minimize impact on the environment, the Company also promotes activities that improve the quality of life in the communities so as to strengthen and foster sustainable growth of the communities. A risk mitigation plan has been implemented as follows:

- Community development standard operating procedures have been set up for mine operations, aiming to counter risk of adverse impacts on the communities. The procedures serve as guidelines and uniform standards for community development officers at all sites. Operational standards are occasionally reviewed to best fit with changing situations.
- A sufficient number of Community Development Officers (CDO) has been allocated at each mine site. The community development officers act as mediators between communities and the Company, and work with communities to improve their quality

of life as designated by the development plans. The CDOs can also assess the sensitivities of the communities at an early stage, and work out plans to resolve issues, or minimize any adverse impact.

- A Community Consultative Committee (CCC), consisting of representatives from the local government, local communities, and the Company, collaborates on drawing up community development plans which meet community needs, are consistent with the government's development plan, and are accepted by all related parties. Ongoing reviews and assessments of the progress, including problems and solutions, are addressed at the CCC meetings for further improvement.
- Community development programs are organized to meet each community's needs and to address its problems. The programs place emphasis on community involvement and capability-building so that the community can develop into an independent and sustainable community. The programs support development of communities surrounding the mines in such areas as job creation, infrastructure, education, basic health care, religion, culture, and environmental issues, thereby improving the quality of life and satisfaction among communities, and improving their relationships with the Company.
- The Community Development Department has worked closely with other departments in order to minimize risks arising from business operations, especially with regards to the environment and safety. Work starts from the planning stage, monitoring, evaluating, and preventing possible impacts from the Company's operations. This is to ensure that communication between the Company and surrounding communities, through the Community Development Department, is effective. The department collaborates with government agencies, local administrative organizations, and the media so that the Company is able to recognize the impact of its operations and resolve any issues in a timely manner.
- The Company has initiated a joint-program called, "Contractor Management in Community Development Work" in Indonesia to ensure that all community development projects are well organized and

- supported. By working closely with major contractors from the planning process, budget allocation, human resources allocation, to exchange of knowledge, expertise, and information, the community development projects have seen productive improvements.
- Follow-up assessments by all levels of management, including site visits, are regularly conducted to ensure that the Company has careful operations, clear working plan and well-defined risk management that causes no adverse impacts but instead benefit and satisfy both the communities and the society.
- Stakeholder satisfaction surveys on community development programs in Indonesia are conducted every two years to assess satisfaction and to identify weaknesses and risks as well as to find suggestions from the communities and related parties. The results of the surveys are used to set benchmarks for improvement and as a basis to ensure that the best interests of all parties are satisfied.

# 4. Risks in Compliance with Applicable Laws and Regulations

Recognizing the adverse consequence of compliance risk to the Company's operation and reputation, Banpu is committed to compliance with laws and regulations relevant to its operations both in Thailand and abroad. Moreover, the Company has developed processes and tools to manage the risks arising from the changes in regulations and policies in every country it has invested. The executives in each country are responsible for monitoring changes in both local and national regulations and policies, and communicating with governmental and private organizations, communities, and other stakeholders about the changes. The Company also hires local consulting firms to help interpret local laws and provide suggestions on legal compliance. A compliance unit regularly monitors the Company's operations to ensure that they fully comply with relevant laws and regulations.

# 4.1 Risks from Regulatory and Policy Change in the Countries Where the Company Has Invested

Overseas investment brings with it the possibility of

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risk associated with any regulatory change in the country of investment. In 2016, the countries where regulations, rules, and policies were substantially changed include Australia, China Japan and Mongolia. The Company managed these risks as follows:

#### Australia

- On 18 October 2016, the government of New South Wales issued the Hunter Regional Plan, which is a 20-year blueprint, to create a leading regional economy, biodiversity, and prosperous communities with sufficient accommodations and occupations for the population in Australia. The Company has coordinated with the government and other mines to develop its business plan in alignment with the blueprint.
- On 17 November 2016, the Parliament of New South Wales approved Biodiversity Conservation Act 2016. The act would be officially announced in early 2017 and become effective in mid-2017. The Company will subsequently have to use a new method for assessing biodiversity, leading to new calculation of compensation and alternative ways of compensation, including payment to the Biodiversity Trust. Currently, the Company has started accommodating its operations in accordance with new standards.

#### People's Republic of China

- To solve the oversupply in the coal industry, the Chinese government proclaimed the following control measures:
  - To cut 1,000 million tonnes of production capacity in three to five years starting from 2016, of which comprises 750 million tonnes from mine shutdowns and 250 million tonnes from reduction of coal production.
  - 2. To reduce working days of coal mines from 330 to 276 days per year, first effective in Shanxi Province since April 2016 and effective nationwide since May 2016. However, the policy was later relaxed because of coal shortage in the market.
  - 3. To limit production of high-sulfur and/or highash coal by not permitting new mine, halting or scaling down productivity of mines that are

- under construction or in operations.
- 4. To deny permission of new coal mines from 2016 to 2018.
- 5. To close down mines where have safety issues.
- 6. To promote coal exports.

The aforementioned measures have caused the coal prices of to surge, which positively affected the Company's coal business in China. Besides, the Company has strictly complied with both safety and environmental measures; therefore, the government relaxed working day restrictions for the Company's coal mine. Accordingly, the restriction did not have a significant impact on the Company.

- Strict measures on coal import to support domestic producers and pressure caused by oversupply in the country
  - 1) The aforementioned measure on the quality of imported coal has a slight impact on the Company because the amount of ash in coal produced by the Company's mines in Indonesia and Australia is 4 6% and 15 24% respectively. The amount of sulfur dioxide in coal produced by the Company's mines in Indonesia and Australia is about 0.5 2% and 0.3 0.6% respectively. Both ash and sulfur dioxide levels of the Company's coal do not exceed the limit.
  - 2) Since 15 October 2014, coal import tariff has been set at 3 6% based on types of coal. However, the Company's mines in Indonesia were not affected by such measure thanks to a free trade agreement between China and ASEAN, which allows tax-free export from Indonesia since 2012. The free trade agreement between China and Australia allows tax-free export from Australia since January 2017.
- Due to air pollution in China, the Chinese government launched policies on air pollution control for coalfired power plants, which will become effective from 2021 onward, as follows:
  - 1) Dust emission must not exceed 10 milligrams per cubic meter.
  - Sulfur dioxide (SO2) emission must not exceed
     milligrams per cubic meter.

Nitrogen oxides (NOx) emission must not exceed
 milligrams per cubic meter.

The local governments were allowed to enforce the new measure when they are ready by 2021. Furthermore, the Chinese government also requires that the average net coal consumption of coal-fired plants be lowered to 310 grams per kWh by 2021. The Company has increased more investment on the control of air pollution to comply with the new standards. It has planned to use ultra-supercritical technology at the Shanxi Lu Guang (SLG) Power Plant and designed a controlling system to lower the coal consumption to 310 grams per kWh.

- The Chinese government issued policies on the management method on combined heat and power (CHP) generation to promote reduction of air pollution, and improvement on CHP generation in the industrial sector. The policy promotes the use of pressure from CHP technology, which is highly effective and emits low pollution. This policy specifically offers benefits for the plants that use pressure to generate power during the winter. Using the CHP technology, the Company's power plants are eligible to benefit from such policy, namely they received approval to expand the use of CHP technology and exclusive support on sales price and quantity from the government.
- The Chinese government restricted the size of coal-fired power plant projects. The size has to correlate with power demand, and water resource and environmental conditions must be taken into consideration. This policy commanded closure of old coal power plants that were below standards on efficiency, safety and quality. It also denied or delayed permission for construction, of which follows a strict procedure, of new coal power plants that did not align with power demand. The Chinese government's restricted policy did not have a substantial impact on the Company's operations because its current power plants completely meet all the standards prescribed by the laws and regulations. In addition, the Company's new power plant, Shanxi Lu Guang, uses the

- advanced technology "ultra-supercritical system" to meet the emission standards.
- In 2015, the Chinese government launched the electricity system reform that commands electricity grid owners to charge electricity users according to state-determined price, and prohibits them from gaining profit from the difference between the buy and sell prices. This policy limits monopolies and increases competition by cutting cost and enhancing quality, which results in lower electricity price that is fair to both business and individual customers. The Power Transmission and Distribution Pricing Reforms were initially enforced in 12 provinces, and are expected to be enforced in the whole country by 2018. This policy did not have a negative impact on the Company's power plants in 2016 because the Company had entered into the power purchase agreement. However, after the opening to free market in 2018, the Company will be able to secure wholesales contract for the majority of its power capacities and the surplus capacity will be sold to the competitive markets in the form of power tariff and dispatch.
- The Chinese government announced an Instruction on Setting Up Renewable Energy Exploration and Utilization Target Oriented Guidance System in order to promote survey and use of renewable energy in accordance with energy development strategy. The strategy prescribes the proportions of renewable energy consumption at 15% and 20% of total energy consumption in 2020 and 2030, respectively. The policy may impact the working hours of the Company's coal-fired power plants in the future but will benefit its solar power projects in China.
- The Chinese government issued a draft document soliciting opinions on reduction of Feed-In-Tariffs (FiT) and reduction of subsidy for solar power generation, starting from 2017. From the document, there may be volatility of future income in solar power business. To cope with this risk, the Company prepares to reduce cost for project developments.

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#### Japan

• The Japanese government issued a policy to reduce the electricity charge from JPY 27 per kW-h in 2015 to JPY 24 per kW-h in 2016. However, the Company's under construction projects are not affected by the policy change because the price is fixed as signed in the contract regardless of the duration of the project.

#### The Republic of Mongolia

• In February 2015, the Mongolian government imposed additional legal regulations for 'Prohibiting Mineral Exploration and Extraction Near Water Sources, Protected Areas and Forests', or the so-called "Long Name Law", which requires the license holder to carry out a development and improvement plan in the affected area. Although the Company was only slightly impacted by these regulations because most of its operations are located outside the protected areas, the Company has completed its development plan required by law and already submitted the plan to the government.

#### 4.2 Risk from the Hongsa Power Project Court Case

The Company places a high priority on managing the risk from the Hongsa Power Project court case by setting up a special working team, comprising the representatives from the Board of Directors and the executives in order to track progress of the legal department and team of lawyers and has closely analyzed the pending situation. Current situations and related progress are reported to the Board and the executives. The priority is put on promoting understanding and confidence among stakeholders. On 9 September 2014, the Appeals Court dismissed the case for the reason that the Defendants (Banpu, Banpu International Ltd., Banpu Power Ltd., and Banpu's executives) had acted in good faith before and after the joint development agreement was entered into, and that the Defendants

did not commit any wrongful acts against the Plaintiffs. The Appeals Court also found that it was the Plaintiffs that breached the joint development agreement, and that the Defendants had no obligation to return to the Plaintiffs the 13 documents containing the information relating to the Hongsa Power Plant and the Hongsa Lignite Mine. The Plaintiffs have now filed a petition to the Supreme Court of Thailand against the judgment of the Appeals Court. The case entered into the Supreme Court's trial process in 2015 and it is expected that the appeal process will take approximately two to four years. Banpu Power's executives firmly believe in the Company's good faith in the development of the Hongsa Power Project.

### 5. Emerging Risk

Emerging risks are risks that have never been in existence or which the Company has never experienced, but may cause adverse effects as unexpected future changes may occur, such as political, legal, social, technological, environmental or natural changes. Some changes cannot certainly be estimated of their impacts of risks. The Company's analysis and assessment of long-term emerging risks highlighted disruptive technology and climate change, which may lead to change in laws and regulations, for instance, the 22nd Conference of Parties (COP 22) of The United Nations Framework Convention on Climate Change. The Company managed such risk by collecting information from reports and other sources about future events that may turn to be future risks, for example, insights from the World Economic Forum about the future scenarios. Better informed, the Company shall adapt its strategies to accommodate changes. In 2016, the Company adopted corporate strategy of diversification by investing in a more environmentally friendly business in response to the changing global energy situation. The Company entered the solar power generation market in Japan and China, and set up a new business unit to be responsible for energy technology business.



# Internal Control and Risk Management

Banpu has established internal control and risk management systems that appropriately cover all major business activities. The Company's directors, executives and employees are mutually responsible for the development of the systems, improvement of their efficiency and effectiveness, and compliance with international standards both in its operations and information technology system while taking into consideration all incurring costs and anticipated benefits. Monitoring framework was adopted to ensure the highest efficiency of the operations. The Audit Committee is responsible for reviewing and assessing the adequacy of the internal control and risk management systems to ensure their efficiency and effectiveness and compliance with applicable policies, laws and regulations. The Committee is also required to confirm the accuracy and reliability of financial reports, accounting reports, and other reports as well as transaction records with connected persons. Internal Audit Department takes responsibility for reviewing the operations of Banpu Group and providing consultancy and advice to improve effectiveness and efficiency of the internal control system to reasonably ensure that the Company will be able to achieve its goals as set in its mission and strategies.

In the Board of Directors' Meeting held on 26 January 2017, the Board assessed the internal control system based on the internal control adequacy assessment report previously reviewed by the Audit Committee, which follows the Securities and Exchange Commission's (SEC) framework. The SEC's internal control framework, which is based on COSO Internal Control – Integrated Framework (2013), consists of control environment, risk assessment, control activities, information and communication, and monitoring activities. The overall assessment demonstrated that the Company has an adequate, appropriate, and effective internal control system.

The Board of Directors' views regarding the Company's internal control system can be summarized as follows:

#### 1. Control Environment

Banpu is committed to promotion of sound, effective and efficient control environment to achieve its predefined business goals. The Company has an appropriate management structure, with a clear chain of command and authorization levels in accordance with executive ranks to ensure that its management and operations are effectively executed. Roles and responsibilities in major operating units have been clearly defined to enable checks and balances. Major policies and regulations are periodically reviewed in response to any changes in the internal and external environment. The Company maintains its standards on recruitment and management of human resources and assures that they are in line with the corporate culture "Banpu Spirit". Moreover, the Company has the compensation standards in determining reasonable and appropriate compensation based on employee performance. Human resource development is carried out through individual development plans, succession plans and staff rotations. The Company also places great importance on good corporate governance and the Code of Conduct. It established a whistleblowing channel to receive complaints and grievances regarding corporate governance and business ethics. Banpu has participated in Thailand's private sector Collective Action Coalition Against Corruption (CAC), and in 2016, it issued Related Party Transaction Policy to create a clear transaction process and enhance transparency of the financial transactions.

#### 2. Risk Assessment

The Company recognizes the importance of risk management and preparation for potential risks amid changes caused by both internal and external factors that threaten its business activities at department,

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business unit, and corporate levels. Risk assessment enables the Company to monitor critical risks in a fast-changing scenario in a systematic and timely manner and to find right solutions to those risks. Additionally, the Company has created a database from the information gained from risk assessment for forecasting risks and preparing for the development and improvement of management systems. The management and staff of the Company all take part in assessing risk factors and monitoring risks by assessing the likelihood and the size of negative impact including risks of corruptions. Preventive measures and a recovery plan are identified to promptly respond to the risks. The Company also set up a department to take charge of risk management. Apart from that, Banpu reinforces and communicates the importance of risk management continuously across its organization to prepare for uncertainty. The Company utilizes risk management as a tool to broaden its investment horizon and to monitor the implementation of investment strategies in order to ensure that it is achieved in a timely and realistic manner. The Company's risk management department is responsible for monitoring the progress made in implementing measures and a recovery plan, and preparing risk management reports reviewed by the Audit Committee for the Risk Management Committee. The risk management reports are submitted to the Board of Directors on a quarterly basis.

#### 3. Control Activities

The Company's policies, rules and regulations are established in writing and regularly reviewed to ensure compliance with plans, rules and regulations, and practices. In 2016, Banpu improved various operation processes, namely Carbon Policy, Operational Excellence Policy and Standard, Mergers and Acquisition, and Investment Committee—Investment Decision Process. It strives to ensure that all departments have an adequate internal control system, clear and appropriate division of labor with an effective system of checks and balances, precise delegation of management and approval authority, and Key Performance Indicators (KPI) linked to the Company's goals. The Company's assets are safeguarded to prevent them from personal

abuse and monitored with the appropriate and effective IT control system. Seminars on internal control are held by the Internal Audit Department to share knowledge and increase understanding of internal control for its staff at the headquarters and the executives of its subsidiaries in Indonesia.

#### 4. Information and Communication

Banpu has developed an effective and secure information technology system in compliance with the applicable laws to facilitate energy business and sustainable growth as part of its five-year IT Master Plan (2016 -2020). In 2016, it set up the Architecture Review Board and Enterprise Architecture working under the Information Technology department to oversee Banpu Group's business and technology architecture to ensure that it is transparent, flexible, and consistent with the strategic plan "Smarter & Greener", and ready for the management of evolving investment and technological changes. This is also an opportunity to use technology to create added value to business and operational processes. Moreover, the Company has an information gathering and collection system to provide the Board of Directors with accurate, complete, timely and effective information to facilitate effective decision-making. There are various information technology systems to support financial and important operations, for instance, planning and operating systems, enterprise assets management, financial management, and enterprise reporting system which help the Board of Directors make appropriate and timely business decisions. Other systems include web-based workflows, which is accessible from anywhere in the world via any computer and multi devices. In addition, the Company encourages the use of fast and modern technologies, such as websites, Google collaboration platform and electronic document management (EDM) system, to communicate important business information both within and outside the Company. For safety reason, rights to information access is clearly defined according to the employee's duties and responsibilities. A variety of effective intracorporate communication channels, including emails, PR activities and meetings are used to promote collaboration and improve goal achievement. In inter-

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corporate communication, the Company has Investors Relations and Corporate Communications departments that are responsible for the disclosure of information that must be equally accessible to all stakeholders.

#### 5. Monitoring Activities

The Company has established a monitoring system both at the management and operation levels. Operation results are reviewed and monitored by the heads and executives of each section. There are also meetings of the management to regularly monitor the achievement of operational goals. In the case that important issues arise and may affect the Company, the CEO and the

management will closely monitor the operation results and solutions reached by the concerned units. The Internal Audit Department is responsible for reviewing and assessing the adequacy and efficiency of the Company's internal audit system, and monitoring risk management's compliance with laws and regulations, providing advice to improve operational processes, and ensuring that the problems facing the Company have been solved in a timely and appropriate manner. The Department is also required to regularly submit internal control reports to the Board of Directors, the Audit Committee, the CEO, and the management.



# Sustainable Development

# Sustainable Development Policy

With the business credo: "an industry will be strong only when it is developed in tandem with social and environmental responsibility", the Company has been operating its business on the basis of good corporate governance and management to find a balance between economic, social, and environmental sustainability. The Company has also been applying international standards of practice in determining strategies for sustainable development in order to enhance business competitiveness and create values for all stakeholders.

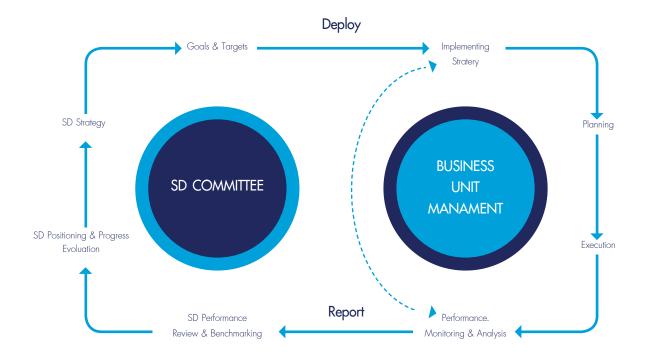
#### **Enhancement of Competitiveness**

- Employees The Company respects for human rights and treats its employees without discrimination. It strengthens corporate culture through "Banpu Spirit" as well as encouraging its employees to learn and fully develop themselves, and promoting leadership and functional competencies.
- Developing Operational Excellence The Company emphasizes flexibility and efficiency in business processes throughout the supply chain with innovations and continuous quality improvement.
   The Company offers products that cater to customers' needs and improves customer relations management while looking for new investment opportunities.



#### Creating values for all stakeholders

- Compliance with laws and regulations The Company is committed to conforming the Principles of Corporate Governance and all applicable laws and regulations, including international standards of practice.
- of employees and partners is the Company's great concern. It sets three goals to ensure both safety and health of all parties, namely zero incidents, zero repeat, and zero compromise toward safety. These goals are strictly adhered to in order to prevent loss from occupational accidents and injuries.
- Environment The Company aims at striking a balance between business development and environmental preservation. Prior to launching any project, an environmental impact assessment will be conducted to set appropriate measures to prevent and eliminate impacts to the environment. The Company has adopted an integrated approach which emphasizes waste minimization or resource maximization, prevention of impacts on the site, and appropriate environmental management throughout the supply chain.
- Community The Company strives to create sustainable value for the communities and society where it operates through its engagement with the communities, paying taxes, creating employment opportunities and organizing other activities to gain acceptance from all concerned sectors.



To achieve truly successful implementation of the policy, the Company will set up an effective monitoring system and clear implementation indicators.

### Sustainability Strategies

With a vision to be the "Asian Face of Energy" that is dynamic and committed to offer quality products and services, Banpu runs its business in accordance with the corporate governance principles and endeavors to balance economy, society and environmental concerns. National and international standards are inputs for setting sustainable development strategies, for instance, UN's Sustainable Development Goals (SDGs) are used as a guideline for determining sustainable development issues. UN Guiding Principle on Business & Human Rights, and Universal Declaration on Human Rights are used as policy inputs for setting up a human resources management policy and a human rights policy.

For Banpu, sustainability is not only limited to the Company operations, but also all business partners in the supply chain. The Company focuses on value creation for business development as well as incubating innovation with synergy. All business units are in full alignment in terms of sustainable development, keeping balance between enhancing competitiveness and creating value for all stakeholders.

#### Managing Sustainable Development

Sustainability as defined by Banpu means long-term existence of the Company, which does not lie only in its form but also in its true value determined by its business performance, people and corporate culture. Beyond the long-term existence, the Company is committed to create sustainable growth and development to the society, environment and all stakeholders. While moving forward to become the dynamic regional energy provider as stated in Banpu's vision, proactivity, excellence in quality, internationally accepted action plan, and flexibility are required to pave the way to sustainable growth.

Since 2013, sustainable development has been included in Banpu's long-term strategic plan to ensure that the Company has considered all possible impacts that its operations could have on stakeholders. The sustainability issues are also incorporated in the Key Performance Indicators (KPIs) of Senior Management.

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### Sustainable Development Committee

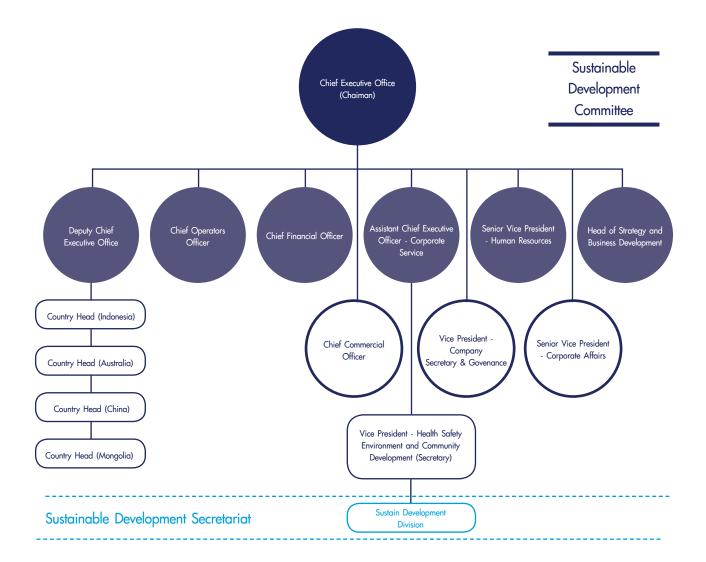
To continue implementing the sustainable development policy, Banpu set up a Sustainable Development (SD) Committee, chaired by the CEO, with senior executives and heads of business units as members. The SD Committee has the following duties and roles:

- Set and review the Company's sustainable development policy, including related policies and management systems, in order to enhance competitive capacity and to ensure that the Company's growth is aligned with social and environmental responsibility.
- Monitor the results of all business units' operations and decisions related to stakeholders and Company's credibility.
- Align the operations of all business units with the sustainable development policy.

The areas that the Sustainable Development Committee focuses on include leadership and corporate governance, compliance with laws and regulations, strategic planning, clients, finance officers, management, operational excellence, environment, occupational health and safety, community and government relations. A meeting for policy review and policy making is held annually. The committee also meets quarterly to monitor operation results of business units to ensure that they all comply with the stated policy.

### Human Rights Policy

The Company has incorporated respect for human rights into its sustainable development strategy. It respects human rights principles both at the local and international levels. Observing UN Guiding Principle on Business & Human Rights, and Universal Declaration on Human Rights, the Company strives to find measures



to prevent and minimize infringement of human rights caused by the Company's operations. These practices are undertaken as part of implementing the corporate shared value "Banpu Spirit".

#### Tax Management Approach

Being a good corporate citizen in every country where it operates is the Company's great concern and is considered as part of its sustainable development strategy. In addition to compliance with applicable laws and regulations of each country, the Company demonstrates its commitment to transparency through disclosure of tax payments. Moreover, all business transactions between Banpu's subsidiaries are based on transparency and fairness for the benefit of the host countries and all stakeholders.

### Sustainable Development Reporting

Since 2011, the Company has prepared and publicized its Sustainability Development Report (SD Report) to report the results of its sustainable development to investors and stakeholders. The SD reports can be found on the Company's website: http://www.banpu.com/sustainability\_report. The Company has been improving the quality of Sustainability Development Report, and it has been awarded for the best SD Report from the CSR Club of the Thai Listed Companies Association and Thailand's Securities and Exchange Commission (SEC) consecutively since 2012 - 2016.

Apart from that, the Company's SD reports have been subjected to Materiality Disclosures review by Global Reporting Initiative (GRI) in terms of accuracy according to the fourth generation of the report guidelines (G4). The Company's report passed at "In accordance-Core", which means that at least one Indicator is disclosed for each material aspect.



#### National Award of Sustainability

In 2015, the Stock Exchange of Thailand (SET) granted Sustainability Awards for the first time for listed companies who were committed to maintaining balance between economy, society, and environment while conducting business in accordance with the principles of corporate governance. In 2016, the Company was listed in Thailand Sustainability Investment - the list of companies with outstanding performance on Environmental, Social and Governance (ESG), for the second consecutive year.

#### International Award for Sustainability

In 2016, the Company was evaluated by the Dow Jones Sustainability Indices (DJSI), global sustainability benchmarks for assessing performance of leading companies worldwide trusted by global investment funds. Each year, DJSI selects 2,500 publicly listed companies from the stock exchanges around the world based on float adjusted market capitalization and assessment of sustainability performance including economic status and social and environmental responsibility. Based on these criteria, the top 10% of companies in each industry are listed by DJSI, and the list is reviewed and announced annually around September. Banpu has been selected by DJSI in the group of 'Emerging Market' with the highest score in Coal & Consumable Fuels industry for three consecutive years. This shows that the Company's commitment to sustainability have been globally recognized.

#### MEMBER OF

# Dow Jones Sustainability Indices

In Collaboration with RobecoSAM @

Additionally, the Company was assessed by Robeco Sustainable Asset Management, or RobecoSAM, which is a global investment funds management firm. RobecoSAM reviews global companies' sustainability performance using the same database as DJSI's. Each

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January, RobecoSAM publishes in RobecoSAM Sustainability Yearbook - a list of companies distinguished as RobecoSAM Sustainability Leader in each industrial sector. In the latest issue of RobecoSAM Sustainability Yearbook published in January 2017, Banpu has received "Gold Class" and "Industry Mover" awards in Coal and Consumable Fuels sector for the third and second consecutive year respectively. These recognitions demonstrate Banpu's performance excellence on sustainability compared to other world-class companies in the same industry.





## Human Resources Management in Response to Business Growth and Diversity

Human resources management plays a pivotal role in steering organization to stability and sustainability. Banpu hence places top priority on development of the human resources management system as well as its people to respond to changes in business and economic situations, which are considered challenges. In 2016, Human Resources Department has organized the following activities:

#### 1. Organizational restructuring

In response to rapid change in business competition and the Company's growing business direction and diversity in all upstream, midstream and downstream sectors, Banpu had a policy to restructure the organization in 2016. The policy has been put into practice across the organization, both in Thailand and overseas, to foster alignment and collaboration in accomplishing the Company's business goals.

# Organizational restructuring policy's objectives are as follows:

#### To improve organizational communication

The approach to improve organizational communication stresses on fewer hierarchies in supervision in order to shorten the communication distance, which helps improve the accuracy and precision of the communication while making effective decisions in a timely manner.

#### · To promote staff development

After the restructuring of the supervision hierarchy, duties will be redesigned to enable the staff to expand their capacity and decision making authority, which motivates them to do their jobs at full potential.

## To align human resources management with business directions

Organizational restructuring and job redesign enable the Human Resources Department to manage workforce and locate personnel more appropriately and efficiently. In 2016, the Company started restructuring its organizational units, resulting in the increased proportion of supervisees to supervisors from 4:1 to 6:1, and it also planned to complete restructuring in all units within the first half of 2017.

#### 2. Banpu Leadership Development Program

"Banpu Leadership Development Program" focuses on developing its management at various levels across countries to have strong leadership in order to cope with business direction. The program was designed and developed based on Banpu Training Roadmap to mainly strengthen "people mindset", "people management skills on how to be good at managing and leading people" and "Banpu Spirit", its corporate culture. The involvement of senior management with program design and implementation was the key success factor of the program. In 2016, Banpu arranged Leadership program as followed:

- 1) Banpu Global Leadership Program for "Strategic Leaders"
- 2) Banpu Global Leadership Program for "First Line Leaders"
- 3) Engaging Leader Program

The Company will continue developing its people for strong leadership pipeline in response to its business direction.

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# 3. Strengthening the Corporate Culture: "Banpu Spirit" and "Banpu DNA"

Banpu firmly believes that "Banpu Spirit" and "Banpu DNA", the corporate culture which the Management and staff have always strictly adhered to as the operating





Integrity

principle, plays a crucial role in creating harmonious collaboration among all members, regardless of gender, nationality, religion, language, age, or operating unit. These shared values contribute greatly to achieving organizational goals.



Care



Synergy

# Banpu DNA, the attributes, which is inherent for every single employee of Banpu, are as follows:

- Professionalism: Banpu staff have expertise, skills, and abilities to deliver to all stakeholders as well as
  reliability and determination to keep the promise they have with stakeholders.
- Adaptability: Banpu staff are ready to adapt themselves to change and response to business competitive conditions. They are able to analyze and predict future scenarios to prepare themselves to such changes.
- Positive Creativity: Banpu staff have a creative process of thinking, analysis and decision making, which contributes positively to their performance, problem-solving and the attainment of goals.
- Flexibility: Banpu staff are able to understand the underlying reasons for change and development.

  They are also ready and agree to embrace such changes and development.
- Mobility: Banpustaff are ready to adjust their working conditions regarding organizational structure, chain of command and appointment to work overseas, etc.

In 2016, Banpu organized the following activities to promote the significance of corporate cultures:

- Potential development for the Banpu Change Leader (BCL) staff through a workshop entitled "Igniting Banpu Spirit" with the aim of enhancing the staff's knowledge and creative thinking skills.
- Reiterating the strength of the corporate core value "Banpu Spirit" by organizing "Banpu Moving Forward Together". This activity aimed to create better understanding of the Company's business directions as well as inspiration and synergy for moving forward together in a sustainable manner.
- Creating inspiration for the staff with "Banpu DNA & Inspiration Talk", an activity which fosters inspiration and promotes converting creativity into innovation.
- Strengthening Banpu Spirit through "More Power Get Better" activities, which provide opportunities for staff to spend time and do activities together to create synergy.
- Creating understanding of Banpu Spirit among new staff in "Banpu Spirit for New Employees". After participating in this workshop, the staff will be able to apply "Banpu Spirit", the corporate core value to their work and daily life.

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Additionally, Banpu places great importance on the promotion of creativity and innovation in its staff at every operating unit and in every country it operates in order to enhance value and effectiveness in the Company's operations, which will steer the Company toward sustainable growth. To achieve this goal, Banpu organizes "Banpu Innovation Convention" every year

at its headquarters in Thailand to provide opportunities for the winners of the best innovations from each country to showcase their innovations and share knowledge. In 2016, there were 11 presentations of best innovations; among these two projects were from Thailand, four projects from Indonesia, four projects from China and one project from Australia.







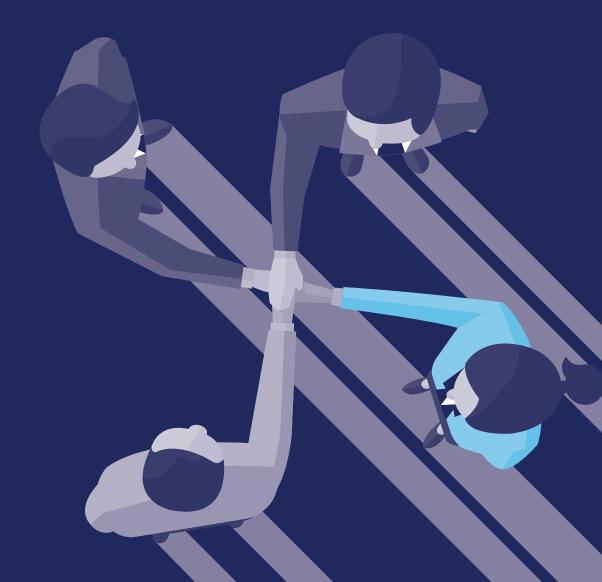








In good spirit, we seek 'synergy'
in all that we do.





#### 1. Corporate Governance Policy

The Board of Directors is committed to the principles of systematic management and good corporate governance. Accordingly, the Corporate Governance Policy and the Code of Conduct Handbook were first issued in writing in 2002. After a revision in 2005, the second and the most current edition of the Policy and the Handbook came into effect in 2006 in Thai, English, Bahasa Indonesia, and Chinese. To remain current and consistent with the changes in regulations by the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC), and to be in line with international practice, the Board of Directors has approved a new edition of the Policy and the Handbook in 2014. This Policy and Handbook are the complete reference and guidelines for directors, executives, and all employees. In addition, in 2015, Banpu started implementing the Whistleblower Policy to protect those filing grievance and to promote transparency. IOD admitted the Company to join the Collective Action Coalition Against Corruption (CAC), and the Company subsequently issued an Anti-Corruption Policy in 2016.

Banpu has assessed the effectiveness of the implementation of the Corporate Government Policy by using the Key Performance Indicators (KPIs) and the Behavioral Factors, in which "integrity", one component of the "Banpu Spirit" corporate culture, is used as an indicator. The assessment results, categorized by employee levels and operational locations, are satisfactory.

#### Formulation of Corporate Governance Policy

The Board of Directors has formulated the Corporate Governance Policy in writing as a guideline for the directors, executives and staff to comply with. The Policy, which upholds good corporate governance principles of the SET's best practices on corporate governance, covers five principles as follows:

Section 1 Shareholder's Rights

Section 2 Equitable Treatment of Shareholders

Section 3 Roles of Stakeholders

Section 4 Information Disclosure and Transparency

Section 5 Responsibilities of the Board of Directors

#### Communication of Corporate Governance Policy

Committed to implementation of policies and guidelines on corporate governance and code of conduct, in 2016, the Company launched action plans to promote corporate culture and corporate governance attitudes. The plans aimed at educating and raising awareness among employees of all levels about corporate governance and code of conduct in order to motivate them to work under such policy and code. The activities are as follows:

- A training session on corporate governance principles as part of the orientation program for new staff, with knowledge assessment on corporate governance via e-learning system.
- "CG Play Your Part" the activity aimed at communicating with employees about Whistleblower Policy and Anti-Corruption Policy.
- 3. A regular article, "CG of the Month", published in the Company's periodical internal magazine; "Banpu Insight", presents trends and directions of corporate governance in Thailand and other ASEAN countries. This is distributed to every country in which Banpu has investments. Articles have included:
  - o The Board of Directors' Roles in Corporate Governance
  - o Participation in Anti-Corruption
  - o Creating Ethical, Professional and Transparent Business Alliance
  - o Introducing the Amended Corporate Governance Code

- 4. Continuing the "CG Day" program to raise awareness among employees and encourage them to strictly maintain high moral standards. In 2016, the "CG Play Your Part" was proposed to promote understanding of Anti-Corruption Policy and their participation in actions against corruption.
- 5. Formulation of agreement between executive officers and representatives of employees from all business units, to work by a single standard against corruption.

### Banpu has received awards for its commitment to maintaining good corporate governance as follows:

With a strong commitment to sound corporate governance and to creating equitable value to all stakeholders, the Company has been recognized by various national and international organizations. In 2016, the Company was listed by the Dow Jones Sustainability Indices (DJSI), with the highest score in Coal & Consumable Fuels industry for three consecutive years. Also last year, the Company was listed on Thailand Sustainability Investment - the list of companies with outstanding performance based on the Environmental, Social and Governance (ESG) criteria - for the second consecutive year. For further details on the awards received by the Company, please see Section "Sustainable Development".

#### Section 1 Shareholder's Rights

The Board of Directors emphasizes the importance of shareholders' rights and their equality. This has been 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 in a format conducive for decision making. Shareholders are also entitled to attend a meeting, cast their votes at shareholders meetings to change Banpu's important policies, elect and remove directors, approve an appointment of auditor and receive their shares of profit.

At a shareholders' meeting, the Board of Directors facilitates shareholders by providing adequate, clear and comprehensive information in a timely fashion. 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. In addition,

shareholders are allowed to equally express opinions, seek explanations or pose questions.

The 2016 Annual General Meeting of Shareholders (AGM) was convened on 19 April 2016 at 13.00 hours at Royal Paragon Hall 3, 5th Floor of Siam Paragon No. 991, Siam Paragon Shopping Center, Rama I Road, Pathumwan, Bangkok 10330. All thirteen directors attended the Meeting. Banpu assigned Thailand Securities Depository Co., Ltd., its share registrar, to send the invitation letter to shareholders in advance and post it on the Company's website at http://www. banpu.co.th/th/corporate-governance/agm-egm 30 days prior to the meeting date. The minutes of the 2016 AGM were 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. The Company informed the SET to notify the minority shareholders of the opportunities to propose agenda items to be included in the AGM, and to nominate candidates to be considered for the director positions between November and December 2015. The procedures and methods for considering proposals were clearly stated on the Company's website: http://www.banpu.com/en\_agm\_ egm.php. No shareholder proposed an agenda item or nominated candidates for director positions for the 2016 AGM.

#### Section 2 Equitable Treatment of Shareholders

#### Shareholders' Meeting

The Board of Directors has a 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 process. As such, Banpu sent out an invitation letter for the meeting together with supporting documents for each agenda to shareholders prior to the meeting. Opinions of the Board of Directors also accompany each agenda item. The meeting is attended by 13 directors, including the Chairman of the Audit Committee, the Chairman of the Corporate Governance and Nomination Committee, and the Chairman of the Compensation Committee. High-level executives, the auditor, and independent observers from a law firm

also attend the meeting.

The Chairman of the Meeting opens to meeting to allow every shareholder to examine the Company's operations and to present questions in each of the agenda items. The Chairman also encourages shareholders to voice their opinions and make inquiries about the Company's operations. In addition, the Board of Directors completes the minutes of the meeting and releases them on the Company's website 14 days after the meeting, so that shareholders can review the minutes and if necessary propose amendments within 30 days.

#### Shareholders' Meeting

The 2016 Annual General Meeting of Shareholders (AGM) was convened on 19 April 2016 at 13.00 hours at Royal Paragon Hall 3, 5<sup>th</sup> Floor of Siam Paragon No. 991, Siam Paragon Shopping Center, Rama I Road, Pathumwan, Bangkok 10330. The AGM was attended by all 13 directors, 1,120 shareholders and 997 proxies, bringing the total to 2,117 persons representing 950,435,909 shares. This accounted for 36.81% of all 2,581,878,550 issued shares.

# Site Visits and Information Provided to Shareholders To improve the shareholders' understanding of its businesses and allow them to monitor its operation, Banpu has regularly arranged for shareholders to visit Banpu's operation sites and meet with the

Banpu has regularly arranged for shareholders to visit Banpu's operation sites and meet with the executives. Eighty shareholders visited the BLCP Power Plant in Rayong Province, Thailand on 3 June 2016.

#### Section 3 Roles of Stakeholders

Committed to maintaining fairness for all stakeholders, Banpu incorporates policies on stakeholders into the Corporate Governance Policy and promotes collaboration with stakeholders; namely, employees, customers, trading partners, creditors, government agencies, communities where Banpu's business is located and the society at large. Based on such principles, the Code of Conduct Handbook provides guidelines for the directors, executives, and employees to follow based on fairness and balanced mutual interests.

Important guidelines pertain to conflicts of interest, responsibilities to shareholders, and policies on and treatment of employees, customers, trading partners, creditors, competitors, and the society in general. It is considered a duty and a responsibility that Directors, executives, and all employees shall acknowledge, understand, and strictly comply with the guidelines, in order to ensure and maintain confidence that all stakeholders are treated well and have their rights protected.

In addition, Banpu has created a communication channel to receive complaints and grievances regarding corporate governance and business ethics, which reaches out to and covers all groups of stakeholders. Information can be found on the Company's website under the Corporate Governance section, with the contact address GNCSecretariat@banpu.co.th, which is regularly monitored and reported to the Corporate Governance and Nomination Committee and the Board of Directors on a quarterly and an annual basis, respectively. In addition, in 2015, Banpu started implementing the Whistleblower Policy to protect those filing grievances and to promote the corporate culture on transparency. This followed what had happened in 2014 when the Board approved the Whistleblower Policy to protect those filing grievances and, in the process, disclosing possible wrongdoings.

In 2016, the Board of Directors also approved Banpu's Anti-corruption Policy. Banpu had received a resolution, which allowed it to be a certified member of the Private Sector Collective Action Coalition Against Corruption (CAC) since 2010.

As for the Anti-corruption Policy and practices, the Company have stated in its Code of Conduct regarding giving and receiving bribery, gifts and business entertainment. Details are as follows.

#### 3.4 Giving and Receiving Bribery

- (1) Executives and staff are prohibited from demanding or receiving any benefit from trading parties, 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 any attempt to persuade them to commit a fraudulent action.

#### 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.

In 2016, the Company communicated with the Management and employees in all business units to raise awareness about the Anti-Corruption Policy so that the whole organization comes to a mutually-agreed commitment to a single standard against corruption.

#### **Employees**

Recognizing that workforce is a pivotal factor for success, Banpu has put in its Code of Conduct a policy and practices towards employees to ensure fair treatments to employees of all nationalities and languages to get equal access to career opportunity, remunerations, appointment, transfer, capacity-building and safe workplace environment for their lives and properties. Banpu has conducted adequate and appropriate Health, Safety and Environmental (HSE) measures to prevent loss from accident and work-related illness and injury.

The Company proclaimed the HR Philosophy in the management and development of human resources which is based on three principles.

- (1) Equitability
- (2) Performance Based
- (3) Competency Based

To cope with business changes and global economy, the Company takes responsibility in developing employees to be able to adapt to changes with flexibility, mobility, positive creativity and professionalism beyond the chain of command. In sum, Banpu focuses on engendering in all personnel with "Banpu Spirit" and professionalism. All employees are equitably treated and provided with equal opportunities, regardless of nationality, race, religion, language and gender. We strictly adhered to the operating principle of shared vision and goals, creating harmonious collaboration among all members who are bonded together with "Banpu Sprit" corporate culture which features:



- 1. Innovation
- 2. Integrity
- 3. Care
- o. Oaro

BANPUspirit

4. Synergy

The Company maintains a remuneration policy that is fair to the employees and consistent with the Company's performance both in the short and the long terms and in all forms of compensation, including salary, welfare, and other benefits which are linked to the creation of values added for the shareholders in the long run. Human resources management is fair and regularly and inclusively provides opportunities for learning and development to the full capacity of each employee. With goals set at maintaining transparency as well as building a workforce that is able to steadily and sustainably progress into the future, the Company has set up a Job Evaluation Committee, Organization Development Committee, and has given full support to the Compensation Committee and the Corporate Governance and Nomination Committee.

#### Customers

Banpu is committed to seeking ways and means to effectively respond to the needs of its customers. This has been stipulated as a policy and practices towards customers in the Company's Code of Conduct Handbook that it will strictly adhere to promises made with customers. This can be done through delivering quality goods and services that match customer's expectation in a fair price, providing accurate and enough information in a timely fashion, complying with conditions given to customers, establishing a grievance process to allow customers to file complaints with regard to quality, volume, safety of goods and services and,

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finally, providing advice on how to effectively use its goods and services for customer's best interest. Besides, customer's confidentiality is best kept and will never been exploited.

#### Trading Partners/Creditors

Banpu has a policy to equitably and fairly treat its trading partners and/or creditors by taking into consideration the Company's best interest. This meanwhile will be pursued on the basis of mutual benefit of both parties where conflict of interest shall be avoided and contractual obligations be complied.

#### Competitors

The Code of Conduct Handbook contains a policy and practices to treat competitors in a way that is consistent with international practices and within a legal framework for business competition. Banpu will not fraudulently infringe upon or seek to obtain trade secrets of any competitors. The Company is also committed to fair business conduct by complying with the guidelines indicated in its Code of Conduct. In the past year, Banpu had no disputes with competitors.

#### Community and Society

Banpu's policy is to conduct businesses that are beneficial to the economy and the society as a whole, while maintaining balance between growth of business and development of the community, the society and the environment. Great emphasis is placed on conservation of the culture and traditions of the community where the Company's unit is located. It is also Banpu's policy to be a good citizen and to fully comply with the relevant laws and regulations. Banpu is determined in its continuous efforts to improve the quality of society, whether it is done solely by the Company itself, or in collaboration with the government, the community, or non-governmental organizations. A Sustainable Development Policy has been implemented, with the Company's standard being benchmarked against the global standard for activities such as reports on the effect of greenhouse gases resulting from coal mines and power plants, and the formulation of best practice guidelines to effectively achieve safety, health, and high environmental standards. Also included in such guidelines are the indicators, evaluation, and assessment of risk that results from the Company's operation which may affect employees, business partners, the environment, and the community in which the Company conducts its business. In support of the above policy, the Company has undertaken various Corporate Social Responsibility (CSR) activities. Over the past three decades of its business operation, Banpu has always allocated part of its earnings to CSR activities both at the local and corporate levels, including CSR projects in those countries where Banpu has operations. Notable among these projects are the ones in Indonesia and China, which focus on "learning" for several target groups. The Company believes that "learning is a power of change and development", particularly when it is promoted among children who will be the major driving force behind the societal and national development in the future. In addition, the Company has raised awareness at all levels of its workforce to maintain good corporate culture, and ultimately for the community and the society to sustainably grow in line with the Banpu "Do by Heart" principle, based on a sincere, serious and wholehearted willing commitment to social responsibility.

#### Communication Channels with Banpu

Stakeholders may submit their opinions through the following channels:

Headquarters : 27th Floor, Thanaphoom Tower

1550 New Petchburi Road,

Makkasan, Ratchathewi,

Bangkok 10400

Telephone : 0 2694 6600 Fax : 0 2207 0696-8 Website : www.banpu.com

Company Secretary: Telephone: 0 2694 6825

e-mail: bodsec@banpu.co.th

Investor Relations : Telephone: 0 2694 6747 e-mail : investor@banpu.co.th

Corporate

Communications : Telephone: 0 2694 6600 e-mail : corp\_com@banpu.co.th

#### Section 4 Information Disclosure and Transparency

#### 1. Conflict of Interest

Banpu considers it important to prohibit directors, executives and employees from using their positions for personal benefit. As indicated in the Code of Conduct, 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 carried out at arm's length, and directors 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, all rules, procedures and the disclosure of connected information of listed companies must be strictly complied.

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 executive or employee involving in a special project of which the information has not yet been disclosed to the public; or that it's under negotiation where the project's information has to be kept confidential as it could affect the share price, the executive or employee are to sign a confidentiality agreement until the information is disclosed to the SET and the SEC.

#### 2. Information Disclosure to Investors

The Board of Directors oversees disclosure of information and its transparency to ensure that both financial and non-financial information relating to the Company's business and performance is revealed in a complete, accurate, adequate, regular and timely manner. In addition, 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. Aside from disclosing information as required by the SET and the SEC, Banpu also communicates with shareholders and investors through other channels. The Investor Relations Division directly communicates with shareholders, investors and securities analysts both domestically and abroad, while the Corporate Communications Department disseminates corporate information to shareholders, investors and the public through local and international press.

In 2016, Banpu offered the following opportunities to disclose information to international investors, institutional investors, small investors, securities analysts, and press:

The Company's information and news are also made available on the Company's website: www.banpu.com,

No.	Information Disclosure and Presentation	Times
1.	International Road Show	2
2.	Local Road Show	4
3.	Quarterly and Annual Analyst Meeting	4
4.	Opportunity Day for listed companies to release quarterly performance to investors	4
5.	Company visits by domestic and international investors	42
6.	Information provision to investors via conference call	17
7.	Interviews with Executive Officers	12
8.	Press conference on the company's performance	2
9.	Press release on the Company's performance and business strategies	16
10.	Activities for the press and public relations on Corporate Social Responsibility (CSR)	26
11.	Site visits and information provided for shareholders and analysts	1
12.	Exhibitions	3

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to which all stakeholders can equally access. Interested parties may contact or make inquiries to the Company's Investor Relations via telephone: +66 (0) 2694 6744, fax: +66 (0) 2207 0557, or e-mail: investor\_relations@banpu.co.th.

### Section 5 Responsibilities of the Board of Directors 1. Leadership and Responsibilities

Since 2009, the Board of Directors has explicitly assigned duties and responsibilities to the Board in "The Practices for the Board of Directors B.E. 2552, Banpu Public Company Limited", which was amended three times in 2011, 2012 and 2013, respectively. The amendments were done in accordance with business growth, regulations, rules and corporate governance guideline. The Practices of the Board of Directors specifies compositions and rules about the Board, general qualifications of directors, qualifications of independent directors, expertise, terms of office and retirement, authorities and responsibilities, and the Board of Directors' meeting and voting.

The Board of Directors has a pivotal role in overseeing the formulation of the Company's vision and mission, which are the Company's goals to achieve sustainable business. The Board monitors and supervises the Company's operation to ensure goal alignment. The Board also reviews of the Company's vision and mission at least once every five years to ensure that the Company adheres to the predetermined business goals to sustainable development.

To determine vision and mission of the Company, the Board of Directors and the Management have collaboratively devised long-term strategic plan and business directions once every five years for more than 20 years. The Board appoints and entrusts a CEO with clearly defined authorities and responsibilities to take charge of business management, development and implementation of strategies. The CEO cascades management authorities to executive officers in business units in Thailand and overseas using a Delegation of Authority tool.

Apart from oversight the Company's operations according to the strategic plan and business directions, the Board of Directors prioritizes business operations that maximize shareholders' substantial benefits, with adherence to the principles of good corporate governance. Thus, the Board of Directors stipulates that the Corporate Governance Policy and the Code of Conduct have targets in the Company's vision, mission, ideology, values, principles, and recommendations. Employees are clearly advised about what they should and should not do, about standards of practice that the Company expects and commits to upholding in all operations concerning employees, shareholders, customers, partners, creditors, competitors and wider society, all of which concretely comply with the Corporate Governance Policy.

Banpu designates as a duty and a responsibility of directors, executives, and all employees to acknowledge, understand, and follow the Company's policies and guidelines as set forth in the Code of Conduct Handbook. Clarifications on the policies and guidelines are made at meetings while materials and activities are created to improve awareness and understanding among employees both domestically and abroad. The Company also assigns management in each area of operation to ensure that employees under their supervision know, understand, and strictly comply with the policies and guidelines. The employees at all levels must act as good exemplars.

Apart from standards of practice set in the Code of Conduct Handbook, the Management and employees together formulate the core values of the organization, namely, Banpu Spirit which includes Integrity, Innovation, Care and Synergy. The Spirit is expected of nurture shared values and good corporate culture for employees at all levels in all operation locations, both in Thailand and overseas.

#### 2. Set and Monitor Strategic Guideline for Sustainable Development

Based on the guidance suggested by the Board of Directors, the Management is responsible for formulation

and presentation to the Board of business direction, long-term strategic plan, action plans and budget and annual manpower planning. The Board will openly share opinions and discuss with the Management before any decisions are made and approved.

In 2016, the Board of Directors and the Management collaboratively worked on strategic plans business directions for the years 2017-2020 to accommodate the strategic plans to rapidly-changing business environment. Risk assessment and mitigation plan were carried out in preparation for future scenarios. The Board of Directors approved in principle the Company's strategic plan and business directions for the year 2017-2020 in the 13th Board meeting in December 2016.

The strategic plan for the next five years focuses on sustainable development with emphasis on building competitive advantages, value creation for stakeholders and the ability to adapt to changing economy and industry, which are policy inputs for the strategic plan. Supervision of the implementation of the plan is regularly put on the Board's monthly meetings. In July 2017, the Board of Director will have the Management review whether the Company's year plan and action plan are successfully implemented. The Board is entitled to provide suggestions or comments on improvement and problem-solving where necessary.

#### 3. Balancing of Power by Non-executive Directors

The Board of Directors ensures that the number of its existing directors is appropriate to the Company's size. At present, Banpu's Board of Directors consists of 12 members. Two are executive directors; six are non-executive directors, and four are independent directors, which accounts for 33% of the Board.

In the past year, the Corporate Governance and Nomination Committer reconsidered the composition of the Board with regard to the proportion of non-executive directors and independent directors, and found that the proportion of non-executive directors is appropriate.

#### 4. Consolidation or Separation of Office

The Board of Directors requires that its Chairman and CEO be two different persons. Their roles, responsibilities, and authority are clearly separated to achieve a healthy balance between management and good corporate governance.

#### 5. The Board of Directors' Meeting

The Board of Directors convenes at least once a month on the last Thursday of the month. An additional meeting 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. Adding an agenda item after documents are distributed to the Board is allowed only when it is extremely necessary and justified, and when the item has been approved by the Chairman of the Board. Each meeting lasts approximately 3.5 hours. During the meeting, all directors may openly voice their opinions. The Chairman of the Board must summarize decisions and agreed opinions. If a director has a conflict of interest in an issue being discussed by the Board, the director must leave the room when the matter is considered. Minutes of all the meetings shall be in written form and are signed by the chairman of the board and the Company Secretary. Records of meetings shall be kept in document forms and scanned document files to facilitate quick reference by directors or related persons. These include other document attached with particular agendas. All must be safe-kept as reference for at least five years with protection system from alteration and other risk of catastrophe.

In 2016, the Board of Directors convened 13 times. Each director attended the meetings, as follows:

			Meet	ing Attend	dance
Director Name	Title	Terms of Office	Ordinary Meeting	Special Meeting	Total
1. Mr. Krirk-Krai Jirapaet	Chairman	April 2014 - AGM 2017	3	1	4/4
2. Mr. Anothai Techamontrikul	Vice Chairman/ Independent Director	April 2015 - AGM 2018	3	1	4/4
3. Mr. Chanin Vongkusolkit	Chairman	April 2016 - AGM 2019	12	1	13/13
4. Mr. Rutt Phanijphand	Vice Chairman/ Independent Director	April 2014 - AGM 2017	12	1	13/13
5. Mr. Teerana Bhongmakapat	Independent Director	April 2016 - AGM 2019	12	1	13/13
6. Mr. Suthad Setboonsarng	Independent Director	April 2014 - AGM 2017	12	1	13/13
7. Mr. Metee Auapinyakul	Director	April 2014 - AGM 2017	12	1	13/13
8. Mr. Ongart Auapinyakul	Director	April 2015 - AGM 2018	12	1	13/13
9. Mr. Rawi Cosiri	Director	April 2016 - AGM 2019	12	1	13/13
10. Mr. Verajet Vongkusolkit	Director	April 2015 - AGM 2018	12	1	13/13
11. Mr. Bantoeng Vongkusolkit	Director	April 2015 - AGM 2018	11	1	12/13
12. Mr. Sudiarso Prasetio	Independent Director	April 2016 - AGM 2019	11	1	12/13
13. Ms. Somruedee Chaimonghlol	Director	April 2015 - AGM 2018	12	1	13/13
14. Mr. Anon Sirisaengtaksin	Director	April 2014 - AGM 2017	9	-	9/9

#### 6. The Board of Directors' Report

The Board of Directors is responsible for Banpu's consolidated financial statements and the financial information that appears in Banpu'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 a responsibility to oversee 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 included in Banpu's Annual Report.

The Board of Directors considered that the financial statements of the Company and its subsidiaries as of 31 December 2016 are accurate, complete, adequate, and reliable.

#### 7. Auditing and Internal Control System

The Board of Directors has set up an internal control system that covers all aspects of Banpu's business, ranging from finance, accounting, asset management and operations to legal compliance. The Board makes sure that there are sufficient and effective check-andbalance mechanisms to protect stakeholders, shareholders' equities and Banpu's assets. The Board has also ensured that the Internal Audit Department remains independent by requiring it to directly report to the Audit Committee to ensure the system remains an effective mechanism to drive Banpu to expand in a sustainable manner. The Internal Audit Department monitors the internal control of operating procedures and critical systems covering all Banpu's business units and supporting functions. The Department gives advice on risk management to improve Banpu's business processes and ensure that the business continues to grow in the rapidly changing economy.

#### 2. Sub-committees

The management structure of the company as of 31 December 2016 consisted of the Board of Directors and the executive officers. The Board of Directors consists of independent directors, non-executive directors, and executive directors. The independent directors account for 33% of total number of board members. The ratio of independent directors to the total board members was 4:12.

The Board set up three sub-committees; namely, the Audit Committee, the Corporate Governance and Nomination Committee and the Compensation Committee. The term of office of these committees is three years from April 2016 to the date of the Annual Shareholder's Meeting in 2019.

#### (1) The Audit Committee

The Audit Committee consists three independent directors whose duties are to review the accuracy and reliability of the Company's financial statements, the adequacy of internal control and risk management system, financial derivative transactions, commodity hedging, and compliance with rules, laws and related regulations. The Audit Committee is also responsible for selecting an auditor and determining the remuneration. The Audit Committee is required to review connected transactions and potential conflict of interest to ensure that all are accurate complete and transparent. In addition, the Committee has to review key risk management measures, operational plans and results, budgets, and manpower plan of the Internal Audit Office. In 2016, the Audit Committee convened nine times, all of which were quorate and with all agenda items covered.

(2) The Corporate Governance and Nomination Committee In 2016, the Corporate Governance and Nomination Committee consisted of four directors. Among these, three are non-executive directors and one is an independent director. The Committee has two major duties: firstly, to review the Corporate Governance Policy and the Code of Conduct and monitor compliance of the policy and practices within Banpu's Code of Conduct. Secondly, the Committee is to nominate directors and the Chief Executive Officer, to review a succession plan in

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order to nominate appropriate persons to fill the management positions (for department head level and higher), and to submit recommendations to the Board of Directors for approval or for submission to the shareholders' meeting, as the case may be. In addition, the Corporate Governance and Nomination Committee also suggests to the Board of Directors the method used to evaluate the directors and the Board, completes the evaluation, and based on the evaluation results, monitors corrective action. In 2013, the Committee began using an evaluation form to evaluate the three sub-committees in 2012. In 2014, the Committee started using the individual assessment for each director.

In 2016, The Corporate Governance and Nomination Committee convened four times, all of which were quorate and with all agenda items covered.

#### (3) The Compensation Committee

The Compensation Committee consists of three members: two are non-executive officers and one independent director who acts as the Chairman. The Committee is responsible for providing opinions regarding compensation management to the Board of Directors for approval or for submission to the shareholders' meeting, as the case may be.

In 2016, the Compensation Committee convened six times with all members attending.

### 3. Directors and Nomination of Directors and the Chief Executive Officer

- (1) The independent directors, who account for 33% of the Company's Board of Directors, are as follows:
  - 1. Mr. Rutt Phanijphand
  - 2. Mr. Teerana Bhongmakapat
  - 3. Mr. Suthad Setboonsarng
  - 4. Mr. Sudiarso Prasetio

Banpu Public Company Limited has defined the qualifications of "Independent Directors" according to the regulation of Securities and Exchange Commission and the Notification of the Capital Market Supervisory Board No. TorJor. 39/2559 dated 16 November, B.E.

2559 Re: Qualifications of Independent Directors which determines the qualifications of Independent Directors as follows:

- Holding shares not exceeding one per cent of the total number of shares with voting rights of Banpu, its parent company, subsidiary company, associate company, major shareholder or controlling person, including shares held by related persons of such independent director;
- 2. Neither being nor used to be an executive director, employee, staff, advisor who receives salary, or controlling person of Banpu, its parent company, subsidiary company, associate company, same-level subsidiary company, major shareholder or controlling person, unless the foregoing status has ended not less than two years prior to the date of filing an application with the Office. Such prohibited characteristic shall not include the case where the independent director used to be a government official or advisor of a government unit which is a major shareholder or controlling person of Banpu;
- Not being a person related by blood or legal registration as father, mother, spouse, sibling, and child, including spouse of child, executive, major shareholder, controlling person, or person to be nominated as executive or controlling person of Banpu or its subsidiary company;
- 4. Neither having nor used to have a business relationship with Banpu, its parent company, subsidiary company, associate company, major shareholder or controlling person, in the manner which may interfere with his independent judgment, and neither being nor used to be a significant shareholder or controlling person of any person having a business relationship with Banpu, its parent company, subsidiary company, associate company, major shareholder or controlling person, unless the foregoing relationship has ended not less than two years prior to the date of filing an application with the Office.

The term 'business relationship' under the first paragraph shall include any normal business transaction, rental or lease of immovable property, transaction relating to assets or services or granting or receipt of financial assistance through receiving

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or extending loans, guarantee, providing assets as collateral, and any other similar actions, which result in Banpu or his counterparty being subject to indebtedness payable to the other party in the amount of three percent or more of the net tangible assets of Banpu or twenty million baht or more, whichever is lower. The amount of such indebtedness shall be calculated according to the method for calculation of value of connected transactions under the Notification of the Capital Market Supervisory Board governing rules on connected transactions mutatis mutandis. The consideration of such indebtedness shall include indebtedness occurred during the period of one year prior to the date on which the business relationship with the person commences:

- 5. Neither being nor used to be an auditor of Banpu, its parent company, subsidiary company, associate company, major shareholder or controlling person, and not being a significant shareholder, controlling person, or partner of an audit firm which employs auditors of Banpu, its parent company, subsidiary company, associate company, major shareholder or controlling person, unless the foregoing relationship has ended not less than two years prior to the date of filing an application with the Office;
- 6. Neither being nor used to be a provider of any professional services including those as legal advisor or financial advisor who receives service fees exceeding two million baht per year from Banpu, its parent company, subsidiary company, associate company, major shareholder or controlling person, and not being a significant shareholder, controlling person or partner of the provider of professional services, unless the foregoing relationship has ended not less than two years prior to the date of filing an application with the Office;
- Not being a director appointed as representative of directors of Banpu, major shareholder or shareholder who is related to major shareholder;
- 8. Not undertaking any business in the same nature and in competition to the business of Banpu or its subsidiary company or not being a significant partner in a partnership or being an executive director, employee, staff, advisor who receives salary or holding shares exceeding one per cent

- of the total number of shares with voting rights of other company which undertakes business in the same nature and in competition to the business of Banpu or its subsidiary company;
- Not having any other characteristics which cause the inability to express independent opinions with regard to Banpu's business operations.

After being appointed as independent director with the qualifications under (1) to (9) of the first paragraph, the independent director may be assigned by the board of directors to take part in the business decision of Banpu, its parent company, subsidiary company, associate company, same-level subsidiary company, major shareholder or controlling person, provided that such decision shall be in the form of collective decision.

The provisions in (2), (4), (5) and (6) of the first paragraph relating to the consideration of qualifications of Banpu's independent directors during the two-year period prior to the date of filing an application with the Office shall be applied to the application filed with the Office from 1 July 2010 onwards.

In the case where the person appointed by Banpu as independent director has or used to have a business relationship or provide professional services exceeding the value specified under (4) or (6) of the first paragraph, Banpu shall be granted an exemption from such prohibition only if it has provided the opinion of the company's board of directors indicating that, by taking into account the provision in Section 89/7, the appointment of such person does not affect performing of duty and expressing of independent opinions. The following information shall be disclosed in the notice calling the shareholders meeting under the agenda for the appointment of independent directors:

- The business relationship or professional service which make such person's qualifications not in compliance with the prescribed rules;
- 2. The reason and necessity for maintaining or appointing such person as independent director.

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 The opinion of Banpu's Board of Directors for proposing the appointment of such person as independent director.

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

### Regulations Governing Directors Holding Position in Other Companies

To ensure that directors can dedicate enough time to performing duties to the Company, it is required that directors not holding positions in more than five listed companies. (Banpu Plc.'s Code of Conduct Section 5.1 Clause (5) General Qualifications of Directors\*), \*effective since 19 December 2014.

#### Voting Procedure in the Board of Directors' Meeting

The Company set the procedure of the Board of Directors' meeting voting 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." (Practices for the Board of Directors of Banpu Public Company Limited, on Board of Directors, section 8.5, effective from 19 December 2014)

#### The Board of Director's Self-evaluation

The Board of Directors, the sub-committees and individual directors shall evaluate their own performance, with criteria, procedures, and evaluation results shown in the annual report, in the report of Corporate Governance and Nomination Committee. The overall evaluation results are shown as follows:

- (2) Nomination of Directors and Top Executives
  - The Corporate Governance and Nomination Committee shall recommend to the Board of Directors candidates to replace retiring directors or to fill any other vacancy. The nomination process has the following procedures:
- 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 SET's rules and regulations. After the screening process, the Corporate Governance and Nomination will nominate the candidate to be approved by the Board of Directors and the Annual General Meeting of Shareholders (AGM).

The Corporate Governance and Nomination Committee, one-third of which shall be independent directors, recruits candidates to fill director positions that become vacant due to completion of term or other reasons. All members of the Board of Directors submit a name they deem appropriate while minority shareholders submit names through website under a certain time frame and appropriate conditions. All names from the two sources are subject to a screening process, with criteria including knowledge, competencies, experiences, general and specific qualifications deemed beneficial to the Board as a whole (Board Skill Mix). Selected candidates are two times the number of vacancies. After the board's approval, the nominees will be approved by at least half of the shareholders' votes attending the AGM. The appointees will be voted individually.

Performance Evaluation of the Board of Directors	Average	Evaluation Criteria
Board of Directors	4.75 from 5	Very Good
Individual Directors	4.78 from 5	Very Good
Sub-committees	98.70%	Excellent

For the nomination of executives, the Corporate Governance and Nomination Committee semi-annually monitors a succession plan covering CEO, COO and senior executives to ensure that the Company will have competent executives with proper expertise and experience to fill important positions in the future.

### 4. Corporate Governance of Subsidiaries and Affiliates

The Company has clear procedures on governing its subsidiaries in order to effectively manage operations at their full potential as follows:

#### Investment Policies by Banpu and Its Subsidiaries

- 1. The Management shall study and assess preliminary findings of the Investment Committee before reporting the results and investment summary outlook to the Board of Directors. The Board then considers and approves the project for funding, development and expansion. The Board of Directors also has power to approve the establishment of subsidiaries as well as their dissolution as necessary to ensure that Banpu can be most efficiently managed.
- The Board of Directors considers and approves the investments that meet the criteria set by the SEC and the SET, such as connected investments and decisions that involve receipts or sales of assets.
- 3. The subsidiaries shall submit reports on their performance and operation, particularly of their main businesses. They shall also assess the sensitivity of the business to risk and evaluate it against set goals or benchmarks. These management reviews provide a basis for policy formulation and business model improvement so that the subsidiary grows in a sustainable manner.

Internal Control Policy and Central Management Policy In order to reinforce the independence of the Audit Committee, the Board of Directors and the Management require that each area of operations conduct an internal audit and report directly to the Audit Committee, who subsequently reports progress to the Board of Directors on a quarterly basis.

Management within each subsidiary is determined based on the Company's investment share. The Board of Directors appoints an executive to serve as a director in each subsidiary so that those companies consistently operate in accordance with Banpu's direction, policies, and strategies. Executive selection is decided based on established criteria of knowledge, capabilities particularly in the target business, location (where the director position is at a foreign subsidiary), and health and readiness of the executive. Executives holding director positions in subsidiary companies are reviewed at least once a year.

#### **Budget Policy**

Investment budget preparation and implementation must be in accordance with the budget regulations at each of the subsidiaries and also consistent with Banpu's budget rules. Budget preparation and review must be completed within the deadline and corresponding information submitted according to Banpu's standard operation. The Board of Directors has to approve a project investment which exceeds the approved budget at 10% and more than THB 1,500 million.

#### 2. Anti-Corruption

In business management, the Company has always upheld the principles of good corporate governance, namely, transparency, integrity, accountability, with effective operations as well as responsibilities to society, the environment and stakeholders. There is a specific department in the organization which has a clear mission to supervise and monitor business operations to make them comply with laws and corporate governance principles.

The Company set up a Legal Compliance Department to manage risks from operations that may infringe rules and regulations, and to oversee the compliance with laws of all business units' operations based on their activities. Each unit is required to file Regulatory Compliance Checklists reviewed by the Legal Compliance Department who will compile a report semi-annually. All business divisions must review updates about rules and regulations to be fully responsive to changes.

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Risk Management Department is responsible for assessing risks in all businesses, strategies and an annual action plan. In 2014, the department started assessing the risk of fraud which may occur in the work process and prepared for preventive measure and solutions. There are quarterly reviews of risks, which are reported to the Board of Directors at least twice a year.

The Company formulated Corporate Governance Policy and Code of Conduct Handbook in 2002. The Code of Conduct stipulated practice guidelines on gifts given and received and business entertainment to prevent corruption and even potential risk of corruption (sections 3.4 and 3.5). The Corporate Governance and Nomination Committee and the Corporate Governance Department are responsible for the oversight of policies, communication with employees about the policies through orientation and other activities, and collection of complaints received through the Complaint Channel. All complaints are reported to the Corporate Governance and Nomination Committee and related departments who duly respond to complaints. In 2014, the Company proclaimed a Whistle Blowing Policy, which protects informants and enhances employees' participation in exposing wrongdoings against the organization and other stakeholders. Complaint issues are brought to Fraud Management Committee and subsequently sent to top executives.

The Company expressed its intent to campaign against corruption as part of The Private Sector Collective Action Against Anti-Corruption (CAC) it has joined since 2010. The Company has supported the activities of IOD in organizing meetings and seminars about the project. In 2013, the Company evaluated itself by using CAC's Self Evaluation Tool and reported the results to the Corporate Governance and Nomination Committee and the Board of Directors.

In 2014, the Company submitted the evaluation form and anti-corruption policy to be considered by the Audit Committee. The Board of Directors approved the anti-corruption policy on 18 February 2015. The Company subsequently submitted evaluation results and self-evaluation form to CAC as part of an application to be listed in the Private Sector Collective Action Against Anti-Corruption. The Company was subsequently accepted as a member of the collective action on 10 July 2015, and formally declared the Anti-Corruption Policy in 2016.

#### 5. Supervision on the Uses of Internal Information

Banpu recognizes the importance of information disclosure and transparency, and has set out policies on information disclosure, transparency in financial statements and corresponding policy implementation in the Company's Corporate Governance Policy. This is to ensure that financial and non-financial information about the businesses and the performance of the Company is disclosed to shareholders, investors, securities analysts, and the general public in an accurate, complete, adequate, reliable, and timely manner. The Board of Directors is determined to ensure strict compliance with laws and regulations regarding information disclosure and transparency. Sales or purchases of shares by any director or executive are duly reported to the SEC and the SET. Change in securities holding of directors or executives are subject to be reported to the Board of Directors' meeting on a monthly basis.

To supervise use of the Company's internal information, the Company stipulated preventive measures against leakage of internal information as practice in the Code of Conduct Handbook under the section Conflict of Interests and keeping confidential corporate information.

It is the responsibility of the Company's directors, executives and staff to keep corporate information strictly confidential, especially the 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. The Directors shall follow guidelines stated in Board of Directors' Practice B.E. 2552 and the Code of Conduct as follows.

1. Directors shall not use 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 shall not use internal information in trading the Company's shares or refrain from disclosing internal information to any third party for the benefit trading the Company's shares.
- Business secrets shall not be disclosed to any third party especially to competitors even after the directors of staff have left the Company.

Apart from that, the Company stipulated in the Corporate Governance Policy that directors, executives and staff must not exploit their relationship with the Company for personal gain, and avoid any transaction related to oneself, which may lead to a conflict of interest with the Company. If necessary, the transactions are to be carried out at arm's length, and directors 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, all rules, procedures and the disclosure of connected information of listed companies must be strictly complied. Apart from that, the Board of Directors' Code of Conduct stipulated a guideline of practice for directors in the case of knowing information not yet disclosed to the public, and requires directors and executive offices to report securities ownership in the Board of Directors' meetings on a monthly basis.

The Company has developed the Information Technology (IT) system to supervise the use of Company information. Systems are in place to prevent access to information from the third party and to limit the staff's information access level according to their individual responsibility. In the case where an executive or employee participates in a special task using information which has yet to be publicly disclosed, is still under negotiation, or may be subject to internal control given its possible impact 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 Stock Exchange of Thailand and Securities and Exchange Commission.

The internal information usage control is addressed in the Company's rules under the "Disciplinary Action" section. Applying to all levels of employees, the rule states that any employee who fails to comply or violates the set disciplinary requirements is considered to have breached Company rules and is subject to disciplinary action and punishment according to the nature of offence. Regarding information use, it is stated that anyone "disclosing the Company's secrets with an intention to destroy its reputation, credibility, or products, resulting in a financial loss or a loss in business opportunity to Banpu" may be subject to severe punishment up to dismissal.

#### 6. Other Issues in Corporate Governance Principles

Banpu has followed the 2012 Corporate Governance Principles for Listed Companies as set out by the Stock Exchange of Thailand except for some cases that the Company did not comply with the principles, with details and reasons as follows.

### 2012 Corporate Governance Principles for Listed Companies

Banpu has continuously adhered to the 2012 Corporate Governance Principles for Listed Companies as set out by the Stock Exchange of Thailand; however, in 2016 the Company has not yet complied with the principles in the following areas:

#### Section 5 Responsibilities of the Board of Directors

- 1. The Chairman of the Board should be an independent director.
  - The Company's practice: The Chairman of the Board is a non-executive director whose roles and duties are clearly defined by the Board of Directors. The emphasis is placed on of balanced benefits for the Company, shareholders and all stakeholders.
- 2. The nomination committee should be comprised entirely of independent directors.
  - The Company's practice: The Corporate Governance and Nomination Committee currently consists of four members, namely one independent director and three non-executive members. The Chairman of the Committee is a non-executive member.

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However, the Board of Directors have 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 Board should appoint an external consultant to facilitate a board assessment at least once every three years, and assessment results should be disclosed in the annual report.

The Company's practice: Banpu has annual performance assessments of the Board of Directors as a whole, assessment of sub-committees and individual assessment of each director. The Corporate Governance and Nomination Committee had considered the issue and decided not to appoint an external consultant to facilitate a board assessment.

### Report of the Corporate Governance and Nomination Committee

The Corporate Governance and Nomination Committee consists of Mr. Rawi Corsiri, the Chairman, Mr. Sudiarso Prasetio, Mr. Verajet Vongkusolkit and Mr. Anon Sirisangtaksin. The committee independently perform duties to the full extent as entrusted by the Board of Directors, in compliance with rules and guideline of the Corporate Governance and Nomination Committee and the principles of good corporate governance of the Stock Exchange of Thailand.

In 2016, the Corporate Governance and Nomination Committee convened four times with full attendance. The Corporate Governance and Nomination Committee summarized its performance in 2016 as follows:

#### The Corporate Governance Mission

#### 1. Promotion of Corporate Culture and Positive Attitude toward Corporate Governance

The Corporate Governance and Nomination Committee supervised the implementation of the public relations plan to promote corporate culture and positive attitude toward corporate governance, which yielded satisfactory results in 2016.

Channel of Complaint about Corporate Governance Banpu has created a communication channel for complaints and grievances regarding corporate governance, covering all groups of stakeholders. Information can be found on the Company's website under the Corporate Governance section, with the contact address GNCSecretariat@banpu.co.th, which is regularly monitored by a secretary who reports to the Corporate Governance and Nomination Committee and the Board of Directors on a quarterly and an annual basis respectively. In 2016, there were no complaints from stakeholders.

#### 3. Performance Evaluation of Boards and Directors

The Corporate Governance and Nomination Committee has reviewed and subsequently approved the appropriateness of the approach and evaluation documents used in the annual performance evaluation of the Board. The documents includes the assessment form for the Board, the form for the Board and Committee members, and the form for individual directors. The assessment form for the Board consists of five major categories as follows:

- 1. The Structure and Composition of the Board
- 2. Roles, Duties and Responsibilities of the Board
- 3. Nomination of Directors
- 4. Remuneration of Directors
- 5. Board Meeting and Performance of the Board

The Corporate Governance and Nomination Committee reported the annual evaluation results to the Board of Directors' meeting. In sum, the Board of Directors' performance was satisfactory with a score 4.75 out of 5. Specifically, each topic received a score in the 'good to excellent' range (4.6-5.0). The Board acknowledged the evaluation results and suggestions, and directors also exchanged views in the Board of Directors' Meeting on ways to improve their performance to best benefit the Company.

The assessment items for the three sub-committees, namely, the Audit Committee, the Compensation Committee and the Corporate Governance and Nomination Committee are grouped under four categories:

- 1. Qualifications of Directors
- 2. Duties and Responsibilities of Directors
- Duties and Responsibilities of Sub-committees according to Charter

#### 4. Meeting and Report

The sub-committees' performance as a whole was averagely assessed as very good with the score percentage of 98.70%. Each sub-committee submitted its annual self-assessment report to the Board of Directors as part of their performance report.

The members of the Board of Directors have individually assessed their own performance according to the following seven categories:

- 1. Structure and composition of the Board
- 2. Roles, duties and responsibilities of the Board
- 3. Ethics and corporate governance
- 4. Development of directors
- 5. Relationship with the management
- 6. The Board of Directors' meeting
- 7. Overall performance of directors

The individual directors' performance assessment was averagely scored at 4.78 out of 5. The directors acknowledged the assessment results and suggestions and found the individual assessment satisfactory. They exchanged views on how to improve their performance to best benefit the Company.

#### Nomination of Directors and Succession Plan for Senior Executive Officers

### Nomination of Directors Whose Terms of Office Expired in 2016

The Corporate Governance and Nomination Committee reviewed the qualifications and appropriateness of the directors whose 3-year terms ended and proposed to the Board of Directors to re-nominate their names to the Annual General Meeting of Shareholders for consideration and approval. In the 2016 AGM, four directors reelected by the shareholders were as follows:

- 1. Mr. Chanin Vongkusolkit
- 2. Mr. Rawi Corsiri
- 3 Mr. Sudiraso Prasetio
- 4. Mr. Teerana Bhongmakapat

After the Corporate Governance and Nomination Committee had reviewed the qualifications and appropriateness of the four directors whose terms of office expired, they found that the directors have appropriate qualifications and impressive performance. The Committee then proposed their names to be nominated to the Annual General Meeting of Shareholders for consideration and approval of reelection according to the nomination process, of which has been completed.

#### Succession Plan for Senior Executive Officers

In 2016, the Corporate Governance and Nomination Committee once received a progress report on the succession plan for senior executive officers, and reported the succession plan to the Board of Directors once.

Mr. Rawi Corsiri
Chairman of the Corporate Governance
and Nomination Committee

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### Corporate Social Responsibility

#### CSR After-Process and Environmental Activities

#### Thailand

In 2016, Banpu pursued its CSR after-process activities in three major areas, namely, educational development, environmental development, and youth capacity development. All activities were unified by an integrated concept of continued "learning", which is a cornerstone of sustainable social, economic and environmental development, both in formal and non-formal settings, as Banpu believes that "Learning is the power of change and development".



#### **Educational Development**

#### Banpu Education for Sustainability

For the past 13 years, Banpu has been sponsoring learning and teaching activities at six schools in Lamphun, Lampang and Phayao, where the Company previously had operations. With the aim to strengthen education, the key foundation for sustainable development of the country, the Company promotes and develops

integrated learning in three areas, namely, development of the schools to become sustainable learning centers for communities, capacity development for teachers, and widening learning skills of students. Over the past four years, the Company has provided native English speakers to teach at those Banpu-sponsored schools to enhance the English communication competence of the teachers and students to enrich international

cultures, which will improve their life skills and strengthen friendships. Banpu's support of learning and teaching activities as well as other projects to the six schools for the past 13 years is worth more than THB 37 million. The Company is dedicated to educational and moral development of young people and enhancing teachers' teaching capacity in order to improve the quality of education in these schools so that they have the same standards with those in urban areas and to transform them into sustainable learning centers for communities.

The Company's support yielded concrete social outcomes. Students from the six schools won awards in regional and national academic competitions and activities promoting moral development. In addition, teachers were able to create interesting lessons effectively and promote students critical thinking. Moreover, the teachers formed a network for sharing their professional experiences. As for the schools themselves, it was found that their teaching standards were improved, and they became the community learning centers. They were also selected as an exemplary school, a buffer school, or a pilot school in various aspects.

### Scholarships for Geology and Mining Engineering Students

Banpu has granted scholarships to geology and mining engineering students for eight consecutive years. Each year, the Company provides ten scholarships to senior students in geology and mining engineering from four universities, namely, Chulalongkorn University, Khon Kaen University, Chiang Mai University, and Prince of Songkhla University. Over the past eight years, the Company has awarded scholarships to 78 students.

#### Scholarships for Accounting Students

2016 was the first year the Company provided financial support to develop more accounting personnel. The Company awarded four scholarships to four senior accounting students at Rajamangala University of Technology, Rattanakosin Bophitphimuk Chakkrawat Campus.

### Financial Support to Schools in the Southern Provinces: Year 10

2016 marks the 10th consecutive year that Banpu provided financial support to schools in the five provinces of conflict-affected in the South. The Company donated THB 1.5 million to 10 schools in the Special Development Zone in Southern border provinces, including Pattani, Narathiwat, and Yala, through the Office of Basic Education Commission (OBEC).



#### **Environmental Development**

### Power Green Camp Year 11 "Managing Biodiversity and Conserving World Heritage Sustainably"

In collaboration with the Faculty of Environment and Resource Studies, Mahidol University, Banpu organized the Power Green Camp in its eleventh year to promote better understanding of environmental science among young students, which will lead to sustainable environmental conservation.

In 2016, the Power Green Camp 11 was held under the theme "Managing Biodiversity and Conserving World Heritage Sustainably", with an aim to broaden students' knowledge and understanding of biological diversity, which is around them in their daily lives. The camp also focused on developing 21<sup>st</sup> century learning skills by enhancing the participants' critical thinking skills through scientific learning process. In this year, 70 participants who are 10<sup>th</sup> - 11<sup>th</sup> grade students in science program in high schools nationwide event joined this program. These young people expanded not only the environmental science network but also the "Power Green Camp" network. This was also the second year that the Company selected three students

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participating in the Power Green Camp in October, whose projects are outstanding, to visit Indonesia on a biodiversity excursion. Indonesia is known as one of the world richest countries in terms of biological diversity, therefore this excursion will broaden Thai students' horizons both in domestic and international contexts.

For the past eleven years, more than 700 students have participated in the Power Green Camp. This camp has also created around 160 environmental youth leaders, who served as facilitators at the camps and helped expand the environmental network.



### Youth Capacity Development Banpu Champions for Change Year 6

In 2016, Banpu Champions of Change continued into its sixth year of support to promote the development of a new generation of social entrepreneurs. The support was particularly granted to "social enterprises" which were run by young people and stressed the connection between business, society and the environment via business management and social enterprise ethics. In the first round, 20 applicants were selected to participate in a workshop on developing business ideas and models. The Company then selected 10 business projects which were most feasible to get seed capital for THB 50,000. After three months, five business projects that had better performance and progress received THB 200,000 to continue their projects for another five months.

The distinction of this year's social enterprises is in addressing such overlooked everyday-life issues as

stress, physical and mental health, and the environment. These issues must be tackled wisely and creatively with multifaceted approaches.

Since its inception in 2011, Banpu Champions for Change has provided consultancy and capacity development training for social entrepreneurs in various aspects, including business model development, financial planning, social impact assessment, brand development, team management, and business risk management. The project has provided financial and skill support to 62 social enterprises to run their business trial based on their ideas and interests. Banpu has also supported 25 other social enterprises with outstanding performance to enhance their potential and develop into sustainable social enterprises. While earning profit, these social enterprises have created opportunities for 50 communities and more than 120,000 people. Moreover, some of these social enterprises successfully entered international markets.

#### Banpu Table Tennis Club

Banpu Table Tennis Club (BTTC) has continuously organized a variety of activities for Thai athletes to develop their skills and broaden their perspectives with the aim of raising the standards of Thai table tennis. In 2016, the Club maintained its focus on athletes' self- development both physically and mentally through various activities, for instance, daily training, a special training camp 'Extra Training, Extra Power' and sending athletes to compete in both domestic and international tournaments.

Currently, the Club has 60 athletes and members from all over the country. The Club keeps improving its



standards and its management while developing a personalized training plan for each athlete. Additionally, Banpu organized other activities to reinforce morals, ethics, discipline, and unity, for example "BTTC Camp" was held to inspire young people in remote areas. In the camp, the coaches of the national youth team and the Club's volunteer athletes with experiences in national and international tournaments were invited to help the participants improve their skills. In 2016, the camp was organized in Chiang Mai, which received satisfactory responses from the youth there and nearby provinces. The Club has organized this camp for three consecutive years with the strong belief that it would foster volunteer spirit of the Club's athletes while providing them opportunity to offer skill training to talented young people who lack access to professional coaches and national players.

In the past nine years, an athlete from the Club was selected to join the national team in SEA Games; 26 athletes were recruited into the national youth team, and 10 athletes were admitted to universities for their table tennis ability. The Club's athletes also won awards from many domestic and international tournaments.

#### Support for Young Tennis Athlete

Banpu extended its support to a young tennis player, Songrit Chanbuppha, a dedicated youthathlete with high potential who is in need of financial support. In 2016, the Company sponsored him for sports equipment, physical training course, daily skill training and competitions in major tournaments. The sponsorship is expected to develop his potential and prepare him for the selection into the national youth team and future career as a professional athlete.



#### Sustainable Community and Social Development

After the short-term restoration and rehabilitation of Ban Khao Samorkhon community including Moo 1, 2 and 3 villages in Tha Wung District, Lopburi Province, which was devastatingly flooded in 2011, Banpu has actively engaged in economic and social development activities designed for this community for the last five years under the sustainable development project of Ban Khao Samorkhon, Lopburi Province. The project aims at providing sustainable development to the community by building capacity and skills needed for making a living and by nurturing unity within the community. Three activities carried out under this project are as follows:

### Ban Khao Samorkhon Organic Sinlek Rice Farming Project

Since its inception in 2014, Organic Sinlek Rice Farming Project at Khao Samorkhon aims for better productivity at a reduced cost, which will result in higher income and more secure financial status among member farmers as well as a safer working condition due to less chemical use. Sinlek rice is a healthy strain of rice that is lesser known to consumers, thus, it has been slowly responded by the market together with the drought in 2015 and 2016, Sinlek rice cultivation therefore came to a halt. However, the farmers responded to the problem by cultivating jasmine rice instead, using the organic method as much as possible in order to serve greater market demand and eco-friendly trends. Moreover, to cope with a continuing trend of drought, farmers managed risk of monoculture by reducing rice fields and using integrated farming methods. The produce could be consumed in the household while the extras of the yearround produce could be sold to the market to increase household income. Integrated farming fields in the project are a result of the lesson learned from agricultural experts, knowledge sharing among farmers, and study trips to other agricultural projects.

### Ban Khao Samorkhon's Farmers-For-Truth Fertilizer Fund

In 2016, Banpu closely followed the progress of the activities under Ban Khao Samorkhon's Farmers-For-

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Truth Fertilizer Fund by attending the monthly meetings to hear progress reports and provide advice on fund management. The fertilizer fund has been continuously increasing and become so self-reliant that it no longer needs support from Banpu. The project significantly helped lessen formal and informal debts of the farmers and improve saving behavior of the fund members.

#### Off-season Lime Cultivation

Banpu donated 114 lime trees and other production supplies to 39 project members for the start of the off-season lime cultivation on 5 December 2013 with the objective to diversify their income sources. To date, the number of lime trees has increased to 137, and the farmers have been actively networking among themselves to share knowledge, experience and cultivation techniques. In the past year, Banpu monitored the progress of each individual farmer on-site every month and provided the farmers technical support on lime propagation to increase additional income from the existing lime trees.

#### Climbing Wattle Planting Project

Banpu donated 1,430 climbing wattles to 20 interested farmers on 25 April 2014. This project not only generated additional income for the farmers, but also allowed the exchange of produce under the "community kitchen" concept. Furthermore, the farmers built a network for sharing knowledge and experience on growing climbing wattles, and they helped gather the produce for distribution. Banpu has closely monitored the progress of the project and provided technical advice on the cultivation to all members on a monthly basis.

Since the start of the program, the community has transformed drastically. The Fertilizer Fund helped reduce the amount of farmers' debts while other projects, including production of fermented bio-extract, biofertilizers and bio-extract hormones, waste management, agricultural professional training and integrated farming, improved their quality of life. These achievements are the results of attitude adjustment through the lessons learned from the problems and collaboration of the members, which will make a stronger community and enable sustainable development.

#### Community Development

- Public Utilities Development: The Lamphun Mine, in collaboration with Li District Administration, provided clean water to Ban Huay Tom community in Na Sai Subdistrict, Li District, Lamphun as relief for the drought victims.
- healthcare Development: The Lamphun Mine hosted a mobile medical service unit to provide free health examinations, dental care, and medical consultation to the 148 villagers of Ban Hong, Ban Waen-Narin, and nearby villages. Apart from that, the Lamphun Mine also ran a "Care for Community Health" program together with health care volunteers in Ban Hong and Waen-Narin to provide blood pressure checks to 38 bedridden patients, people with disabilities, and patients with infectious diseases.



- Educational Development: In the 2016 academic year, the Lamphun Mine awarded 95 scholarships worth THB 200,000 in total to students from 17 villages surrounding the mine. The Lamphun Mine has continuously awarded scholarships worth about THB 1,800,000 million in total to students in the surrounding communities for eight years since 2009. In addition, the Lamphun Mine joined the schools in organizing various school activities, including Children's Day activities.
- Supporting Religious Activities and Local Traditions: The Lamphun Mine joined local communities in making merit at the end of Buddhist Lent, and donating Lent candles to 9 temples. These activities not only strengthen the relationship between the mine and the communities and but also preserve local traditions. In 2016, the Lamphun Mine once again received an outstanding CSR-

DPIM award from Department of Primary Industries and Mines (DPIM), Ministry of Industry.

#### Republic of Indonesia

PT. Indo Tambangraya Megah or ITM, a subsidiary of Banpu in the Republic of Indonesia, places top priority on CSR and community development activities as it does on its mining business. ITM runs and supports CSR activities in accordance with Banpu's policy and

implementation guideline, which focuses on promotion of learning as a basis for sustainable development. The focused areas of ITM are the improvement of education quality for students, teachers and volunteers in Indonesia as well as the improvement of quality of life through community development activities in the communities surrounding the Company's five mining sites on Kalimantan Island: Embalut, Indominco, Jorong, Trubaindo and Bharinto In 2016, ITM sponsored the following activities:

 Organizing workshops for primary school teachers under the concept "World Care" in the communities surrounding Kitadin-Embalut mine, and the concept "Integrated Learning Based on Personality Traits" in the communities surrounding Indominco and Kitadin-Embalut mines. These workshops were part of the Volunteer Action Project, joined by 301 teachers from 89 schools.

In 2016, ITM organized the following community development activities:

- Public infrastructure development: The Company sponsored the construction of multi-utilitycommunity buildings, pre-school learning centers, bridges linking villages and cultivation fields; the improvement of roads and bridges in many villages to facilitate safer and fastertravel and transport; and the dredging of dikes and canals.
- Economic development and income generation:

  The Company organized a variety of professional development trainings, for instance, car driving, welding, and study trip to cacao orchards to learn about cacao planting and integrated agriculture.

Furthermore, the Company promoted diverse income-generating agricultural activities in the villages where its mining sites are located. Agricultural activities include chicken farming; fish farming; cattle and goat farming; planting vegetables, oil palms, rubber trees, fruits, and cacao; rice farming; and mushroom farming. The Company also encouraged other projects such as food processing, handicraft, dressmaking, running community stores, etc.

- educational Development: The Company prioritizes educational development, which is one of the key factors of strong and sustainable community development. In the past year, the Company's educational development activities included:
  - Granting more than 200 scholarships to students from the primary school level to the tertiary level.
  - Granting scholarships to young people in the villages who are studying nursing or education in colleges while urging them to come back to work in their communities after graduation as they are a major force driving the improvement of the community health care and education.
  - Providing continued financial support for schools to buy school furniture, such as desks, chairs, cabinets, and teaching materials and books.
  - Arranging non-formal education classes for the disadvantaged in four villages so that they have better education and job opportunities.
  - Organizing computer trainings for students, teachers and community leaders.
- Development of health and sanitation and primary health care: The Company has been supporting health and sanitation development covering lifelong health care from newborns to the elderly through the following activities:
  - Sanitation training workshop for mothers and children; health check-up for women after marriage, during pregnancy and delivery; and provision of supplementary food for pregnant women and pre-school children.
  - Dispatch of mobile medical units providing medical check-up for school students and the

elderly as well as health promotion activities and medical care for students.

- Anti-drugs workshops and campaigns targeting students Provision of clean drinking water to communities
- Environmental Conservation: The Company supported many environmental conservation activities, for example, village garbage bank projects, mangrove reforestation, and recycle of coconut fiber as ropes and nets for sale, which reduced a huge amount of coconut fiber waste.
- Promotion of community relations: The Company promoted the preservation of culture and traditions, especially those of the Dayak tribes, through various activities. The Company also supported religious activities in the communities surrounding its mines and provided assistance to the communities affected by such disasters as fire or flood.

#### People's Republic of China

Hebi Zhong Tai Mining Co., Ltd. and Shanxi Gaohe Energy Co., Ltd., Banpu's joint ventures in China promoted and supported social and community development activities in the areas surrounding their coal mines as follows:

- The Gaohe mine donated CHY 301,879 to five villages surrounding the mine for the purchase of furniture and office supplies for village committee's offices, and exercise and
- fitness equipment for nursing homes. The Hebi mine donated CHY 50,000 to the local government for the purchase of road cleaning trucks.



## Board of Directors and Management

Name / Position	Age	Education	%	Work	experience in the lo	st five years	
			Share held	Period	Position	Organization	
Mr. Chanin Vongkusolkit     Director     Dated 16 May 1983	University, Missouri, U.S.A. sh	Own share: 0.59	2016 - present	Chairman	Banpu Public Company Limited		
Senior Executive Officer     Dated 10 April 2015     An uncle of person number     7 and 10		<ul> <li>B.Econ., Thammasat University</li> <li>DCP Refresher Course # 3/2006, Thai Institute of Directors Association (IOD)</li> <li>Director Certification Program</li> </ul>	Spouse: 0.13	2016 - present	Commissioner	The Securities and Exchange Commission, Thailand	
		(DCP) #20/2002, Thai Institute of Directors Association (IOD)		1983 - 2016	Director	Banpu Public Company Limited	
				2015 - Present	Senior Executive Officer	Banpu Public Company Limited	
				1983 - 2015	Chief Executive Officer	Banpu Public Company Limited	
				2015 - Present	Director	Banpu Power Public Company Limited	
				1983 - Present	Director	Banpu Power Public Company Limited	
				2004 - Present	Director	Mitr Phol Sugar Corp., Ltd.	
					2011 - Present	Chairman	The Erawan Group Public Company Limited
				2011 - Present	Chairman	Thai Listed Companies Association	
2. Mr. Rutt Phanijphand  Vice Chairman Dated 28 April 2016  Independent Director	69	<ul> <li>M.S. in Business Ad., Fort Hays Kansas State University, Hays, Kansas, U.S.A.</li> <li>B.S., Kasetsart University</li> </ul>	-	2005 - Present	Independent Director/ Chairman of the Compensation Committee	Banpu Public Company Limited	
Dated 27 April 2005  Chairman of the Compensation		Directors Accreditation     Program(DAP): Governance     Training for Listed Company		2016 -Present	Vice Chairman	Banpu Public Company Limited	
Committee Dated 4 May 2005		Directors, #4/2003, Thai Institute of Directors Association (IOD)		2014 - Present	Member of the Audit Committee	Banpu Public Company Limited	
Member of the Audit Committee     Dated 30 April 2014	<ul> <li>Directors Certification Program (DCP) #61/2005, Thai Institute of Directors Association (IOD)</li> <li>Financial Institutions Governance Program (FGP) #1/2010, Thai Institute of Directors Association (IOD)</li> </ul>	(DCP) #61/2005, Thai Institute of Directors Association (IOD)	(DCP) #61/2005, Thai Institute of Directors Association (IOD)		2013 - Present	Chairman/ Director	Land and Houses Securities Public Company Limited
		Institute of Directors Association (IOD)		2010 - Present	Chairman/ Director	Land and Houses Fund Management Co., Ltd.	
		National Defence College (Class 388)		2009 - Present	Chairman of Executive Directors/ Director	LH Financial Group Public Company Limited	

Name / Position	Age	Education	%	Work e	experience in the la	st five years
			Share held	Period	Position	Organization
				2001- Present	Chairman of the Nomination and Compensation Committee/ Director	Home Product Centre Public Company Limited
				2005 - Present	Chairman of Executive Directors/ Director	Land and Houses Bank Public Company Limited
				2001 - 2014	President/ Chief Executive Officer	Quality Houses Public Company Limited
				2006 - 2009	Director/ Member of the Audit Committee	IRPC Public Company Limited
3. Mr. Teerana Bhongmakapat Independent Director Dated 4 April 2012	60	Ph.D. (Econ), University of Wisconsin at Madison, U.S.A. M.Econ., Thammasat University B.Econ. (Quantitative Economics),	-	Present	Independent Director/ Chairman of Audit Committee	Banpu Public Company Limited
Chairman of the Audit Committee     Dated 30 April 2014     Member of the Compensation		Chulalongkorn University Capital Market Academy Leader Program (CMA) #14, Capital Market Academy Director Certification Program (DCP)			Member of Compensation Committee	Banpu Public Company Limited
Committee Dated 30 April 2014		#161/2012, Thai Institute of Directors Association (IOD)  • Financial Institutions Governance Program (FGP) #7/2013, Thai Institute of Directors Association (IOD)  • Director Certification Program			Independent Director/ Member of Audit Committee	Tisco Financial Group Public Company Limited And Tisco Bank Public Company Limited
		Update (DCPU) #2/2014, Thai Institute of Directors Association		2011 - Present	Professor of Economics (C11)	Chulalongkorn University
		(IOD) • IT Governance Program (ITG) #2/2016, Thai Institute of Directors		2006 - Present	Professor of Economics	Chulalongkorn University
		Association (IOD)  • Audit Committee Forum 2016, Federation of Accounting Professions Under The Royal		2016 - Present	Chairman, Research Support Committee	National Anti-Corruption Commission (NACC)
		Patronage of His Majesty The King and Thai Institute of Directors Association (IOD)  Audit Committee Effectiveness Seminar, Federation of Accounting		2010 - 2015	Eminent Member, Anti-Money Laundering Committee (AMLO)	Anti-Money Laundering Office (AMLO)
		Professions Under The Royal Patronage of His Majesty The King		2008 - 2012	Dean, Faculty of Economicsvt	Chulalongkorn University
					Eminent Member, Committee on Antidumping Duties and Countervailing Subsidies	Ministry of Commerce

Name / Position	Age	Education	% Share	Work	experience in the	last five years									
		held	Period	Position	Organization										
4. Mr. Rawi Corsiri  Director	67	M.B.A., Sasin Graduate Institute of Business Administration of	Own share: -	2012 - Present	Director	Banpu Public Company Limited									
<ul> <li>Dated 6 April 2012</li> <li>Chairman of the         Corporate Governance         and Nomination         Committee         Dated 28 April 2016     </li> </ul>		<ul> <li>Chulalongkorn University</li> <li>Bachelor Degree (Geology),         Chulalongkorn University</li> <li>Director Certification Program (DCP)         #32/2003, Thai Institute of Directors         Association (IOD)</li> </ul>	Spouse: 0.02	2016 - Present	Chairman of the Corporate Governance and Nomination Committee	Banpu Public Company Limited									
		Capital Market Academy Leader     Program (CMA) #2/2006, Capital     Market Academy     Executive Leadership Program     Nida-Wharton,Co-program between		2012 - 2016	Member of the Corporate Governance and Nomination Committee	Banpu Public Company Limited									
		National Institute of Development Administration (NIDA) and The Wharton School, University of Pennsylvania, U.S.A.		2001 - Present	Director	Banpu Power Public Company Limited									
	<ul> <li>Top Executive Program (TEA#3),</li> <li>Thailand Energy Academy</li> </ul>		2016 - Present	Member of the Corporate Governance and Nomination Committee	Banpu Power Public Company Limited										
				2010 - Present	Director	Centennial Coal Company Limited									
				2011 - 2016	Advisor	Banpu Public Company Limited									
				2009 - Present	Director	Hongsa Power Company Limited									
				2009 - Present	Director	Phu Fai Mining Company Limited									
				2001 - Present	Director	BLCP Power Ltd.									
				2010 - 2012	Director	Banpu New Energy Holdings Co., Ltd.									
				1997 - 2012	Director	Banpu Coal Power Limited									

Name / Position	Age	Education	%	Work	experience in the lo	st five years
		Share held	Period	Position	Organization	
<ul> <li>5. Mr. Suthad Setboonsarng <ul> <li>Independent Director</li> <li>Dated 3 April 2014</li> </ul> </li> </ul>	65	B.A. in Economics, Thammasat University  M.A. in Agricultural Economics, University of Hawaii, U.S.A.	-	Present	Independent Director/Member of the Audit Committee	Banpu Public Company Limited
Member of the Audit Committee     Dated 30 April 2014		<ul> <li>Ph.D. in Economics, University of Hawaii, U.S.A.</li> <li>Director Certification Program (DCP) #194/2014, Thai Institute of</li> </ul>		November 2015 - Present	Director/ Member of the Audit Committee	Bank of Thailand
		Directors Association (IOD)		2013 - Present	Chairman	NawaChiOne Foundation
					Director	Board of Trustee International Rice Research Institute (IRRI) Los Banos Philippines
					Director	Development Research Institute (CDRI) Phnom Penh, Cambodia
				2011 - 2012	Senior Advisor	Bower Group Asia, Washington DC. U.S.A.
				2009 - 2011	Thailand Trade	Office of Thailand Trade
Mr. Sudiarso Prasetio     Independent Director     Dated 3 April 2014     Member of the Corpor     Governance and     Nomination Committee	ate	Civil Engineering, Brawijaya     University Malang Indonesia     Astra Middle Management Program,     INSEAD     Astra Executive Program, INSEAD     Professional Director Program	-	2014 - Present	Independent Director / Member of the Corporate Governance and Nomination Committee	Banpu Public Company Limited
Dated 30 April 2014		Leadership, Focus & Execution		1999 - 2013	President Director	PT. Pamapersada Nusantara
				2013 - April 2015	Commissioner	PT. United Tractors Tbk (Listed Company)
				1999 - 2013	Vice President Commissioner	PT. Pama Indo Kodeco
				2011 - 2014	President Commissioner	PT. Asmin Bara Bronang
				2013 - Present	President Director	PT. Unitras Energy
				2008 - Present	Member of Advisory Board	Indonesian Mining Services Association

Name / Position	Age	Education	%	Work	experience in the lo	st five years
			Share held	Period	Position	Organization
7. Mr. Buntoeng Vongkusolkit • Director	60	B.S. in Political Science,     Ramkhamhaeng University     M.S. in Political Science,	0.05	Present	Director/ Member of the Compensa- tion Committee	Banpu Public Company Limited
Dated3 April 2014  • Member of the Compensation Committee Dated 30 April 2014  *A nephew of person number		Ramkhamhaeng University  Ultra Wealth - Invest Like a Master (UW 2)  Top Executive Program (TEA#5) Thailand Energy Academy  TLCA Leadership Development Program (LDP 1),		1982 - Present 2015 - Present	Director  Chief Operating Officer - Cane Management Business	Mitr Phol Group  Mitr Phol Group
6 and a cousin of person number 9		Thai Listed Companies Association Top Executive Program in Commerce and Trade (TEPCoT) #5  Director Certification Program (DCP) #161/2012, Thai Institute of Directors Association (IOD)  Senior Executive Program #9,		2011 - Present		Mitr Phol Group
		Sasin Graduate Institute of Business  Management Problem Solving and Decision Making Program Kepner - Tregoe, International, Princeton, New Jersey, U.S.A.		2008 - 2011	Group Managing Director – ASEAN Business	Mitr Phol Group
Mr. Metee Auapinyakul     Director	and Technology (honoris causa), St. Louis University, Missouri, U.S.A. B.Sc. (Management), St. Louis University, Missouri, U.S.A.	Own share:	1983 - Present	Director/ Advisor	Banpu Public Company Limited	
Dated 16 May 1983  Advisor Dated 1 January 2014			B.Sc. (Management), St. Louis	0.11 Spouse: 0.01	2015 - Present	Director
*An older brother of person number 9		Economy, Harvard University John F. Kennedy School of Government,		2004 - Present	Chairman of Advisors	GENCO Public Company Limited
		Boston, U.S.A.  National Defence College (Class 377) #7		2008 - 2013	Honorary Advisor, Energy Committee	House of Representatives
	<ul> <li>National Defence College, College of Management, (Class#1)</li> <li>Director Certification Program (DCP) #61/2005, Thai Institute of Directors Association (IOD)</li> </ul>	of Management, (Class#1)  • Director Certification Program (DCP)		2009 - 2013	Advisor, the National Accreditation Council	Ministry of Industry
			2007 - 2011	Director	Thai Agro Energy Public Company Limited	

Name / Position	Age	Education	%	Work	experience in the lo	ast five years
			Share held	Period	Position	Organization
<ul><li>9. Mr. Ongart Auapinyakul</li><li>Director</li><li>Dated 29 July 1983</li></ul>	rector University of Missouri, Colu	B.S. (Mechanical Engineering),     University of Missouri, Columbia,     U.S.A.	Own share: 0.18	1983 - 2016	Executive Officer	Banpu Public Company Limited
Executive Officer     Dated 8 January 2001		Senior Executive Program 3, Sasin Graduate Institute of Business  Administration of Chulalongkorn	Spouse: 0.07	1983 - Present	Director	Banpu Public Company Limited
*A younger brother of person number 8		Administration of Chulalongkorn University  National Defence College (Class 4414)  Director Certification Program (DCP) #23/2002, Thai Institute of Directors Association (IOD)  Capital Market Academy Leader Program (CMA) #8, Capital Market Academy  Top Executive Program 1, Urban Green Development Institute  Top Executive Program (TEA#1) Thailand Energy Academy  Top Executive Program 17, Indicial Training Institute  Top Executive Program 1, Institute of Business and Industrial Development  Top Executive Program in Commerce and Trade (TEPCoT) #4		Present	Advisor	Banpu Public Company Limited
Mr. Verajet Vongkusolkit     Director     Dated 1 June 2010     Member of the Corporate Governance and	<ul> <li>Bachelor of Science (Finance)         Babson College, Massachusetts,             U.S.A.     </li> <li>Director Certification Program (DCP)         #24/2002, Thai Institute of Directors     </li> </ul>	Babson College, Massachusetts, ed 1 June 2010 U.S.A.  Director Certification Program (DCP)	0.12	2010 - Present	Director/Member of the Corporate Governance and Nomination Committee	Banpu Public Company Limited
Nomination Committee Dated 1 June 2010		Association (IOD)		2008 - Present	Director	Mitr Siam Sugar Corp., Ltd.
*A nephew of person number 1 and a cousin of person				2008 - Present	Director	Mitr Phol Sugar Corp., Ltd.
number 7				2008 - Present	Director	United Farmer and Industry Co., Ltd.
11. Ms. Somruedee Chaimongkol	55	B.Sc. (Accounting),     Bangkok University	0.11	2015 - Present	Chief Executive Officer/ Director	Banpu Public Company Limited
<ul> <li>Chief Executive Officer         Dated 10 April 2015     </li> <li>Director         Dated 4 April 2015     </li> </ul>		<ul> <li>Program for Global Leadership, Harvard University Graduate School of Business Administration, Boston, U.S.A.</li> </ul>			Director	Banpu Power Public Company Limited
Багей ч дріп 2010	Director Certification Program (DCP) #78/2006, Thai Institute of Directors Association (IOD) Top Executive Program, Capital Market Academy (CMA) #18 Top Executive Program 2, Institute of Business and Industrial Development		2006 - 2015	Chief Financial Officer	Banpu Public Company Limited	
			2001 - 2006	Senior Vice Presieent - Finance	Banpu Public Company Limited	
		of Business and Industrial		Present	Director	BLCP Power Limited
					Director	Hunnu Investments Pte. Ltd.
					Director	AFE Investments Pty Ltd.

Name / Position	Age	Age Education				Work	Work experience in the last five years			
			Share <sup>-</sup> held	Period	Position	Organization				
					Director	BMS Coal Sales Pte. Ltd				
					Director	Banpu Singapore Pte. Ltd.				
					Director	Banpu Minerals Company Limited				
					Director	Banpu International Limited				
					Director	BP Overseas Development Company Limited				
					Director	Centennial Coal Company Limited				
					Director	Banpu Engineering Services Company Limited				
					Director	Banpu Engineering Services (Thailand) Co., Ltd.				
					Director	Biofuel Development Holdings Company Limited				
					Director	Hunnu Coal Pty Ltd.				
					Director	Banpu Minerals (Singapore) Pte. Ltd.				
					Director	Chiang Muan Mining Company Limited				
					Director	Banpu Coal Investment Company Limited				
					Director	Asian American Coal, Inc.				
					Director	AACI SAADEC (BVI) Holdings Limited				
					Director	PT. Indo Tambangraya Megah Tbk				
					Director	Banpu Australia Resources Pty Ltd.				
					Director	Banpu Australia Co., Pty Ltd.				

Name / Position	Age	Education	%	Work	experience in the l	ast five years										
			Share held	Period	Position	Organization										
<ul> <li>12. Mr. Anon Sirisaengtaksin</li> <li>Director Dated 19 April 2016</li> <li>Member of the Corporate</li> </ul>	64	B.Sc. (Geology), Chulalongkorn University     M.B.A., Thammasat University     Certificates in Project Investment Appraisal and Management and	-	Present	Director/ Member of the Corporate Governance and Nomination Committee	Banpu Public Company Limited										
Governance and Nomination Committee Dated 28 April 2016		Global Leadership, Harvard University, U.S.A.  Director Accreditation Program			Executive Advisor	Banpu Public Company Limited										
Executive Advisor		(DAP) Class 52/2006 and Director  • Director Certification Program (DCP) Class 73/2006, Thai Institute of			Director	PTT Global Chemical Public Company Limited										
		Directors Association (IOD)			Director	Bangkok Commercial Asset Management Company Limited										
					Director	PTT Chemical International Private Limited										
															Director	PTT Chemical International (Asia Pacific ROH) Limited
														Director	Energy Oleochemical (M) Sdn.Bhd.	
				Director	Energy Specialty chemical Sdn.Bhd.											
					Director	Natureworks LLC										
					Director	Venecorex Holding										
					Director	Myriant Corporation										
				_	Director	PTTGC International U.S.A. Inc.										
					Director	PTTGC International (Netherlands) Inc.										
				2012 - 2013	Chief Executive Officer	PTT Chemical International Private Limited										
				2008 - 2012	Chief Executive Officer	PTT Exploration and Production Public Company Limited										

Name / Position	Age	Education	%	Work	experience in the l	ast five years											
			Share held	Period	Position	Organization											
<ul><li>13. Mr. Somyot Ruchirawat</li><li>Deputy Chief Executive</li></ul>	61	B.Eng (Chemical Engineering),     Chulalongkorn University	-	2013 - Present	Deputy Chief Executive Officer	Banpu Public Company Limited											
Office Dated 1 January 2013		<ul> <li>M.Eng (Industrial Engineering and Management), Asian Institute of Technology (AIT)</li> </ul>		2011 - 2012	Chief Operating Officer	Banpu Public Company Limited											
		M.B.A. (Executive), Chulalongkorn University		2015 - Present	Director	Centennial Coal Company Limited											
		<ul> <li>Director Certification Program (DCP) #75/2006, Thai Institute of Directors Association (IOD)</li> <li>Capital Market Academy Leader</li> </ul>		2015 - Present	Director	Hebi Zhong Tai Mining Co., Ltd.											
		Program (CMA) #3, Capital Market Academy		2015 - Present	Director	Shanxi Gaohoe Energy Co., Ltd.											
				2014 - Present	Director	Akira Energy Limited											
				2014 - Present	Director	Akira Energy (South) Limited											
					2014 - Present	Director	Aura Land Development Pte. Ltd.										
						201	2014 - Present	Director	Banpu Renewable Energy Co., Ltd.								
															2013 - Present	Director	BMS Coal Sales Pte. Ltd.
									2010 - Present	Director	Banpu Mineral (Singapore) Pte. Ltd.						
							2001- Present	Director	Banpu Minerals Company Limited								
				2001- Present	Director	Banpu International Limited											
				2012 - Present	Director	Hunnu Investments Pte. Ltd.											
					Director	Hunnu Coal Pty Ltd.											
					Director (Commissioner)	PT. Indo Tambangraya Megah Tbk											
										President Director	PT. Indo Tambangraya Megah Tbk						

Name / Position	Age	Education	% Share held	Work experience in the last five years		
				Period	Position	Organization
14. Mr. Voravudhi Linananda  Chief Operating Officer Banpu Public Company Limited Dated 1 January 2013  Chief Executive Officer Banpu Power Public Company Limited Dated 10 September 2015	59	M.B.A., SasinGraduate Institute of Business Administration of Chulalongkorn University Bachelor of Engineering (Mechanical), Kasetsart University Advanced Management Program (AMP173) Harvard Business School, U.S.A. Directors Certificate Program (DCP 149/2011) Thai Institute of Directors Association (IOD) Orchestrating Winning Performance Program (OWPII/2013), International Institute for Management Development (IMD SE Asia)		2013 - Present	Chief Operating Officer	Banpu Public Company Limited
				2015 - Present	Chief Executive Officer	Banpu Power Public Company Limited
				2009 - Presen	Director	Banpu Power Public Company Limited
					Director	BLCP Power Ltd.
					Director	Banpu Coal Power Limited
					Director	Hongsa Power Company Limited
					Director	Phu Fai Mining Co., Ltd.
				2014 - Present	Director	Banpu Engineering Services Co.,Ltd.
					Director	Banpu Energy Service (Thailand) Co.,Ltd.
					Director	Banpu Energy Services (Japan) Co., Ltd.
				2015 - Present	Director	Shanxi Lu Guang Power Co., Ltd.
					Director	Zouping Peak Pte. Ltd.
					Director	Pan - Western Energy Corporation LLC
					Director	Banpu Coal Investment Company Limited
					Director	Banpu Power International Limited
					Director	BP Overseas Development Company Limited
				2016 - Present	Director	Hokkaido Solar Estate G.K.
					Director	BPPR Co., Ltd.
					Director	BPPR Japan Co., Ltd.
					Director	BPP Renewable Co., Ltd.
					Director	Thai Solar Consultant Co., Ltd.
					Director	PT ITM Banpu Power

Name / Position	Age Education		%	Work experience in the last five years					
			Share held	Period	Position	Organization			
15. Mr. Peter Parry  • Chief Financial Officer	55	Bachelor of Business, University of Technology, Major in Accounting,	-	April 2015 - Present	Chief Financial Officer	Banpu Public Company Limited			
Dated 10 April 2015		<ul><li>Sydney</li><li>CPA, CPA Australia</li></ul>		1996 - April 2015	Executive General Manager Finance	Centennial Coal Company Limited			
16. Mr. Sathidpong Wattananuchit  Assistant Chief Executive Officer	58	<ul> <li>Doctor of Philosophy in Strategic Management, University of Northern Washington</li> <li>M.B.A. Strategic Management</li> </ul>	-	2006 - Present	Assistant Chief Executive Officer - Corporate Services	Banpu Public Company Limited			
Corporate Services     Dated 1 January 2006		Leadership, IOU of Netherlands Theology Study, Saint Sabriel's Institution, India Director Certification Program (DCP) #74/2006 Thai Institute of Directors		2004 - 2005	Senior Vice President - Internal Audit	Banpu Public Company Limited			
	#74/2006, Thai Institute of Directors Association (IOD)			1998 - 2003	Senior Vice President - Human Resources	Banpu Public Company Limited			
17. Mr. Akaraphong Dayananda  Head of strategy and	58	University  M.B.A., Bowling Green State	-	2011 - Present	Head of Strategy and Business Development	Banpu Public Company Limited			
Business Development Dated 1 January 2011	University, Ohio, U.S.A.	<ul> <li>Executive Program in Strategy and Organization, Stanford University, California, U.S.A.</li> <li>Director Certification Program (DCP) # 91/2007, Thai Institute of Directors Association (IOD)</li> <li>Director Diploma Examination</li> </ul>	Organization, Stanford University, California, U.S.A.  • Director Certification Program (DCP) # 91/2007, Thai Institute of Directors Association (IOD)  • Director Diploma Examination	Organization, Stanford University, California, U.S.A.  Director Certification Program (DCP) # 91/2007, Thai Institute of Directors Association (IOD)  Director Diploma Examination	<ul> <li>University, Ohio, U.S.A.</li> <li>Executive Program in Strategy and Organization, Stanford University, California, U.S.A.</li> <li>Director Certification Program (DCP) # 91/2007, Thai Institute of Directors Association (IOD)</li> <li>Director Diploma Examination</li> </ul>		2009 - Present	Director	Banpu Power Public Company Limited (This compay formerly registered under the name of Banpu Power Company Limited, with a company registration no.0105539134655, and has converted its status to become a public company limited on the 10 <sup>th</sup> of September B.E.2558 (A.D.2015)
				2008 - 2010	Senior Vice President - Strategy and Business Development	Banpu Public Company Limited			
			2015 - Present	Director	Banpu North America Corporation				
					2009 - Present	Director	Banpu Minerals Company Limited		
					Director	Banpu International Limited			
				2010 - Present	Director	Banpu Australia Co. Pty Ltd.			
					Director	Banpu Engineering Services Co., Ltd			
					Director	Biofuel Development Holdings Co., Ltd.			

Name / Position	Age	Education	%	Work experience in the last five years			
			Share held	Period	Position	Organization	
					Director	Banpu Renewable Energy Co., Ltd.	
					Director	Banpu Infinergy Co., Ltd. <sup>1</sup>	
					Director	Banpu Energy Services (Thailand) Co., Ltd	
				2011 - Present	Director	Ratchasima Green Energy Co., Ltd.	
					Director	Chiang Muan Mining Company Limited	
					Director	Banpu Coal Power Limited	
					Director	Banpu Australia Resources Pty Ltd.	
					Director	Hunnu Coal Pty Ltd.	
					Director	Hunnu Investment Pte. Ltd.	
				2013 - Present	Director	BMS Coal Sales Pte. Ltd.	
					Director	AFE Investments Pty Ltd.	
				2014- Present	Director	Akira Energy Limited	
					Director	BOG Co., Ltd.	
					Director	Aizu Energy Pte. Ltd.	
					Director	Akira Energy (South) Ltd.	
				2016 - Present	Director	Banpu Power (Japan) Co., Ltd. <sup>2</sup>	
						Thai Solar Consultant Co., Ltd	
18. Ms. Udomlux Olarn  • Senior Vice President  - Corporate Affairs  Dated 1 July 2009	57	B.A., Journalism and Mass     Communication (Advertising and     Public Relations), Thammasat     University	-	2009 - Present	Senior Vice President - Corporate Affairs	Banpu Public Company Limited	

<sup>&</sup>lt;sup>1</sup> This company formerly registered under the name of Prachuab Wind Energy Company Limited, and has changed the name on 1 November 2016

<sup>&</sup>lt;sup>2</sup> This company formerly registered under the name of BPP Renewable Co., Ltd., and has changed the name on 23 December 2016

Name / Position	Age Education		%	Work experience in the last five years			
			Share held	Period	Position	Organization	
<ul> <li>19. Mr. Aphimuk     Taifayongvichit</li> <li>Chief Commercial Officer     Dated 1 February 2016</li> </ul>	wichit Columbus, Ohio, U.S.A. Degree: Master of Science in Mechanical Engineering Ohio State University, Columbus, Ohio, U.S.A. Degree: Bachelor of Science in Mechanical Engineering  Marc 2014		May 2016 - Present March	Director  Director  Deputy Head	BMS Coal Sales Pte. Ltd.  BMS Coal Sales Pte. Ltd.  Banpu Australia Co. Pty Ltd.  BMS Coal Sales		
				2014 - April 2016	- Marketing, Sales and Logistics  Director	Pte. Ltd.  BMS Coal Sales Pte. Ltd.  Banpu Australia Co. Pty Ltd.	
					General Manager - Business Liaison	Centennial Coal Company Limited	
				April 2011 - February 2014	Director	Banpu Australia Co. Pty Ltd.	
20. Mr. Varoj Limjaroon  Senior Vice President, Human Resources Dated 1 July 2009	56	B .B.A. Finance and Accountancy, Thammasat University     M.B.A. Executive Program, Thammasat University	-	2009 - Present	Senior Vice President - Human Resources	Banpu Public Company Limited	
Boonsiri Charusiri     Company Secretary     Dated 27 August 2008	59	B.A., Geology (Science), Chulalongkorn University  M.S., (Geological Science), Queen's University, Canada  EMBA, Sasin Gratuate Institute of Besiness Adminstration of Chulalongkorn University  Company Secretary Program (CSP), Thai Institute of Directors Association (IOD)	-	2008 - Present	Company Secretary	Banpu Public Company Limited	

Details of Head of Internal Audit & Secretary of the Audit Committee

Name/Position Age		Education	%	Work experience in the last five years			
			Share held	Period	Position	Organization	
22. Mr. Vorravit Varutbangkul  Head of Internal Audit & Secretary of the Audit	38	Master of Business Administration- Strategy, University of Southampton     BBA - Accounting, Assumption University (ABAC)	-	2015 - Present	Head of Internal Audit & Secretary of the Audit Committee	Banpu Public Company Limited	
Committee Dated 10 April 2015		Certified Public     Accountant of Thailand: CPA		2008 - 2015	Manager - Internal Audit	Banpu Public Company Limited	

# Shareholding of the Board of Directors and Management

As of 31 December 2016

Name I and a sur-	Ordinary Share					
Name - Lastname	31 Dec 2016	31 Dec 2015	+/(-)			
1. Mr. Chanin Vongkusolkit	28,946,376	14,435,420	14,510,956			
Spouse/ Minor child	6,488,580	3,244,290	3,244,290			
2. Mr. Rutt Phanijphand	-	-	-			
Spouse/ Minor child	-	-	-			
3. Mr. Teerana Bhongmakapat	-	-	-			
Spouse/ Minor child	-	-	-			
4. Mr. Rawi Corsiri	-	-	-			
Spouse/ Minor child	1,200,000	600,000	600,000			
5. Mr. Suthad Setboonsarng	30,188	15,000	15,188			
Spouse/ Minor child	15,000	-	-			
6. Mr. Sudiarso Prasetio	-	-	-			
Spouse/ Minor child	-	-	-			
7. Mr. Buntoeng Vongkusolkit	2,660,000	1,330,000	1,330,000			
Spouse/ Minor child	-	-	-			
8. Mr. Metee Auapinyakul	5,436,000	3,408,000	2,028,000			
Spouse/ Minor child	645,200	310,000	335,200			
9. Mr. Ongart Auapinyakul	8,998,500	5,084,250	3,914,250			
Spouse/ Minor child	3,360,000	1,680,000	1,680,000			
10. Mr. Verajet Vongkusolkit	6,074,536	-	6,074,536			
Spouse/ Minor child	238,970		-			
11. Mr. Anon Sirisaengtaksin	20,000	-	-			
Spouse/ Minor child	13,518	-	-			
12. Ms. Somruedee Chaimongkol	5,255,910	1,431,790	3,824,120			
Spouse/ Minor child	-	-	-			
13. Mr. Somyot Ruchirawat	-	-	-			
Spouse/ Minor child	-	-	-			
14. Mr. Voravudhi Linananda	-	-	-			
Spouse/ Minor child	22,000	11,000	11,000			
15. Mr. Peter Parry	-	-	-			
Spouse/ Minor child	-	-	-			
16. Mr. Sathidpong Wattananuchit	-	-	-			
Spouse/ Minor child	-	-	-			
17. Mr. Akaraphong Dayananda	100,000	54,000	46,000			
Spouse/ Minor child	-	-	-			
18. Ms. Udomlux Olarn	165,000	110,000	55,000			
Spouse/ Minor child	-	-	-			
19. Mr. Varoj Limjaroon	-	-	-			
Spouse/ Minor child	-	-				
20. Mr. Aphimuk Taifayongvichit	-	-				
Spouse/ Minor child	-	-				

Remark: The shares partially increased due to the Company has increased the capital and allocate newly issued ordinary shares and warrant to the existing shareholders in 2016.



#### 1. Remuneration in Cash for the Year Ended 31 December 2016

1.1 Total cash remuneration of the Board of Directors in the form of meeting allowance and annual remuneration amounted to THB 34,586,580.00, the details of which are as follows:

As of 31 December 2016

						7 10 01 01 0	ACCCITIBLE ZOTO
			Meeting Allo	wance (THB)			
	Name/Position	Director	Audit Committee	Corporate Governance and Nomination Committee	Compensation Committee	Annual Remuneration (THB)	Total Remuneration (THB)
1.	Mr. Chanin Vongkusolkit Chairman of the Board of Directors	801,000.00	-	-	-	1,896,060.00	2,697,060.00
2.	Mr. Rutt Phanijphand Vice Chairman/ Independent Director/ Chairman of the Compensation Committee/ Member	757,500.00	199,200.00	-	145,600.00	1,896,060.00	2,998,360.00
3.	of the Audit Committee Mr. Teerana Bhongmakapat Independent Director/ Chairman of the Audit Committee/ Member of the Compensation Committee	686,000.00	262,080.00	-	112,000.00	1,896,060.00	2,956,140.00
4.	Mr. Sudiarso Prasetio Independent Director/ Member of the Corporate Governance and Nomination Committee	668,000.00	-	76,000.00	-	1,896,060.00	2,640,060.00
5.	Mr. Suthad Setboonsarng Director/ Member of the Audit Committee	686,000.00	266,400.00	-	-	1,896,060.00	2,848,460.00
6.	Mr. Rawi Corsiri Director/ Chairman of the Corporate Governance and Nomination Committee	686,000.00	-	86,800.00	-	1,896,060.00	2,668,860.00
7.	Mr. Buntoeng Vongkusolkit  Director/ Member of the	668,000.00	-	-	112,000.00	1,896,060.00	2,676,060.00
8.	Compensation Committee Mr. Metee Auapinyakul Director	686,000.00	-	-	-	1,896,060.00	2,582,060.00

			Meeting Allowance (THB)				
	Name/Position	Director	Audit Committee	Corporate Governance and Nomination Committee	Compensation Committee	Annual Remuneration (THB)	Total Remuneration (THB)
9.	Mr. Ongart Auapinyakul Director	444,000.00	-	-	-	1,896,060.00	2,340,060.00
10.	Mr. Verajet Vongkusolkit  Director/ Member of the Corporate  Governance and Nomination  Committee	686,000.00	-	76,000.00	-	1,896,060.00	2,658,060.00
11.	Ms. Somruedee Chaimongkol Director	444,000.00	-	-	-	1,394,053.00	1,838,053.00
12.	Mr. Anon Sirisaengtaksin  Director/ Member of the Corporate  Governance and Nomination  Committee	486,000.00	-	36,000.00	-		522,000.00
13.	Mr. Krirk-Krai Jirapaet Chairman of the Board of Directors	234,000.00	-	-	-	2,464,878.00	2,698,878.00
14.		230,000.00	-	52,000.00	-	2,180,469.00	2,462,469.00
	Total					3	4,586,580.00

#### Notes

- 1. Mr. Krirk-Krai Jirapaet (person number 13) and Mr. Anothai Techamontrikul (person number 14) resigned as Chairman of the Board of Directors and Vice Chairman, respectively, effective from 19 April 2016.
- 2. Mr. Anon Sirisaengtaksin (person number 12) appointed as a director to replace Mr. Krirk-Krai Jirapaet for the remainder of term of office, effective from 19 April 2016, and appointed as Member of the Corporate Governance and Nomination Committee, effective from 28 April 2016,
- 3. Mr. Chanin Vongkusolkit (person number 1) appointed as Chairman of the Board of Directors, effective from 28 April 2016.
- 4. Mr. Rutt Phanijphand (person number 2) appointed as Vice Chairman, effective from 28 April 2016.
- 5. Mr. Rawi Corsiri (person number 6) appointed as Chairman of the Corporate Governance and Nomination Committee, effective from 28 April 2016.
  - 1.2 Cash Remuneration of the Company's Executives in the Form of Salary and Bonus 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, the details of which are as follows:

Unit: THB	Number of Executives	2016	Number of Executives	2015
Total Salaries	9	81,247,671.88	7	64,372,653.57
Total Bonus	9	21,685,227.20	7	20,431,355.00
Total		102,932,899.08		84,804,008.57

#### Notes

- In 2016, there were 9 executives, namely, Ms. Somruedee Chaimongkol, Mr. Somyot Ruchirawat, Mr. Voravudhi Linananda, Mr. Peter Parry, Mr. Sathidpong Wattananuchit, Mr. Akaraphong Dayananda, Ms. Udomlux Olarn, Mr. Aphimuk Taifayongvichit, and Mr. Varoj Limjaroon.
- In 2015, there were 7 executives, namely, Ms. Somruedee Chaimongkol, Mr. Somyot Ruchirawat, Mr. Voravudhi Linananda, Mr. Peter Parry, Mr. Sathidpong Wattananuchit, Mr. Akaraphong Dayananda, and Ms. Udomlux Olarn.

#### 2. Other Remunerations

Contribution to Provident Fund

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

Unit: THB	Number of Executives	2016	Number of Executives	2015
Provident Fund	9	3,213,252.00	7	3,645,743.03

#### Notes:

- In 2016, there were 9 executives, namely, Ms. Somruedee Chaimongkol, Mr. Somyot Ruchirawat, Mr. Voravudhi Linananda, Mr. Peter Parry, Mr. Sathidpong Wattananuchit, Mr. Akaraphong Dayananda, Ms. Udomlux Olarn, Mr. Aphimuk Taifayongvichit, and Mr. Varoj Limjaroon.
- In 2015, there were 7 executives, namely, Ms. Somruedee Chaimongkol, Mr. Somyot Ruchirawat, Mr. Voravudhi Linananda, Mr. Peter Parry, Mr. Sathidpong Wattananuchit, Mr. Akaraphong Dayananda, and Ms. Udomlux Olarn.

#### 3. Employees

The number of the Company's and its subsidiaries' employees as of 31 December 2016 is as follows:

Country of employees	Number of employees
Thailand	314
Indonesia	2,829
China	910
Australia	1,473
Mongolia	123
Lao PDR	2
Singapore	19
Japan	5
Total	5,675

#### Annual Report 2016

Banpu Public Company Limited



#### Ten Major Shareholders as of 31 December 2016

Major Shareholders	Amount of Shares Held	%
1. The Vongkusolkit Family	482,847,186	9.78
Mitr Phol Sugar Corp., Ltd.	288,309,528	5.84
TME Capital Co., Ltd.	124,032,000	2.51
City Holding Co., Ltd.	11,820,000	0.24
United Farmer and Industry Co., Ltd.	35,611,300	0.72
MP Particle Board Co., Ltd.	30,438,448	0.62
Mid-Siam Capital Co., Ltd.	14,916,382	0.30
Pacific Sugar Corporation Ltd.	13,646,682	0.28
Ufinves Co., Ltd.	12,594,000	0.26
Mitr Phol Bio-Power (Phu Viang) Co., Ltd.	12,311,744 9,606,042	0.25 0.19
Mitr Kalasin Sugar Co., Ltd.	9,000,042	0.19
2. Thai NVDR Co., Ltd.	361,367,257	7.32
3. Social Security Office	87,198,000	1.77
4. UBS AG Singapore Branch	69,292,226	1.40
5. HSBC (Singapore) Nominees Pte Ltd.	62,028,170	1.26
6. Chase Nominees Limited	60,600,371	1.23
7. State Street Bank Europe Limited	56,228,809	1.14
8. Bualuang Long-Term Equity Fund	43,883,400	0.89
9. Phatra Securities Plc.	40,704,900	0.82
10. Electricity Generating Authority of Thailand Employees Provident Fund	36,078,400	0.73
Total	1,853,514,845	37.55

#### Notes

- 1. Mitr Phol Sugar Corp., Ltd.: Mid-Siam Sugar Corp., Ltd. holds 99.99% of its paid-up capital.
- 2. TME Capital Co., Ltd.:
  - The Vongkusolkit Family holds 54.23% of its paid-up capital.
  - Ufinves Co., Ltd. holds 15.23% of its paid-up capital.
- 3. City Holding Co., Ltd.: The Vongkusolkit Family holds 87.00% of its paid-up capital.
- 4. United Farmer and Industry Co., Ltd.: Mitr Phol Sugar Corp., Ltd. holds 87.56% of its paid-up capital.
- 5. MP Particle Board Co., Ltd.: United Farmer and Industry Co., Ltd. holds 99.99% of its paid-up capital.
- 6. Mid-Siam Capital Co., Ltd.: Mid-Siam Sugar Corp., Ltd. holds 99.99% of its paid-up capital.
- 7. Pacific Sugar Corporation Ltd.: Mitr Phol Sugar Corp., Ltd. holds 99.99% of its paid-up capital.
- 8. Ufinves Co., Ltd.: TME Capital Co., Ltd. holds 100.00% of its paid-up capital.
- 9. Mitr Phol Bio-Power (PhuViang) Co., Ltd.: United Farmer and Industry Co., Ltd. holds 51.04% of its paid-up capital.
- 10. Mitr Kalasin Sugar Co., Ltd.: United Farmer and Industry Co., Ltd. holds 99.99% of its paid-up capital.

# Dividend Policy

Banpu has a policy to pay approximately 50 percent of its net profits from the consolidated financial statements less all kinds of statutory and corporate reserves. However, this dividend payout rate will subject to cash flows, investment obligations of the Company and its affiliates as well as legal restrictions and other requirements.





# Connected Persons and Transactions

#### Connected Persons

	Connected Persons/ Type of Business	Description of Relationship	Major Shareholders	Members of the Board of Directors
1.	Mitr Phol Sugar Corp., Ltd. (Production and distribution of sugar and molasses)	1) One of the shareholders of Banpu Plc., holding 5.84% of its paid-up capital 2) The major shareholder is Mid Siam Sugar Co., Ltd. 3) There are three joint directors as follows: 1. Mr. Chanin Vongkusolkit 2. Mr. Buntoeng Vongkusolkit 3. Mr. Verajet Vongkusolkit	As of 31 December 2016 Mid-Siam Sugar Co., Ltd. 99.99%	1. Mr. Isara Vongkusolkit 2. Mr. Chanin Vongkusolkit 3. Mr. Buntoeng Vongkusolkit 4. Mr. Chusak Vongkusolkit 5. Mr. Klanarong Sriroth 6. Mr. Thaweewat Thaweepiyamaporn 7. Wg. Cdr. Lucksamee Vongkusolkit 8. Mr. Krisda Monthienvichienchai 9. Mr. Verajet Vongkusolkit 10. Assoc. Prof. Dr.Chiradet Ousawat 11. Mr. Attaphol Vongkusolkit
2.	TME Capital Co., Ltd. (Investment company)	<ol> <li>One of the shareholders of Banpu Plc., holding 2.51% of its paid-up capital</li> <li>The major shareholder is the Vongkusolkit family.</li> <li>There are two joint directors as follows:         <ol> <li>Mr. Metee Auapinyakul</li> <li>Mr. Ongart Auapinyakul</li> </ol> </li> </ol>	As of 31 December 2016  1. The Vongkusolkit Family 54.23%  2. The Auapinyakul Family 24.16%  3. Ufinves Co., Ltd.15.23%  4. The Kantatham Family 3.17%  5. The Kanjanakumnerd Family 2.58%  6. The Putpongsiriporn Family 0.63%	1. Mr. Vitoon Vongkusolkit 2. Mr. Metee Auapinyakul 3. Mr. Ongart Auapinyakul 4. Mr. Pakorn Kantatham 5. Mr. Annop Vongkusolkit 6. Ms. Jintana Kanjanakumnerd 7. Ms. Pansawan Vongkusolkit
3.	City Holdings Co., Ltd. (Holding company)	1) One of the shareholders of Banpu Plc., holding 0.24% of its paid-up capital 2) The major shareholder is Vongkusolkit Family. 3) There is no joint director.	As of 31 December 2016  1. The Vongkusolkit Family 87.00%  2. The Kanjanakumnerd Family 6.00%  3. The Putpongsiriporn Family 2.00%  4. The Lattapanit Family 2.00%  5. The Jenlapwattanakul Family 1.50%  6. The Pradittan Family 1.50%	1. Mr. Vitoon Vongkusolkit 2. Mr. Isara Vongkusolkit 3. Mr. Banchoet Vongkusolkit 4. Ms.Jintana Kanjanakumnerd 5. Mrs. Arada Lattapanit 6. Ms. Theeranat Vongkusolkit 7. Ms.Phatsawan Vongkusolkit
4.	United Farmer and Industry Co., Ltd. (Production and distribution of sugar and molasses)	<ol> <li>One of the shareholders of Banpu Plc., holding 0.72% of its paid-up capital</li> <li>The major shareholder is Mitr Phol Sugar Corp., Ltd.</li> <li>There are two joint directors as follows:         <ol> <li>Mr. Buntoeng Vongkusolkit</li> <li>Mr. Verajet Vongkusolkit</li> </ol> </li> </ol>	As of 31 December 2016 Mitr Phol Sugar Corp., Ltd. 87.56%	Mr. Isara Vongkusolkit     Mr. Buntoeng Vongkusolkit     Ms. Chayawadee Chaianan     Mr. Thaweewat Thaweepiyamaporn     Ms. Jintana Kanjanakumnerd     Mr. Sukkan Wattanawekin     Mr. Krisda Monthienvichienchai     Mr. Verajet Vongkusolkit     Mrs. Arada Lattapanit

	Connected Persons/ Type of Business	Description of Relationship	Major Shareholders	Members of the Board of Directors
5.	5. MP Particle Board Co., Ltd. (Investment company)	<ol> <li>One of the shareholders of Banpu Plc., holding 0.62% of its paid-up capital</li> <li>The major shareholder is United Farmer and Industry Co., Ltd.</li> <li>There is no joint director.</li> </ol>	As of 31 December 2016 United Farmer and Industry Co., Ltd. 99.99%	<ol> <li>Mr. Isara Vongkusolkit</li> <li>Mr. Krisda Monthienvichienchai</li> <li>Mrs. Amporn Kanjanakumnerd</li> <li>Mr. Pariwat Kanchanathana</li> <li>Mr. Attaphol Vongkusolkit</li> </ol>
6.	Mid-Siam Capital Co., Ltd. (Sugar cane planting and stock investment)	1) One of the shareholders of Banpu Plc., holding 0.30% of its paid-up capital 2) The major shareholder is Mid Siam Sugar Co., Ltd. 3) There is one joint director: Mr. Buntoeng Vongkusolkit	As of 31 December 2016 Mid-Siam Sugar Co., Ltd. 99.99%	<ol> <li>Mr. Soonthorn Vongkusokit</li> <li>Mr. Isara Vongkusolkit</li> <li>Mr. Buntoeng Vongkusolkit</li> </ol>
7.	Pacific Sugar Corporation Ltd. (Import and export of sugar)	1) One of the shareholders of Banpu Plc., holding 0.28% of its paid-up capital 2) The major shareholder is Mitr Phol Sugar Corp., Ltd. 3) There is one joint director: Mr. Verajet Vongkusolkit	As of 31 December 2016 Mitr Phol Sugar Corp., Ltd. 99.99%	<ol> <li>Mr. Krisda Monthienvichienchai</li> <li>Ms. Amporn Kanjanakumnerd</li> <li>Mr. Jirasak Vongkusolkit</li> <li>Mr. Verajet Vongkusolkit</li> </ol>
8.	Ufinves Co., Ltd. (Holding company)	1) One of the shareholders of Banpu Plc., holding 0.26% of its paid-up capital 2) The major shareholder is TME Capital Co., Ltd. 3) There are two joint directors as follows:  1. Mr. Metee Auapinyakul 2. Mr. Ongart Auapinyakul	As of 31 December 2016 TME Capital Co., Ltd. 100.00%	<ol> <li>Mr. Vitoon Vongkusolkit</li> <li>Mr. Metee Auapinyakul</li> <li>Mr. Ongart Auapinyakul</li> <li>Mr. Pakorn Kantatham</li> <li>Mr. Annop Vongkusolkit</li> <li>Ms. Jintana Kanjanakumnerd</li> <li>Ms. Phatsawan Vongkusolkit</li> </ol>
9.	Mitr Phol Bio-Power (PhuViang) Co., Ltd. (Production and distribution of sugar and molasses)	1) One of the shareholders of Banpu Plc., holding 0.25% of its paid-up capital 2) The major shareholder is United Farmer and Industry Co., Ltd. 3) There is one joint director: Mr. Buntoeng Vongkusolkit	As of 31 December 2016 United Farmer and Industry Co., Ltd. 51.04%	1. Mr. Isara Vongkusolkit 2. Mr. Buntoeng Vongkusolkit 3. Mr. Krisda Monthienvichienchai 4. Mr. Chanchai Chiwaket 5. Mr. Sirasak Tathong 6. Mr. Prawit Prakritsri 7. Mr. Jirasak Vongkusolkit 8. Ms. Theeranat Vongkusolkit 9. Mr. Nattapong Vongkusolkit
10.	Mitr Kalasin Sugar Co., Ltd. (Production and distribution of sugar and molasses)	1) One of the shareholders of Banpu Plc., holding 0.19% of its paid-up capital 2) The major shareholder is United Farmer and Industry Co., Ltd. 3) There are two joint directors as follows:  1. Mr. Buntoeng Vongkusolkit 2. Mr. Verajet Vongkusolkit	As of 31 December 2016 United Farmer and Industry Co., Ltd. 99.99%	<ol> <li>Mr. Isara Vongkusolkit</li> <li>Mr. Buntoeng Vongkusolkit</li> <li>Mr. Thaweewat Thaweepiyamaporn</li> <li>Ms. Jintana Kanjanakumnerd</li> <li>Mr. Sukkan Wattanawekin</li> <li>Ms. Chayawadee Chaianan</li> <li>Mr. Krisda Monthienvichienchai</li> <li>Mrs. Arada Lattapanit</li> <li>Mr. Verajet Vongkusolkit</li> </ol>

# Other References

1) Ordinary Share Registrar	Thailand Securities Depository Company Limited  1st Floor, The Securities Exchange of Thailand  93 Ratchadapisek Road, Din Daeng, Bangkok 10400  Tel. +66 (0) 2009 9999
2) Debenture Registrar	Bangkok Bank Public Company Limited 333 Silom Road, Bangrak, Bangkok 10500 Tel. +66 (0) 2230 1893
3) Bond Representative	Siam Commercial Bank Public Company Limited  9 Ratchadapisek Road, Jatujak, Bangkok 10900 Tel. +66 (0) 2544 1111  Kasikornbank Public Company Limited Head Office: 1 Soi Rat Burana 27/1, Rat Burana Road, Rat Burana, Bangkok 10140 Contact: 400/22 Phaholyothin Road, Phaya Thai, Bangkok 10400 Tel. +66 (0) 2470 3687, +66 (0) 2470 1946  Bangkok Bank Public Company Limited  333 Silom Road, Bangrak, Bangkok 10500 Tel. +66 (0) 2230 1893
4) Auditor	Ms. Amornrat Pearmpoonvatanasuk Authorised Auditor No. 4599 PricewaterhouseCoopers ABAS Ltd. 15 <sup>th</sup> Floor, Bangkok City Tower 179/74-80 South Sathorn Road, Bangkok 10120 Tel. +66 (0) 2344 1000, +66 (0) 2824 5000
5) Financial Advisor	None
6) 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.
7) Financial Institutions Regularly in Contact	The Company is regularly in contact with around 30 local and international commercial banks and financial institutions



## Detail of the Company, Its Subsidiaries and Associated Companies and Joint Ventures\*\*

	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 Public Company Limited	Energy	5,163,757,100 THB	4,937,170,022 THB	4,937,170,022	1	-	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
	Subsidiary companies								
	Thailand								
2	Banpu Minerals Company Limited	Coal mining and trading	3,200,000,000 THB	3,200,000,000 THB	3,200,000	1,000	99.99%	58/1, Moo 1, Tambon Thungkwaw, Amphoe Muang Phrae, Phrae Province, Thailand	0 2694 6600
3	Chiang Muan Mining Company Limited	Coal mining and trading	57,837,500 THB	57,837,500 THB	5,783,750	10	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
4	Banpu Coal Sales Co., Ltd.	Coal trading	10,000,000 THB	10,000,000 THB	100,000	100	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
5	Banpu International Limited	Investment in coal mining	250,000,000 THB	250,000,000 THB	25,000,000	10	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
6	Banpu Engineering Services Co., Ltd.	Investment in alternative energy	247,000,000 THB	247,000,000 THB	24,700,000	10	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
7	Banpu Infinergy Co., Ltd.	Investment in alternative energy	10,000,000 THB	10,000,000 THB	1,000,000	10	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
8	BOG Co., Ltd.	Investment in energy business	1,550,000,000 THB	1,550,000,000 THB	15,500,000	100	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
9	Banpu Energy Services (Thailand) Co., Ltd.	Investment in alternative energy	150,000,000 THB	150,000,000 THB	15,000,000	10	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
10	Biofuel Development Holdings Company Limited	Investment in alternative energy	76,000,000 THB	76,000,000 THB	7,600,000	10	99.99%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
11	Banpu Power Public Company Limited	Investment in power business	30,956,920,000 THB	30,456,920,000 THB	3,045,692,000	10	78.71%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2007 6000
12	Banpu Coal Power Limited	Investment in power business	5,921,587,160 THB	5,921,587,160 THB	592,158,716	10	99.99%	1550, Thanapoom Tower,26 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2007 6000
13	Banpu Renewable Energy Co., Ltd.	Investment in renewable energy business	960,000,000 THB	960,000,000 THB	96,000,000	10	99.99%	1550, Thanapoom Tower,26 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2007 6000
14	Banpu Power (JAPAN) Co., Ltd.	Investment in renewable energy business	5,000,000 THB	5,000,000 THB	500,000	10	99.99%	1550, Thanapoom Tower,26 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2007 6000
15	Thai Solar Consultant Co., Ltd.	Solar rooftop power generation	1,000,000 THB	1,000,000 THB	100	10,000	99.99%	1550, Thanapoom Tower,26 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2007 6000

<sup>\*\*</sup>Please see % of holding from Banpu group structure page 26-27

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (shares)	Par value per share	% of holding	Head Office	Telephone
	Indonesia								
16	PT. Indo Tambangraya Megah Tbk	Construction, trading, transportation, industry, repair and services related to coal mining and electricity business	1,500,000,000,000 IDR	564,962,500,000 IDR	1,129,925,000	500	68.09%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, Jl. Suitan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
17	PT. Indominco Mandiri	Coal Mining in Indonesia	20,000,000,000 IDR	12,500,000,000 IDR	12,500	1,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
18	PT. Jorong Barutama Greston	Coal Mining in Indonesia	318,855,000,000 IDR	318,855,000,000 IDR	21,257	15,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, JI. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
19	PT. Trubaindo Coal Mining	Coal Mining in Indonesia	100,000,000,000 IDR	63,500,000,000 IDR	63,500	1,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, JI. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
20	PT. Kitadin	Coal Mining and related business	1,000,000,000,000 IDR	377,890,000,000 IDR	188,945	2,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, JI. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
21	PT. Bharinto Ekatama	Coal Mining in Indonesia	68,000,000,000 IDR	17,000,000,000 IDR	17,000	1,000,000	99.00%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
22	PT. ITM Indonesia	Trading, land transportation, industry, agriculture, construction, repair and services	40,000,000,000 IDR	11,000,000,000 IDR	11,000	1,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
23	PT. Tambang Raya Usaha Tama	Mining Support services	500,000,000,000 IDR	228,980,000,000 IDR	22,898	1,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, Jl. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
24	PT. ITM Energi Utama	Energy business	1,200,000,000,000 IDR	300,000,000,000 IDR	300,000	1,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, JI. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
25	PT. ITM Batubara Utama	Coal mining business	40,000,000,000 IDR	11,000,000,000 IDR	11,000	1,000,000	99.99%	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, JI. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
26	PT ITM Banpu Power	Investment in power business	1,200,000,000,000 IDR	300,000,000,000 IDR	300,000	1,000,000	70.00% (held by PT. Indo Tambangraya Megah Tbk) 30.00% (held by Banpu Power Public Company Limited)	Pondok Indah Office Tower 3, 3 <sup>rd</sup> floor, JI. Sultan Iskandar Muda, Pondok Indah Kav. V-TA, Jakarta 12310, Indonesia	6221 29328100
	Australia								
27	Banpu Australia Co. Pty Ltd.	Investment in coal mining in Australia	2,428,021,000 AUD	2,428,021,000 AUD	2,428,021,000	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
28	Centennial Coal Co., Ltd.	Coal Mining and Marketing	2,449,783,562 AUD	2,449,783,562 AUD	395,126,381	\$6.20	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700

<sup>\*\*</sup>Please see % of holding from Banpu group structure page 26-27

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (shares)	Par value per share	% of holding	Head Office	Telephone
29	Centennial Northern Coal Services Pty Ltd.	Employer Company for Newstan Washery	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
30	Berrima Coal Pty Ltd.	Dormant	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
31	Centennial Airly Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
32	Centennial Angus Place Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
33	Centennial Coal Infrastructure Pty Ltd.	Coal exporting logistics and infrastructure	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
34	Centennial Coal Sales and Marketing Pty Ltd.	Coal Marketing	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
35	Centennial Fassifern Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
36	Centennial Northern Mining Services Pty Ltd.	Employer Company for Newstan	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
37	Centennial Inglenook Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
38	Centennial Mandalong Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
39	Centennial Mannering Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
40	Centennial Munmorah Pty Ltd.	Coal Mining (now Dormant)	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
41	Centennial Myuna Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
42	Centennial Newstan Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
43	Charbon Coal Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
44	Coalex Pty Ltd.	Coal Mining - Clarence JV	7,500,000 AUD	7,500,000 AUD	750,000	10	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
45	Clarence Coal Investments Pty Ltd.	Coal Mining - Clarence JV	19,500,002 AUD	19,500,002 AUD	15,500,002 Ord A shares 4,000,000 Ord B shares	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
46	Clarence Colliery Pty Ltd.	Coal Mining - Clarence JV	10,000 AUD	10,000 AUD	10,000	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
47	Clarence Coal Pty Ltd.	Coal Mining - Clarence JV	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
48	Centennial Clarence Pty Ltd.	Coal Mining - Clarence JV	8,800,000 AUD	8,800,000 AUD	8,800,000	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
49	Powercoal Pty Ltd.	Dormant Holding company	4,590,001 AUD	4,590,001 AUD	4,590,001	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
50	Powercoal Superannuation Pty Ltd.	Superannuation Company (Dormant)	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
51	Collieries Superannuation Pty Ltd.	Superannuation Company (Dormant)	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
52	Elcom Collieries Pty Ltd.	Dormant	1,500,000 AUD	1,500,000 AUD	750,000	2	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
53	Huntley Colliery Pty Ltd.	Dormant	354,000 AUD	354,000 AUD	177,000	2	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
54	Mandalong Pastoral Management Pty Ltd.	Dormant	2,736,028 AUD	2,736,028 AUD	10,000,000 Ord partly paid shares - \$0.20 368,014 Ord Shares - \$2.00	2	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700

<sup>\*</sup>Under Corporate Law

<sup>\*\*</sup>Please see % of holding from Banpu group structure page 26-27

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (shares)	Par value per share	% of holding	Head Office	Telephone
55	Powercoal Employees Entitlements Company Pty Ltd.	Employee Trust Company Ex Powercoal	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
56	Hartley Valley Coal Co Pty Ltd.	Dormant	1,000,000 AUD	1,000,000 AUD	1,000,000	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
57	Ivanhoe Coal Pty Ltd.	Coal Mining	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
58	Centennial Drilling Services Pty Ltd.	Drilling Services	1,250,000 AUD	1,250,000 AUD	750,000 A Class Shares 250,000 B Class shares 250,000 C Class shares	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
59	Centennial Springvale Holdings Pty Ltd.	Coal Mining	1 AUD	1 AUD	1	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
60	Centennial Springvale Pty Ltd.	Coal Mining	1,000,000 AUD	1,000,000 AUD	1,000,000	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
61	Springvale Coal Pty Ltd.	Coal Mining	2,000,000 AUD	2,000,000 AUD	2,000,000	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
62	Boulder Mining Pty Ltd.	Coal Mining	1,000 AUD	1,000 AUD	1,000	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
63	AFE Investments Pty Limited.	Mining Investment	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
64	Banpu Australia Resources Pty Ltd.	Investment in coal mining	2 AUD	2 AUD	2	1	100.00%	Level 18, BT Tower , 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
65	Hunnu Coal Pty Ltd.	Coal mining and trading	261,555,190 AUD	261,555,190 AUD	383,632,717	No par value**	100.00%	22 Lindsay Street, Perth WA 6000, Australia	61 8 9328 6262
	China								
66	Shijiazhuang Chengfeng Cogen Co., Ltd.	Power and steam generation and sales	178,971,358 CNY	178,971,358 CNY	NA	NA	100.00%	North Beiguan, Zhengding County, Shijiazhuang City 050800, Hebei Province, P.R.C.	(86311) 85176918
67	Banpu Investment (China) Co., Ltd.	Investment in power business	248,400,000 CNY	248,400,000 CNY	NA	NA	100.00%	9A, 9 <sup>th</sup> Floor, Tower B, Gateway Plaza, No. 18 Xia Guang Li, North Road of East Third Ring, Chaoyang District, Beijing, P.R.C. 100027	(8610) 57580388
68	Tangshan Banpu Heat and Power Co., Ltd.	Power and steam generation and sales	393,425,339 CNY	393,425,339 CNY	NA	NA	87.92% (held by Pan-Western Energy Corporation LLC) 12.08% (held by Banpu Investment (China) Co., Ltd.)	West of Gujiaying Villiage, Bensi Road, Luannan County, Tangshan City 063500,Hebei Province, P.R.C.	(86315) 4168274
69	Zouping Peak CHP Co., Ltd.	Power and steam generation and sales	261,800,000 CNY	261,800,000 CNY	NA	NA	70.00%	Xiwang Industrial Region, Handian Town, Zouping County, Binzhou City 256209, Shandong Province, P.R.C.	(86543) 4615655
70	BPP Renewable Investment (China) Co., Ltd.	Investment in renewable energy business	200,379,537 CNY	200,379,537 CNY	NA	NA	100.00%	Unit 108, No. 26 Jiafeng Road, Pilot Free Trade Zone, Shanghai, P.R.C.	(86315) 4168274
71	Anqiu Huineng New Energy Co., Ltd.	Solar power generation	66,000,000 CNY	66,000,000 CNY	NA	NA	100.00%	No.19 Dafugou, Wushan Town, Anqiu County, Weifang City, Shandong Province , P.R.C.	(86315) 4168275
72	Weifang Tian'an Jinshan Comprehensive Energy Co., Ltd.	Solar power generation	83,000,000 CNY	83,000,000 CNY	NA	NA	100.00%	Unit 205, No.16 Shengli Street, Wushan Town, Anqiu County, Weifang City, Shandong Province, P.R.C.	(86315) 4168275
73	Dongping Haoyuan Solar Power Generation Co., Ltd.	Solar power generation	69,000,000 CNY	69,000,000 CNY	NA	NA	100.00%	East side of Xishan road North, Dongping County, Taian City, Shandong Province, P.R.C.	(86531) 86025858

<sup>\*\*</sup>Please see % of holding from Banpu group structure page 26-27

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (shares)	Par value per share	% of holding	Head Office	Telephone
	Mongolia								
74	Hunnu Altai LLC	Foreign trade , minerals exploration, minerals mining	93,288,458,694 MNT	93,288,458,694 MNT	673,612	138,490	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15th khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
75	Hunnu Gobi Altai LLC	Foreign trade, minerals exploration, mining	155,000,000 MNT	155,000,000 MNT	155,000	1,000	80.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15th khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
76	Hunnu Altai Minerals LLC	Foreign trade, minerals exploraiton	1,724,203,2000 MNT	17,242,032,000 MNT	17,242,032	1,000	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
77	Hunnu Resources LLC	Foreign trade	317,879,653,402 MNT	317,879,653,402 MNT	198,108,584	1,605	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
78	Munkh Sumber Uul LLC	Foreign trade	2,370,190,983 MNT	2,370,190,983 MNT	237,019	10,000	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
79	Golden Gobi Mining LLC	Foreign trade , minerals exploration	13,013,868,667 MNT	13,013,868,667 MNT	1,301,387	10,000	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
80	Great East Minerals LLC	Foreign trade , minerals exploration	2,851,018,000 MNT	2,851,018,000 MNT	285,101	10,000	99.99%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
81	Bilegt Khairkhan Uul LLC	Foreign trade , minerals exploration, minerals mining	25,464,628,355 MNT	25,464,628,355 MNT	2,546,463	10,000	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15th khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
82	Hunnu Power LLC	Foreign trade	40,702,000 MNT	40,702,000 MNT	4,070	10,000	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
83	Borganchan LLC	Foreign trade	31,437,000 MNT	31,437,000 MNT	31,437	1,000	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
84	Munkhnoyon Suvraga LLC	Foreign trade, minerals mining, tourism, and construction	169,153,984,740 MNT	169,153,984,740 MNT	169,153,984	1,000	100.00%	Suite 1502, Fides Tower, Gegeenten Complex, 15 <sup>th</sup> khoroo, Khan-Uul district, Ulaanbaatar-17011, Mongolia	(976) 75551221, (976) 75551551
	Singapore								
85	Banpu Minerals (Singapore) Pte. Ltd.	Investment in coal mining	17,670,002 SGD 11,000,000 USD	17,670,002 SGD 11,000,000 USD	17,670,002 11,000,000	No par value*	50.00% (held by Banpu Minerals Company Limited) 50.00% (held by Banpu Coal Investment Company Limited)	One Marina Boulevard, #28-00 Singapore 018989	65 6890 7188
86	BMS Coal Sales Pte. Ltd.	Coal trading including coal agent and coal blending	5,000,000 USD	5,000,000 USD	5,000,000	No par value*	100.00%	One Marina Boulevard, #28-00 Singapore 018989	65 6890 7188
87	Banpu Singapore Pte. Ltd.	Coal trading	1,500,000 SGD 300,000,000 USD 2,261,711,708 USD	1,500,000 SGD 300,000,000 USD 2,261,711,708 USD	1,500,000 300,000,000 2,261,711,708	No par value*	75.00% (held by Asian American Coal, Inc.) 25.00% (held by Banpu Minerals Company Limited)	One Marina Boulevard, #28-00 Singapore 018989	65 6890 7188

<sup>\*</sup>Under Corporate Law

<sup>\*\*</sup>Please see % of holding from Banpu group structure page 26-27

	Name	Type of	Authorized	Paid up capital	No. of paid-up	Par value	% of	Head Office	Telephone
		business	capital		capital (shares)	per share	holding		
88	Hunnu Investments Pte. Ltd.	Foreign trade	100 SGD 34,768,189 USD	100 SGD 34,768,189 USD	100 34,768,189	No par value*	100.00%	One Marina Boulevard, #28-00 Singapore 018989	65 6890 7188
89	Banpu Power Investment Co., Ltd.	Investment in power business	84,177,391 USD	84,177,391 USD	77,132,663	No par value*	100.00%	8 Marina Boulevard #05-02, Marina Bay Financial Centre, Singapore 018981	65 6338 1888
90	Zouping Peak Pte. Ltd.	Investment in power business	2 SGD	2 SGD	2	2	100.00%	8 Marina Boulevard #05-02, Marina Bay Financial Centre, Singapore 018981	65 6338 1888
91	Banpu Renewable Singapore Pte.Ltd.	Investment in renewable energy business	55,987,677 USD	55,987,677 USD	55,987,675	No par value*	100.00%	8 Marina Boulevard #05-02, Marina Bay Financial Centre, Singapore 018981	65 6338 1888
	Mauritius								
92	Banpu Coal Investment Company Limited	Investment in coal mining	11,050,500 USD	11,050,500 USD	11,050,500	1	100.00%	4th Floor, Ebene Skies,Rue de L' Institut, Ebene, Republic of Mauritius	230 404 8000
93	BP Overseas Development Company Limited	Investment in coal mining	515,533,002 USD	515,533,002 USD	515,533,002	1	100.00%	4 <sup>th</sup> Floor, Ebene Skies,Rue de L' Institut, Ebene, Republic of Mauritius	230 404 8000
94	Banpu Power International Limited	Investment in power business	63,050,000 USD	63,050,000 USD	63,050,000	1	100.00%	4 <sup>th</sup> Floor, Ebene Skies,Rue de L' Institut, Ebene, Republic of Mauritius	230 404 8000
	British Virgin Islands								
95	Asian American Coal, Inc.	Investment in coal mining	50,000,000 USD	40,917,026 USD	40,917,026	1	100.00%	Geneva Place, 2 <sup>nd</sup> Floor, #333 Waterfront Drive, Road Town, Tortola, British Virgin Islands	284 494 4388
96	AACI SAADEC (BVI) Holdings Limited	Investment in coal mining	50,000 USD	1 USD	1	1	100.00%	P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands	284 494 2233
	Cayman Islands								
97	Pan-Western Energy Corporation LLC	Investment in power bussiness	100,000 USD	100,000 USD	100,000	0.01	100.00%	PO Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands	1 345 949 8066
	Japan								
98	Banpu Energy Services Japan Co., Ltd.	Consultancy services to the operator of power generation in Japan	50,000,100 JPY	50,000,100 JPY	500,001	No par value*	100.00%	4 <sup>th</sup> Floor, Olympia Building, 13-3 Tomizawa-cho, Nihonbashi, Chuo-ku, Tokyo, Japan	81 3 6661 0328
99	BPPR Japan Co., Ltd.	Consultancy services to the operator of power generation in Japan	100,000 JPY	100,000 JPY	1,000	No par value*	100.00%	4 <sup>th</sup> Floor, Olympia Building, 13-3 Tomizawa-cho, Nihonbashi, Chuo-ku, Tokyo, Japan	81 3 6661 0328
100	Aizu Land Solar G.K.	Land owner of solar project	100,000 JPY	100,000 JPY	NA	No par value*	100.00%	4 <sup>th</sup> Floor, Olympia Building, 13-3 Tomizawa-cho, Nihonbashi, Chuo-ku, Tokyo, Japan	81 3 6661 0328
	United States of America								
101	Banpu North America Corporation	Investment in oil and gas business	40,000,100 USD	40,000,100 USD	40,000,100	1	100.00%	2711 Centerville Road, Suite 400, Wilmington, Delaware 19808	1 302 654 7584
	Hong Kong								
102	Akira Energy Limited	Investment in renewable energy business	62,017,100 HKD	62,017,100 HKD	62,017,100	1	100.00%	9" Floor, York House, The Landmark, 15 Queen's Road, Central, Hong Kong	852 2522 8101
103	Akira Energy (South) Limited	Investment in renewable energy business	19,120,063 HKD	19,120,063 HKD	19,120,063	1	100.00%	9 <sup>th</sup> Floor, York House, The Landmark, 15 Queen's Road, Central, Hong Kong	852 2522 8101

<sup>\*\*</sup>Please see % of holding from Banpu group structure page 26-27

	Name	Type of business	Authorized capital	Paid up capital	No. of paid-up capital (shares)	Par value per share	% of holding	Head Office	Telephone
	Associated companies								
	Australia								
104	Port Kembla Coal Terminal Limited	Shiploading Coal Port	600,000 AUD	600,000 AUD	600,000	1	16.66%	Port Kembla Road, Inner Harbour, Wollongong NSW 2520, Australia	61 2 4228 0288
	Joint Ventures								
	Australia								
105	Springvale Coal Sales Pty Limited	Coal Marketing	2 AUD	2 AUD	2	1	50.00%	Level 18, BT Tower, 1 Market Street, Sydney NSW 2000, Australia	61 2 9266 2700
	China								
106	Shanxi Gaohe Energy Co., Ltd.	Coal mining in China	1,519,860,000 CNY	1,519,860,000 CNY	NA	NA	45.00%	Changzhi County, Changzhi City, Shanxi, P.R.C.	(8610) 5820 3663
107	Hebi Zhong Tai Mining Co., Ltd	Investment in coal mining	783,330,000 CNY	783,330,000 CNY	NA	NA	40.00%	No. 98, Hongqi Street, Hebi, Henan Province, P.R.C.	(86) 392 291 7401-2
108	Shanxi Lu Guang Power Co., Ltd.	Power generating and sales	1,500,000,000 CNY	567,745,250 CNY	NA	NA	30.00%	Songcunxiang, Zhangzi County, Changzhi City, Shanxi Province, P.R.C.	(86355) 8580511
	Japan								
109	Hokkaido Solar Estate G.K.	Land owner of solar project	10,000,000 JPY	10,000,000 JPY	NA	No par value*	60.00%	1-1-7 Moto-akasaka, Minato-ku, Tokyo, Japan	81 3 3560 1115
	Laos								
110	Hongsa Power Company Limited	Power generating and sales	92,700,000 USD	927,000,000 USD	92,700,000	10	40.00%	NNN Building 4th Floor, Room No.D5 Bourichan Road, Phonsinouane Village, Sisattanak District, Vientiane Capital, Lao PDR	856 (0) 2122 483
111	Phu Fai Mining Company Limited	Mining concession	50,000 USD	50,000 USD	50,000	10	37.50%	Park View Executive Suite Building B Sikottabong District, Vientiane Lao PDR	857 (0) 2122 483
	Singapore								
112	Aura Land Development Pte. Ltd.	Investment in property for solar energy business	3,840,989 USD	3,840,989 USD	3,840,988	No par value*	75.00%	8 Marina Boulevard #05-02 Marina Bay Financial Centre, Singapore 018981	65 6338 1888
113	Aizu Energy Pte. Ltd.	Investment in renewable energy business	17,630,953 USD	17,630,953 USD	17,630,949	No par value*	75.00%	8 Marina Boulevard #05-02 Marina Bay Financial Centre, Singapore 018981	65 6338 1888
	Thailand								
114	BPPR Co., Ltd.	Investment in consultancy services to the operator of power generation	100,000 THB	100,000 THB	1,000	100	75.00%	1550, Thanapoom Tower,27 <sup>th</sup> Floor, New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	0 2694 6600
115	BLCP Power Limited	Power generation and sales	12,010,000,000 THB	12,010,000,000 THB	120,100,000	100	50.00%	9 I-8 Road, Map Ta Phut Industrial Estate, Muang District, Rayong, Thailand	038 925 100
116	Ratchasima Green Energy Company Limited	Investment in alternative energy	250,000,000 THB	250,000,000 THB	25,000,000	10	30.00%	2 Sukhumvit Road, Klongtoey, Bangkok 10110, Thailand	0 2794 1000

<sup>\*</sup>Under Corporate Law

<sup>\*\*</sup>Please see % of holding from Banpu group structure page 26-27









#### Banpu Public Company Limited

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