



# ANNUAL REPORT 2019

B.GRIMM POWER PUBLIC COMPANY LIMITED









## Vision

“Empowering the World Compassionately”

## Corporate Culture and Core Values



Positivity



Partnership



Professionalism



Pioneering spirit

## Mission



**Product  
and Service**

Creating value for the society through high-quality energy and services for our customers, with our pioneering spirit and by being people-centric and nature-centric



**Operation**

Constantly improving our business operations to be a world class energy company



**Growth**

Growing in a sustainable way with strong partnerships domestically and internationally



**Workplace**

Working as a happy team of compassionate professionals with ethics and integrity



**Community**

Empowering people, communities and society to better serve their needs



**Environment**

Operating our business in harmony with nature and the environment



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## Message from Chairman

B.Grimm has a long history and we have been a part of Thai society for over 141 years, since 1878 when Bernhard Grimm and Erwin Mueller opened the first producer of European modern medicines as a German pharmacy in Thailand saving a great number of lives. B.Grimm then was awarded the “Dra Arm” of King Rama V as a purveyor to the Royal Court. The company soon ventured into other industries, and collaborated with the Snidvongse family to build Southeast Asia’s largest infrastructure project at the time, the 1,500 km Rangsit canals, followed by the operation of the first telegraph concession in the country. Over the years, B.Grimm has helped to develop Thailand’s infrastructure, such as telecommunication systems, the Airport Rail Link, and power plants, as well as importing high quality scientific and industrial equipment from many different countries.

B.Grimm Power was established 24 years ago and has since become one of the largest private power producers in Thailand. From the company’s first power project, a co-generation combined cycle plant in Amata Nakorn industrial estate, B.Grimm Power now develops and operates both conventional and renewable power plants in Thailand as well as Laos, Cambodia, Vietnam, South Korea and the Philippines to support the ever growing demand.

In 2019, B.Grimm Power under challenging conditions successfully developed 2 large-scale solar power plants in Vietnam, with a total capacity of 677 MW, one of which is the largest solar power plant in Southeast Asia with a capacity of 420 MW. This is an important achievement for B.Grimm Power and a demonstration of the company’s capabilities as a leader in the renewable energy sector. Furthermore, the consortium of B.Grimm Power and Energy China was selected by the Electricity Generating Authority of Thailand to develop the world’s largest floating solar project, with an installed capacity of 45 MW, at Sirindhorn Dam.

B.Grimm Power aims to reach the target capacity of 5,000 MW under development and operation by the year 2022, consisting of 70% combined cycle plants and 30% renewable energy plants, by continuing to invest in

projects both domestically and abroad. At the end of 2019, the company has 46 power plants in commercial operation with a total capacity of 2,896 MW, comprising of 70% combined cycle plants and 30% renewable energy plants, an increase in capacity of 820 MW, or 40%, from the previous year. The total electricity generation was 13,082 GWh - a growth of 19% from 2018. This is a reflection of the company’s determination to continue to expand our business and we are confident of achieving our goals.

B.Grimm Power’s vision is to “Empowering the World Compassionately” and we are determined to grow our business in a sustainable way, with strict social and environmental responsibilities, good governance and professionalism, ready to adapt our business to the ever-changing world, committed to supporting and promoting the United Nations’ Sustainable Development Goals.

Under the philosophy of “Doing Business with Compassion for the Development of Civilisation in Harmony with Nature” and corporate culture of “Positivity, Professionalism, Partnership and Pioneering Spirit”, everybody at B.Grimm Power is dedicated to working together as a team towards a common goal. This is the key factor behind the company’s continuing success, and today B.Grimm Power is widely recognised as a leading power company with a robust and sustainable growth.

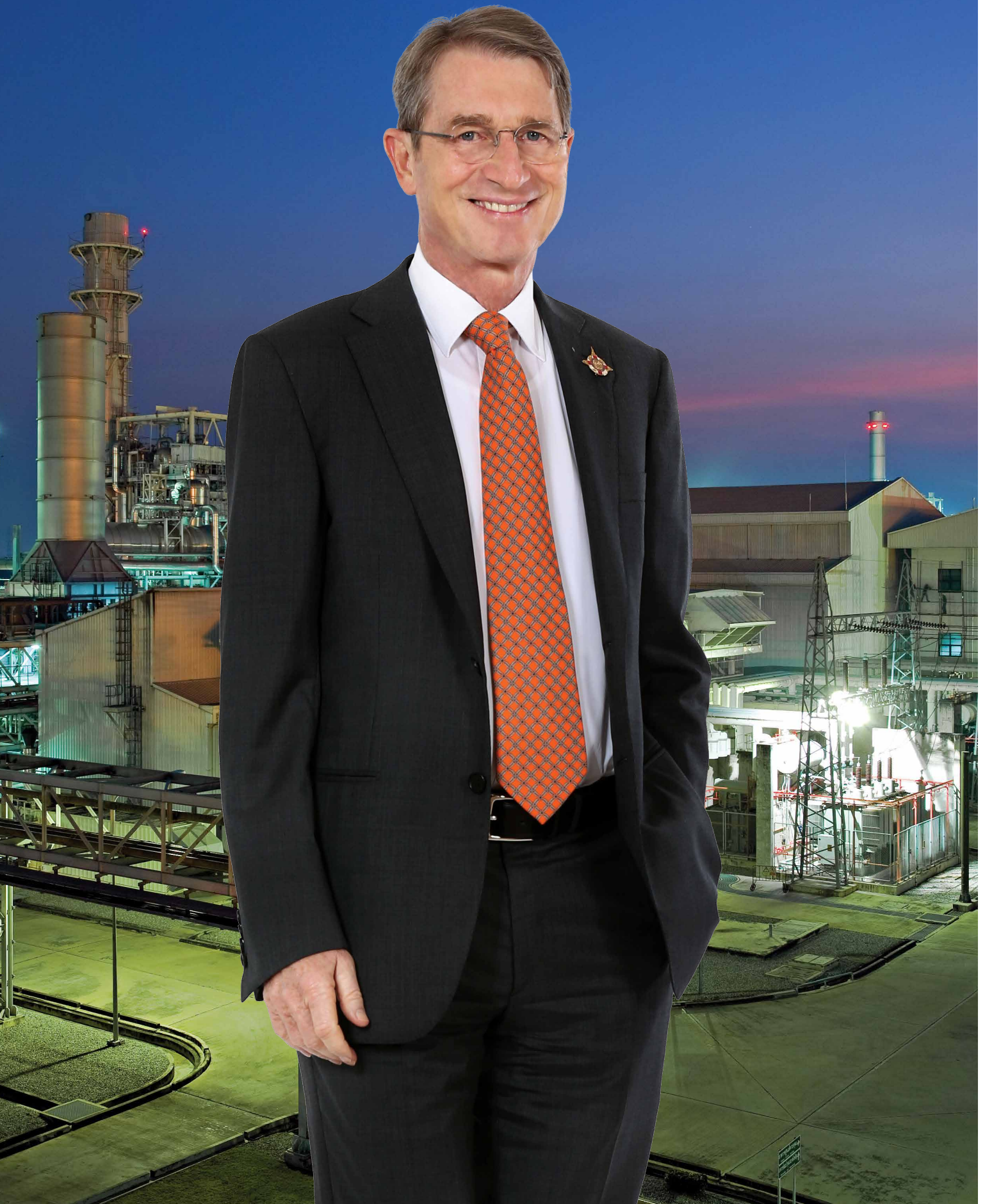
On behalf of the Board of Directors, the management and all staff members, I would like to extend my sincere appreciation for your continued trust and support. B.Grimm Power is committed to continue doing business with compassion in a manner that creates long-term value for all of our shareholders and stakeholders, including the economy, our society and the environment.



**Mr. Harald Link**  
Chairman













## Message from President

Marking its 24<sup>th</sup> founding anniversary in 2019, B.Grimm Power Public Company Limited continued power generation and steam production in support of the industrial sector and the regional economy, underlined by the business principle of compassion for secure and sustainable growth with responsibility for the economy, society, and the environment. Our emphasis has been on professional management underlined throughout the years by good governance along with a Code of Conduct. We take pride in this year's Thailand Sustainability Investment (THSI) Award for the second year in a row and a Platinum Award Excellence in ESG, presented at The Asset ESG Corporate Awards 2019 ceremony in Hong Kong. B.Grimm Power has grown investment in renewable energy, pursuing 30% of the total capacity by spearheading investment in solar power generation in Vietnam with the single largest project among ASEAN countries, whose construction was completed under the budget in less than one year. As for our preparation for industrial transformation, we have joined hands with several international partners, including LG Chem, Siemens, and PetroVietnam Power in making strides toward sustainable growth.

Performance wise, B.Grimm Power posted Baht 44.132 billion this year, a rise of 20.6% over last year. Our consolidated net profit amounted to Baht 3.977 billion, whereas our net profit-owner of the parent came to Baht 2.331 billion, 25.1% over last year. We attribute this performance to the dedication and collaboration of the management and the workforce with the staunch support of all parties in all sectors. We currently operate 46 projects totalling 2,896 megawatts (MW), equivalent to 40% growth over last year, with the acquisition of the SPP 1 business to grow our strategic business to the Map Ta Phut area and the commercial operation launch of four renewable power projects, namely DT 1&2 and Phuyen TTP in Vietnam, the Nam Che 1 hydropower plant in Lao PDR, and an industrial waste-to-energy plant in Thailand. In addition, several other projects are under construction and development to grow our installed capacity to 3,424 MW by 2025. In November 2019 we successfully offered to the public perpetual subordinated bonds worth Baht 8 billion, designed to restructure our capital while growing our investment and routine operation. This move lowered the net interest-bearing debt to equity ratio of the consolidated financial statements from 1.5 at year-end 2018 to 1.0 a year later.

In managing our resources, we have consistently valued optimal resource consumption through systematic, standardised environmental management while cultivating such awareness among our workforce and related parties. Concerning water management, we have consistently abided by the principle of optimal management together with conserving water resources under the sustainability approach, with conservation management planning undertaken with various industrial estates. The bulk of the water consumed in combined cycle power plants is recycled water or water derived from industrial wastewater treatment, ensuring that we can adequately and continuously manage water supply even amid the drought of 2020.

As for preparation for economic transformation, over 71% of our revenue is immune to economic cycles: 65% from our sale to the Electricity Generating Authority of Thailand (EGAT), with take-or-pay clauses of power purchase agreements (PPAs) and 6% from government-supported renewable power plants both in Thailand and abroad. Concerning services provided to industrial users, security arises from the diversity of our customer groups. To elaborate, this year's power consumption by the industrial sector grew 1.3%, of which the packaging and air-conditioner manufacturing groups have significantly consumed more power as of early 2020. New customers have also continually enlisted for a total of 31 MW in the first nine months of 2020. To this end, we have prepared close monitoring and analysis of these customers' businesses; besides, there exists massive demand for stable power supply by many industrial plants around our power plants. In fact, today our customers number only 130 out of some 1,500 industrial plants in these industrial estates.

On behalf of the Board, the management, and all employees, I would therefore like to express my heartfelt appreciation to the shareholders, investors, and stakeholders for their consistent trust in and support to B.Grimm Power's undertaking all along. Please rest assured that we will remain committed to developing B.Grimm Power into an integral part of community, national, and regional development in a secure and sustainable manner. At all times, our moves will be bound by doing business with compassion for the development of civilisation in harmony with nature, which has been B.Grimm's philosophy for over 141 years.



Mrs. Preeyanart Soontornwata  
President



# Performance Highlights for the Year 2019

## Expand prominently while laying business foundations for the sustainable growth

With B.Grimm's philosophy of doing business with compassion for the development of civilisation in harmony with the nature upheld for over 141 years, B.Grimm Power's executives and employees have been working together in the belief that their corporate culture of compassion, in tandem with the principles of good corporate governance and 4 core values, namely professionalism, positivity, partnership and pioneering spirit, can make meaningful contributions to all sectors in the society. All of these significant foundations have led to steady and sustainable growth.

## The production capacity of the commercially operated projects expanded by 40%.

2019 marks another remarkable year of growth for B.Grimm Power with 40% expansion of production capacity of the commercially operated projects from 2,076 MW at the beginning of the year to 2,896 MW as of the end of 2019. All projects were completed within the budget and timeline as planned. Major strategic business expansions are as follows:

### 1. Strategic business expansion into the Map Ta Phut area by purchasing the SPP1 project and partnering with Asia Industrial Estate

Pursuing the strategy of business expansion into the Map Ta Phut area, the centre of Thailand's industrial sector in need for massive quantities of electricity and steam, the Company purchased the SPP1 which was the combined cycle power plants with the aggregate installed capacity of 124 MW under 2 power purchase agreements (PPAs) with EGAT in March 2019 and then, in December 2019, sold 25% stake to Asia Industrial Estate which had made it a new partnership for this business expansion. This would help in terms of flexibility in area management and the market expansion in the Map Ta Phut area. Given that such project had been approved to

construct a power plant to substitute for the PPA to expire, the Company was therefore on the process of developing 2 combined cycle power plant projects with an increase in the installed capacity to 280 MW, which have been scheduled for commercial operation in 2022 to accommodate the need for electricity and steam in large quantities in the Map Ta Phut area, thereby supporting continuous growth of the Thai economy.

### 2. Start commercial operation of the largest solar power plants in Southeast Asia

The Company succeeded in opening the largest solar power plants in Southeast Asia for commercial operation, including the 420-MW installed capacity DT 1&2 project in Tay Ninh, Vietnam and the 257-MW installed capacity Phuyen TTP project in Phu Yen, Vietnam in June 2019 within the determined budget, whereby the construction of these two power plants took less than a year. This underlines its leadership in clean energy and focus on sustainable business growth in Southeast Asia.



### 3. Increase fuel diversity in renewable power plants by opening another two commercially operated projects

The Company opened another two renewable power plants, namely the Nam Che 1 hydropower project in Lao PDR with installed capacity of 15 MW in June and the Waste-to-Energy power project in Thailand with installed capacity of 4.8 MW in December to increase diversity of fuels used in renewable power plants.



### Proportion of renewable energy increase to the target of 30% while business has expanded to solar floating project



With its commitment to supporting economic growth while caring for the environment, B.Grimm Power continuously expanded the proportion of production capacity derived from renewable energy from 8% in the previous year to 30% in 2019. Moreover, the Company expanded its energy business to the electricity-generating solar panels mounted in the rooftop project with the aggregate installed capacity of 7.8 MW and several under installation projects, including the solar rooftop projects for Alaska Milk in the Philippines with installed capacity of 6 MW and for several real estates of Al Madina Group in Oman with the framework of 30 MW aggregate installed capacity.

Additionally, the Company continuously expanded its business to the hydro-floating solar power generation

system (floating solar) both domestically and internationally. The Company is now in the process of installing a 13-MW floating solar project to Lakchai Muang Yang Industrial Estate, scheduled for commercial operation in 2020. On 20 January 2020, B.Grimm Power and Energy China consortium signed an EPC contract with Electricity Generating Authority of Thailand (EGAT) to develop a 45-MW floating solar power generation project with the Sirindhorn Hydropower Plant on a surface area of 450 rai by combining with existing hydropower. This can be considered as the world's largest hydro-floating solar hybrid project, of which the COD is scheduled in 2020.

However, the Company is now on the process of construction and development of another two renewable power plants, of which the COD is set in 2020, namely a 39-MW solar power plant project in Cambodia and a 16-MW Bo Thong wind farm project in Mukdahan Province, Thailand.

### Ready for changes in energy industry and technology

Amidst the global changing trend, changes facing the energy industry and technological development, B.Grimm Power has always been ready for future changes with its strong commitment to unceasingly developing business to achieve steady and sustainable growth. In 2019, the Company signed MOUs with large international companies for the joint study and development as below:

On 21 March 2019, the Company signed an MOU with Siemens and Toshiba Plant Systems & Service Corporation (TPSC) to improve availability and higher

efficiency of power plants and adopt digitalization in operation and maintenance for the construction of combined cycle power plants of the Company.

On 14 May 2019, the Company signed an MOU with LG Chem, a world leading company in energy storage system and battery for the development in a Battery Management System (BMS) for B.Grimm Power's power plant projects.

On 2 November 2019, the Company signed an MOU with PetroVietnam Power to jointly study the development of an LNG project and LNG-fired power plants with total capacity of 3,000 MW in Vietnam.





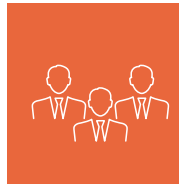
## Net profit grew by 25% in 2019 while capital structure was prepared to accommodate incoming growth

Due to ongoing business expansion, the Company's 2019 operating results showed that operating revenue totaled Baht 44,132 million, increased by 21% from the previous year; consolidated net profit accounted for Baht 3,977 million; and net profit-owner of the parent equaled to Baht 2,331 million, increased by 25% from the previous year. Major growth factors included exponential expansion of production capacity, expansion of industrial users base in Amata City Rayong as well as effective cost and expense management both in terms of the reduction in natural gas consumption by improving efficiency of gas turbines and loan refinancing of Baht 2,200 million of the Solarwa project and the TPS Commercial project in May 2019, which can reduce interest rates by around 2.0% per year or approximately Baht 119 million throughout the project period.

In addition, in November 2019, the Company issued subordinated perpetual debentures of Baht 8,000 million through the public offering, which received much attention and were needed by both institutional investors and individual investors. The purpose was to adjust capital structure and use of funds for investment expansion and normal operation. Such issuance decreased consolidated net interest-bearing debt to equity ratio from 1.5 as of 31 December 2018 to 1.0 as of 31 December 2019.



In 2019 operating results showed that operating revenue totaled Baht **44,132** million, increased by **21%** from the previous year



## 2020: Cautiously prepared for a challenging year while continuing our business expansion

The challenges facing the Company in 2020 include global economic fluctuation and drought situation which the Company has been always prepared for.

With respect to economic factors, most revenue will not be affected by economic volatility as it comes from electricity distribution for EGAT on a take-or-pay basis, thereby ensuring stable cash inflows for the Company and another part of revenue comes from the renewable power plants supported by each country's government agencies. Regarding the provision of electricity and steam for industrial users in Thailand which contributes 25% of total revenue, the Company has closely monitored the electricity usage and found several sectors such as the packaging industry by virtue of the customers' transfer of purchase orders from China and the manufacturers of air conditioners and air purifiers, tend to increase electricity usage. Moreover, the Company has gradually signed PPAs totalling over 31 MW with new industrial users whereby the COD is set in 2020. Currently, the Company has around 130 industrial users from the total of 1,500 companies in all industrial estates where the Company's combined cycle power plants are located. This shows that there is still large demand of high quality electricity and steam that the company has not captured yet.

In coping with the drought situation, the Company has established a water management policy and measures to always ensure the ultimate benefits of the use of water and

Currently, the Company has around **130** industrial users from the total of **1,500** companies in all industrial estates



water conservation in line with the sustainability guidelines. Most water that has been used in combined cycle power plants is recycled or treated after being discharged from the industrial plants. The Company has carefully planned for water management with the industrial estates to ensure sufficient water management continually. The combined cycle power plants, which are under development, have been designed by focusing on high efficiency in water management and use of treated wastewater from the industrial plants for the cooling systems of power plants as well.

The Company is in the process of constructing and developing several power plant projects to achieve installed capacity of 3,424 MW by 2025, for example, constructions of a 39-MW solar power plant in Cambodia, a 16-MW wind power project in Thailand and 7 combined cycle power plants with the aggregate installed capacity of 980 MW, of which 5 projects are to replace the former ones by using cutting-edge and highly efficient technology and the other 2 are new projects.

Moreover, the Company is in the process of conducting a feasibility study for both domestic and overseas business expansion e.g. Vietnam, Lao PDR, South Korea, Malaysia, Cambodia and the Philippines. The expansion can come in the form of new projects and mergers to achieve the goal of 5,000 MW installed capacity from both operating and under-development projects by 2022.

The Company is in the process  
of constructing and developing several  
power plant projects to achieve installed capacity of  
**3,424** MW by 2025,



### Operate sustainable business while creating value for stakeholders

The Company operates business with economic, social and environmental responsibilities while ensuring management professionalism and efficiency under the principles of good corporate governance and Code of Conduct. The Company also places importance on the development of projects by using cutting-edge and environmentally friendly technology to deliver high quality and highly effective electricity and steam which will enhance energy security and development of the country's major infrastructure. The Company prioritises efficient use of natural resources and systematic and standardised environmental management as well as systematic risk management across the organisation which will contribute to the Company's success and achievement of goals in a smooth manner.

Recognising the importance of sustainable business operation alongside the community and society, the Company is therefore determined to conducting business with social and environmental responsibilities by promoting and supporting various projects, including educational development, quality of life development, preservation of art and culture, support of music and sports and environmental conservation, to drive sustainable value and benefit creation for the society and stakeholders.



## Financial Highlights

### Sales and Service Revenue (Baht million)



▲ 20.6%



### EBITDA (Baht million)



▲ 24.9%

### Net Profit - Owners of the Parent (Baht million)



▲ 25.1%

### Total Assets (Baht million)



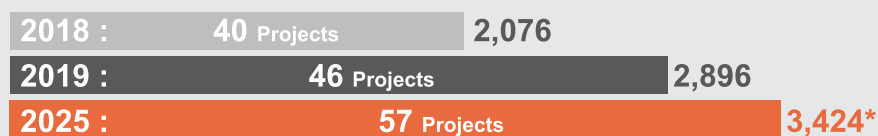
### Net Interest Bearing Debt to Equity



### Total Liabilities and Equity (Baht million)



### Installed Capacity (Megawatts)



\* Including all projects in development as of 2019

▲ 40%  
Capacity Growth in 2019



| Statement of Financial Position (Unit: Million Baht) | 2017   | 2018    | 2019    |
|------------------------------------------------------|--------|---------|---------|
| Total assets                                         | 89,241 | 100,636 | 121,693 |
| Total liabilities                                    | 63,497 | 72,897  | 83,016  |
| Non-controlling Interests                            | 7,091  | 8,486   | 10,533  |
| Total equity attributable to owners of the parent    | 18,653 | 19,253  | 28,144  |

| Statement of Financial Position (Unit: Million Baht)   | 2017   | 2018   | 2019   |
|--------------------------------------------------------|--------|--------|--------|
| Sales and service income                               | 31,482 | 36,585 | 44,132 |
| Gross profit                                           | 6,740  | 6,853  | 8,179  |
| EBITDA                                                 | 8,725  | 9,199  | 11,485 |
| Net profit                                             | 3,594  | 2,976  | 3,977  |
| Normalized net profit (NNP) <sup>1</sup>               | 2,918  | 3,027  | 3,658  |
| Net profit - owner of the parent                       | 2,127  | 1,863  | 2,331  |
| Non-operating items <sup>2</sup> - owner of the parent | (400)  | (21)   | (170)  |
| NNP - owner of the parent                              | 1,727  | 1,842  | 2,161  |

| Financial Ratios                            | 2017  | 2018  | 2019  |
|---------------------------------------------|-------|-------|-------|
| Book value per share (Baht)                 | 7.16  | 7.39  | 10.80 |
| Net profit per share (Baht)                 | 0.96  | 0.71  | 0.88  |
| EBITDA margin                               | 27.7% | 25.1% | 26.0% |
| ROE                                         | 17.3% | 9.8%  | 9.8%  |
| Net interest-bearing debt to equity (times) | 1.37  | 1.55  | 0.96  |

<sup>1</sup> Excluding non-operating items<sup>2</sup> Such as unrealised gain/loss from exchange rate, gain from investment and non-recurring items



## Awards and Recognitions

Best CEO, Platinum Award Excellence in ESG, Best Initiative in Environmental Responsibility, and Best Investor Relations Team by the Asset Publishing and Research Limited

The Country Winner Award in Green Enterprise from The ASEAN Business Awards 2019 of the 35<sup>th</sup> ASEAN Summit

The Most Outstanding Company in Thailand - Utilities Sector by Asiamoney Magazine



ESG 100 : 2019 List by Thaipat Institute

Thailand Sustainability Investment (THSI) List 2019 by the Stock Exchange of Thailand

Sustainability Disclosure Recognition by Thaipat Institute

CEO of the Year, Solar Power of the Year in Vietnam and Solar Power of the Year in Thailand by Asian Power Magazine

The Most Innovative Deal Award by the Thai Bond Market Association

Best Investor Relations Award in the SET Award 2019 event held by the Stock Exchange of Thailand in collaboration with Money & Banking Magazine



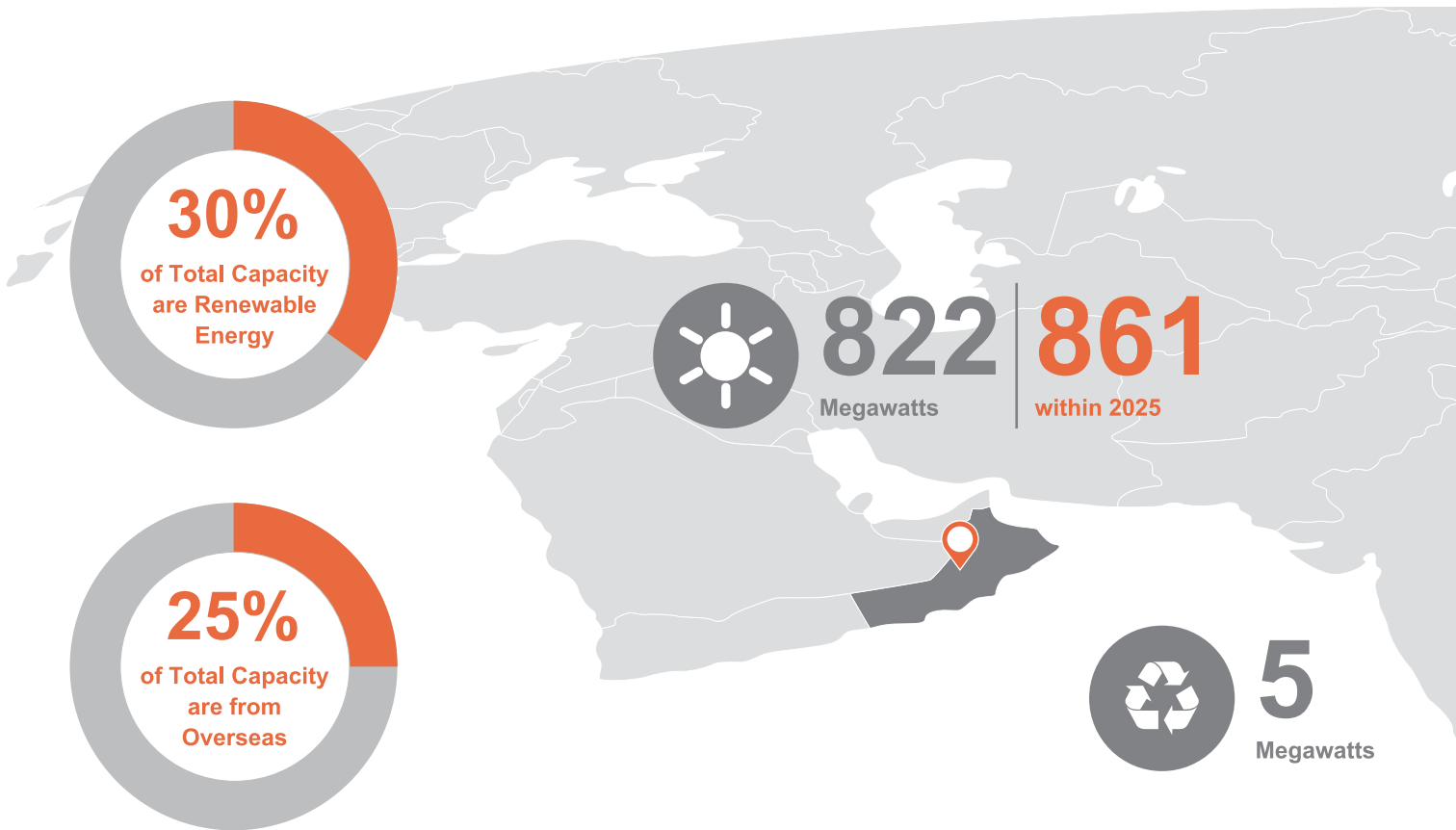


# 2,896

Megawatts

# 3,424

Megawatts within 2025



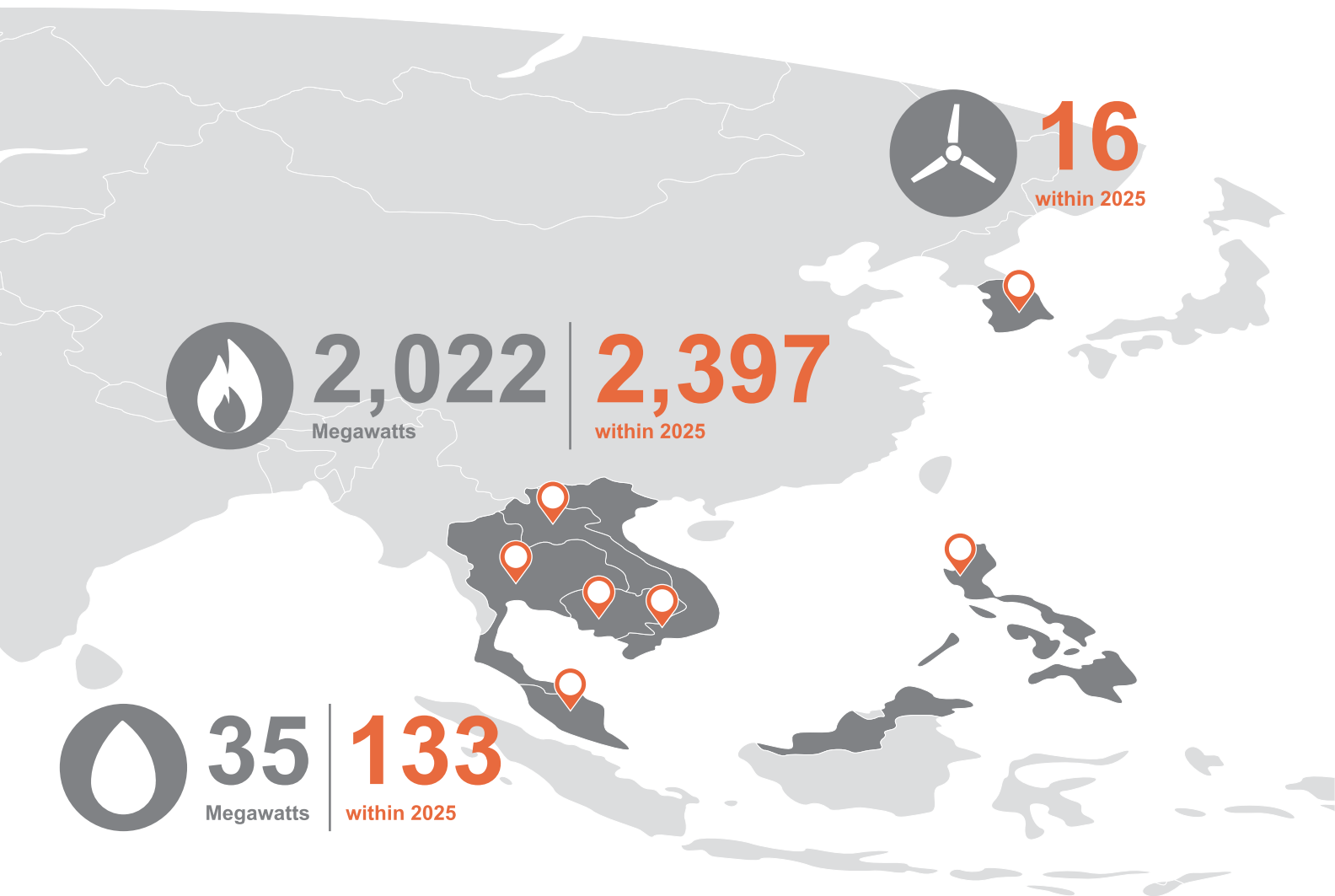
#### THAILAND

- 🔥 B.Grimm BIP Power 1 Limited
- 🔥 B.Grimm BIP Power 2 Limited
- 🔥 B.Grimm Power (Laem Chabang) 1 Limited
- 🔥 B.Grimm Power (Laem Chabang) 2 Limited
- 🔥 Amata B.Grimm Power 1 Limited
- 🔥 Amata B.Grimm Power 2 Limited
- 🔥 Amata B.Grimm Power 3 Limited
- 🔥 Amata B.Grimm Power 4 Limited
- 🔥 Amata B.Grimm Power 5 Limited
- 🔥 Amata B.Grimm Power (Rayong) 1 Limited
- 🔥 Amata B.Grimm Power (Rayong) 2 Limited
- 🔥 Amata B.Grimm Power (Rayong) 3 Limited
- 🔥 Amata B.Grimm Power (Rayong) 4 Limited
- 🔥 Amata B.Grimm Power (Rayong) 5 Limited
- 🔥 B.Grimm Power (WHA) 1 Limited
- 🔥 Glow SPP 1 Co., Ltd.

- 🔥 B.Grimm Power (Ratchaburi) 1 Limited
- 🔥 B.Grimm Power (Ratchaburi) 2 Limited
- 🌿 B.Grimm Solar Power (Sakaeo) 1 Limited
- 🌿 B.Grimm Yanhee Solar Power Limited
- 🌿 B.Grimm Sena Solar Power Limited
- 🌿 Solar Projects with WVO and CO-OP
- 🌿 Progress Interchem (Thailand) Co., Ltd.
- 🌿 Bo Thong Wind Farm Co., Ltd.

#### LAO PDR.

- 🌿 Xenamnoy and Xekatam Hydro Power Co., Ltd.
- 🌿 Nam Che Hydro Power Co., Ltd.
- 🌿 Nam Khao Hydro Power Co., Ltd.
- 🌿 Tadsakoi Hydro Power Co., Ltd.



#### VIETNAM

- Amata Power (Bien Hoa) Limited
- Dau Tieng Tay Ninh Energy Joint Stock Company
- Phu Yen TTP Joint Stock Company

#### CAMBODIA

- B.Grimm Power (Poipet) Co., Ltd.
- Ray Power Supply Company Limited

#### SOUTH KOREA

- B.Grimm Power Korea Limited

#### PHILIPPINES

- B.Grimm Solar Power Inc.

- Co-generation
- Solar
- Hydro
- Wind
- Waste to Energy
- Back up for Power Trading

- Project in Operation
- Project in Development





## Business Policy and Overview

### Business Overview

B.Grimm Power Public Company Limited is one of the core businesses of B.Grimm which has been operating in Thailand for over 141 years under the philosophy of “Doing Business with Compassion for the Development of Civilisation in Harmony with Nature.”

B.Grimm Power was firstly incorporated under the name of Borneo (1993) Company Limited on 26 July 1993. The Company successfully became one of the first private power producers in Thailand with the Amata B.Grimm Power 1 Limited project (ABP1), a combined cycle power plant which was commercially operated in 1998 and investments in power plants subsequently grown both domestically and internationally. In 2011, the Company was renamed as B.Grimm Power Company Limited and expanded its power plant investments both domestically and internationally. On 9 September 2016, it converted into a public limited company officially known as B.Grimm Power Public Company Limited and

became listed on the Stock Exchange of Thailand through the initial public offering on 19 July 2017 with a registered capital of 5.4 billion Baht.

B.Grimm Power’s contractual parties for the sale of electricity and steam in Thailand through power purchase agreements (PPAs) are:

1. Power purchase agreement with the Electricity Generating Authority of Thailand (EGAT) under the Small Power Producer (SPP) program

2. Power and steam purchase agreements with IUs through the Company’s electricity and steam network covering more than 130 industrial plants in 6 leading industrial estates, namely:

- 2.1 Amata City Chonburi Industrial Estate
- 2.2 Amata City Rayong Industrial Estate
- 2.3 Bangkadi Industrial Park
- 2.4 WHA Chonburi Industrial Estate 1
- 2.5 Laem Chabang Industrial Estate
- 2.6 WHA Eastern Industrial Estate (Map Ta Phut)

3. Power purchase agreement with the Provincial Electricity Authority (PEA) under the Very Small Power Producer (VSPP) program from solar power plants, the government agencies and agricultural cooperatives’ ground-mounted solar power plant project B.E. 2560 (2017), and the industrial-waste-to-energy power project





4. Power purchase agreement with the Metropolitan Electricity Authority (MEA) under the state agencies and agricultural cooperatives' ground-mounted solar power plant project B.E. 2560 (2017)

B.Grimm Power has started investing in renewable energy projects since 2015 and planned to expand its production capacity in solar and wind power plant projects continually to protect the environment and respond to the government's policy.

For overseas investments, B.Grimm Power has begun its investment in Vietnam since 1999 by reselling electricity bought from EVN's subsidiary to IUs in Amata City Bien Hoa Industrial Estate through its power network. Moreover, two solar power plants commenced their commercial operations in June 2019, namely, the 420-MW installed capacity DT 1&2 and the 257-MW installed capacity Phu Yen TTP.

B.Grimm Power has also invested in hydropower plant projects in Lao PDR since 2015, transmission line business and sales of electricity in Cambodia since 2018, and planned to expand overseas investments continuously by conducting feasibility studies of power plant projects in South Korea, Malaysia, Cambodia, the Philippines, and Oman to seek investment opportunities with reasonable returns.

As of 31 December 2019, the capacity of B.Grimm Power's power plant projects that were already commercially operated and are under development and construction include the following:

| Type of Power Plant                   | Total Power Plants     |                                   |                                | Power Plants in Operation |                                   |                                |
|---------------------------------------|------------------------|-----------------------------------|--------------------------------|---------------------------|-----------------------------------|--------------------------------|
|                                       | Number of Power Plants | Estimated Installed Capacity (MW) | Estimated Equity Capacity (MW) | Number of Power Plants    | Estimated Installed Capacity (MW) | Estimated Equity Capacity (MW) |
| Combined Cycle                        | 19                     | 2,396.9 <sup>1</sup>              | 1,656.9 <sup>1</sup>           | 17                        | 2,021.5                           | 1,231.0                        |
| Backup for power trading <sup>2</sup> | 1                      | 13.0                              | 4.0                            | 1                         | 13.0                              | 4.0                            |
| Solar                                 | 25                     | 861.0                             | 596.2                          | 24                        | 822.0                             | 557.2                          |
| Water                                 | 9                      | 132.6                             | 94.5                           | 3                         | 35.1                              | 24.9                           |
| Wind                                  | 2                      | 16.0                              | 14.8                           | -                         | -                                 | -                              |
| Industrial Waste                      | 1                      | 4.8                               | 2.3                            | 1                         | 4.8                               | 2.3                            |
| <b>Total</b>                          | <b>57<sup>3</sup></b>  | <b>3,424.3<sup>3</sup></b>        | <b>2,368.7<sup>3</sup></b>     | <b>46</b>                 | <b>2,896.4</b>                    | <b>1,819.4</b>                 |

<sup>1</sup> The replacement projects of ABP1, ABP2, BPLC1 and SPP1 (2 projects) will have installed capacity of 140 MW each. However, the estimated installed capacity of those projects may be subject to change if deemed necessary.

After the expiration of the Revenue Sharing Agreement of ABP1, ABP2 and ABPIF, B.Grimm Power's economic benefit in ABP1 and ABP2 will be 51.2% (from 15.3% through the holding of ABPIF units).

<sup>2</sup> Reselling electricity bought from EVN's subsidiary to over 200 IUs in Amata City Bien Hoa Industrial Estate with total sale of 95 MW through its power network.

<sup>3</sup> As of 17 March 2020, there were 58 power plants based on both project in operation and in development with estimated installed capacity of 3,547 MW and estimated equity capacity of 2,455 MW.

As of 31 December 2019, operating power plants in which B.Grimm Power invested through its subsidiaries and joint ventures were shown below (grouped by location);

| Location                 | Industrial Estate                           | Type of Power Plant      | Number of Power Plants | Installed Capacity |                   | Equity Capacity  |                   |
|--------------------------|---------------------------------------------|--------------------------|------------------------|--------------------|-------------------|------------------|-------------------|
|                          |                                             |                          |                        | Electricity (MW)   | Steam (Tons/Hour) | Electricity (MW) | Steam (Tons/Hour) |
| Thailand                 |                                             |                          |                        |                    |                   |                  |                   |
| Chonburi                 | Amata City Chonburi Industrial Estate       | Combined Cycle           | 5                      | 732.3              | 150.0             | 337.4            | 71.4              |
| Rayong                   | Amata City Rayong Industrial Estate         | Combined Cycle           | 5                      | 646.7              | 150.0             | 374.3            | 86.8              |
|                          | WHA Eastern Industrial Estate (Map Ta Phut) | Combined Cycle           | 2                      | 124.0              | 90.0              | 93.0             | 67.5              |
| Chonburi                 | Laem Chabang Industrial Estate              | Combined Cycle           | 2                      | 159.1              | 70.0              | 159.1            | 70.0              |
|                          | WHA Chonburi Industrial Estate 1            | Combined Cycle           | 1                      | 130.2              | 30.0              | 97.6             | 22.5              |
| Pathum Thani             | Bangkadi Industrial Park                    | Combined Cycle           | 2                      | 229.2              | 40.0              | 169.6            | 29.6              |
| Nakhon Pathom            | -                                           | Solar                    | 22                     | 145.0              | -                 | 120.6            | -                 |
| Phra Nakhon Si Ayutthaya |                                             |                          |                        |                    |                   |                  |                   |
| Saraburi                 |                                             |                          |                        |                    |                   |                  |                   |
| Sa Kaeo                  |                                             |                          |                        |                    |                   |                  |                   |
| Petchabun                |                                             |                          |                        |                    |                   |                  |                   |
| Chachoengsao             |                                             |                          |                        |                    |                   |                  |                   |
| Surat Thani              |                                             |                          |                        |                    |                   |                  |                   |
| Bangkok                  |                                             |                          |                        |                    |                   |                  |                   |
| Samut Prakan             |                                             |                          |                        |                    |                   |                  |                   |
| Nonthaburi               |                                             |                          |                        |                    |                   |                  |                   |
| Ratchaburi               | Ratchaburi Industrial State                 | Industrial Waste         | 1                      | 4.8                | -                 | 2.3              | -                 |
| Vietnam                  |                                             |                          |                        |                    |                   |                  |                   |
| Bien Hoa                 | Amata City Bien Hoa Industrial Estate       | Backup for power trading | 1                      | 13.0               | -                 | 4.0              | -                 |
| Tay Ninh                 | -                                           | Solar                    | 1                      | 420.0              | -                 | 231.0            | -                 |
| Phu Yen                  | -                                           | Solar                    | 1                      | 257.0              | -                 | 205.6            | -                 |
| Lao PDR                  |                                             |                          |                        |                    |                   |                  |                   |
| Champasak                | -                                           | Hydro                    | 2                      | 20.1               | -                 | 14.1             | -                 |
| Saisombun                | -                                           | Hydro                    | 1                      | 15.0               | -                 | 10.8             | -                 |
| Total                    |                                             |                          | 46                     | 2,896.4            | 530.0             | 1,819.4          | 347.8             |



## History and Developments

Following the Thai government's policy to liberalise the power generation industry in Thailand in 1990 where the private sector was allowed to generate the electricity, B.Grimm Power was incorporated in July 1993 under the name of Borneo (1993) Company Limited and became one of the first private power producers in Thailand. The Group's first power plant project was the ABP1 project, a combined cycle power plant that began its commercial operation in 1998. The Group has continued to expand investments, marked by the following milestones:

### 1993

- B.Grimm Power was incorporated as "Borneo (1993) Company Limited" with Baht 100,000 registered capital, divided into 1,000 shares at a par value of Baht 100 per share.

### 1996

- The Group was awarded the PPAs under the SPP program for the ABP 1 project.

### 1997 - 1998

- B.Grimm Power increased its registered capital by Baht 709,500,000 through the issuance of 7,095,000 new ordinary shares at a par value of Baht 100 per share, resulting in the increase in registered capital from Baht 100,000 to Baht 709,600,000 to finance business expansion.

### 1998

- The Group was awarded the PPAs under the SPP program for the ABP2 project.
- The ABP1 project began commercial operation (with installed capacity of 166.4 MW for power generation and 30.0 tons/hour for steam generation).

### 1999

- The Group started business in Vietnam.

### 1999 - 2001

- B.Grimm Power increased its registered capital by Baht 140,400,000 through the issuance of 1,404,000 new ordinary shares at a par value of Baht 100 per share, resulting in the increase in registered capital from Baht 709,600,000 to Baht 850,000,000 for power plant expansion.

### 2001

- The ABP2 project began commercial operation (with installed capacity of 171.2 MW for power generation and 30.0 tons/hours for steam generation).

### 2009

- The Group was awarded 4 PPAs under the SPP programs for the ABP3, ABPR1, ABPR2 and BIP1 projects.

### 2010

- The Group was awarded 9 PPAs under the SPP programs for the ABP4, ABP5, ABPR3, ABPR4, ABPR5, BIP2, BPWHA1, BGPR1 and BGPR2 projects.

### 2011

- B.Grimm Power changed its name to "B.Grimm Power Company Limited."

### 2012

- The ABP3 project began commercial operation (with installed capacity of 132.5 MW for power generation and 30.0 tons/hour for steam generation).

### 2013

- The ABPR2 project began commercial operation (with installed capacity of 124.4 MW for power generation and 30.0 tons/hour for steam generation).
- The Group issued an initial public offering of ABPIF units listed in the Stock Exchange of Thailand (SET).
- The ABPR1 project began commercial operation (with installed capacity of 123.3 MW for power generation and 30.0 tons/hour for steam generation).

### 2014

- B.Grimm Power acquired the BPLC1 project (with installed capacity of 103.0 MW for power generation and 50.0 tons/hour for steam generation) and the BPLC2 project (with installed capacity of 56.1 MW for power generation and 20.0 tons/hour for steam generation) from Sime Darby Energy.

### 2015

- The BIP1 project began commercial operation (with installed capacity of 114.6 MW for power generation and 20.0 tons/hour for steam generation).

- B.Grimm Power entered into a Memorandum of Understanding (MOU) with SV Group Company Limited, one of the leading engineering companies in Lao PDR, to jointly invest in the Xenamnoy 2 and the Xekatom 1 hydro power plant projects.
- B.Grimm Power increased its registered capital by Baht 2,930,000,000 through the issuance of 29,300,000 new ordinary shares at a par value of Baht 100 per share, resulting in the increase in registered capital from Baht 850,000,000 to Baht 3,780,000,000 to mobilise additional funds for business expansion.
- B.Grimm Power entered into an MOU with Daosavanh Company Limited and SV Group Company Limited to jointly invest in additional hydro power plant projects, namely the Nam Che 1 hydro power plant project and the Nam Khao 1, Nam Khao 2, Nam Khao 3, Nam Khao 4 and Nam Khao 5 hydro power plant projects.
- The ABP4 project began commercial operation (with installed capacity of 131.1 MW for power generation and 30.0 tons/hour for steam generation).
- 14 solar power plant projects began commercial operation (with an aggregate installed capacity of 106.2 MW for power generation).
- The BPWHA1 project began commercial operation (with installed capacity of 130.2 MW for power generation and 30.0 tons/hour for steam generation).



## 2016

- The BIP2 project began commercial operation (with installed capacity of 114.6 MW for power generation and 20.0 tons/hour for steam generation).
- The BGSPS1 solar power plant project began commercial operation (with installed capacity of 8.0 MW for power generation).
- The ABP5 project began commercial operation (with installed capacity of 131.1 MW for power generation and 30.0 tons/hour for steam generation).
- On 9 September 2016, B.Grimm Power converted into a public limited company and changed its name to "B.Grimm Power Public Company Limited."
- On 9 September 2016, B.Grimm Power changed its par value from Baht 100 to Baht 2 and increased its registered capital by Baht 1,620,000,000 through the issuance of 810,000,000 new ordinary shares at a par value of Baht 2, resulting in the increase in registered capital from Baht 3,780,000,000 to Baht 5,400,000,000 for an IPO.

## 2017

- ABPSPV1 (a company in the Group) issued 3 - to 15-year secured debentures in the amount of Baht 11,500,000,000 guaranteed by the ABP3, ABPR1 and ABPR2 projects. The debentures were rated "A-" with "stable" outlook through the private placement offering.
- On 19 July 2017, B.Grimm Power Public Company Limited's shares were traded for the first time on the SET.
- The XXHP hydropower plant project began commercial operation (with installed capacity of 20.1 MW for power generation).
- B.Grimm Power was qualified to enter into the PPAs with the PEA and the MEA, totalling 7 projects, accounting for an aggregate installed capacity of 30.8 MW for power generation, under the government agencies and agricultural cooperatives' solar power plant project B.E. 2560 (2017).

## 2018

- Tris Rating Company Limited (TRIS) assigned an "A" company rating with "stable" outlook to B.Grimm Power Public Company Limited.
- The ABPR3, ABPR4 and ABPR5 projects began commercial operation (with an aggregate installed capacity of 399.0 MW for power generation and 90.0 tons/hour for steam generation).



- The BIP1 and BIP2 projects issued 15-year amortising debentures in the amount of Baht 6,700,000,000. The debentures were rated “A-” with “stable” outlook through the private placement offering.
- B.Grimm Power entered into the PPA with Electricity of Vietnam (EVN) to develop DT 1&2 and Phu Yen TTP projects in Vietnam with installed capacity of 420 MW and 257 MW for power generation, respectively.
- B.Grimm Power successfully acquired 51% shares in the BGYSPP project from Yanhee Solar Power Company Limited, making B.Grimm’s a wholly owned BGYSPP project. BGYSPP owns and operates solar power plants in the central region of Thailand with an aggregate installed capacity of 59.7 MW for power generation.
- B.Grimm Power issued 2- to 10-year debentures totalling Baht 9,700,000,000 with “A-” credit rating and the outlook described as “stable” through the private placement offering. The proceeds from the issuance will be used to repay loans and existing debentures to reduce interests and extend tenors.
- B.Grimm Power issued 5-year and 7-year green bonds totalling Baht 5,000,000,000, making the history as the first green bond issued in Thailand was certified by the Climate Bond Initiative. The proceeds from the issuance will be used to repay loans and existing debentures to reduce interests and extend tenors.
- 7 WVO & Coop solar power plant projects began commercial operation (with installed capacity of 30.8 MW for power generation).

#### Major Developments from the previous year to present

- According to the approval granted by the National Energy Policy Council dated 24 January 2019, 5 combined cycle power plants met the criteria for renewal of SPPs and construction of new power plants for replacement under 25-year PPAs.
- BPSLC (the Company’s subsidiary) acquired SPP1 (with installed capacity of 124.0 MW for power generation and 90.0 tons/hour for steam generation and demineralised water of 190 m<sup>3</sup>/h) from Glow Company Limited.



- The Nam Che 1 Hydro Power Plant project began commercial operation (with installed capacity of 15.0 MW for power generation).



- The DT1&2 solar power plant project in Vietnam, the largest solar power plant project in Southeast Asia, began commercial operation (with installed capacity of 420.0 MW for power generation).
- The Phu Yen TTP solar power plant project in Vietnam began commercial operation (with installed capacity of 257.0 MW for power generation).
- The Company signed an MOU with PetroVietnam Power Corporation-JSC (a Vietnamese state-owned enterprise) to mutually conduct a study on the development of LNG-fired power plant project and the import and sale of LNG as fuel for the power plants in Vietnam.
- The Company issued subordinated perpetual debentures totalling Baht 8,000,000,000 with “BBB+” credit rating and the outlook described as “stable” for public offerings (institutional investors and / or general investors). The proceeds obtained through the sale of debentures served as financial sources for current and future investment projects, adjustment of capital structure, normal operations, and other cases of the Company and / or associated companies.

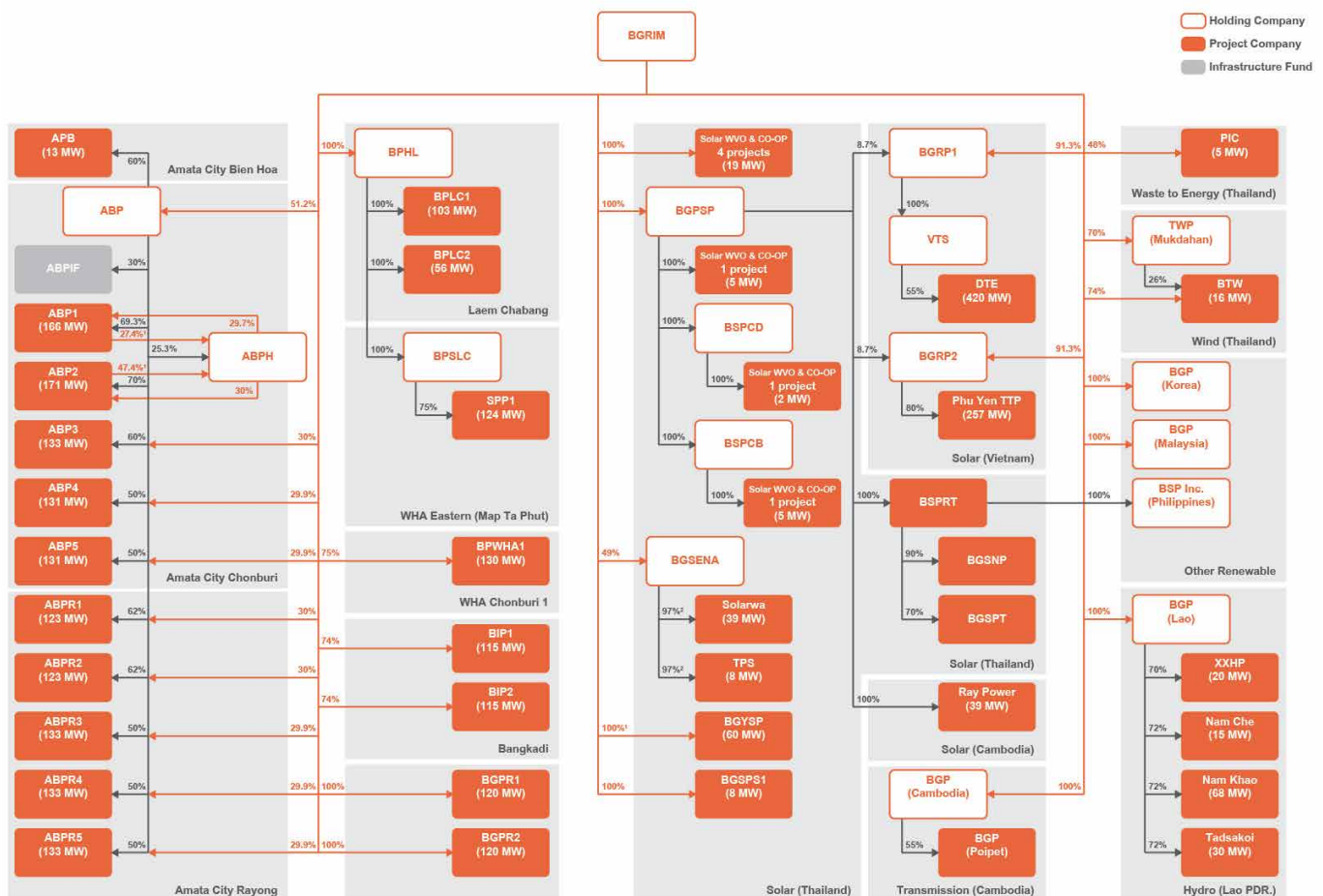
- BPSLC (the Company's subsidiary) sold a 25% stake in SPP1 power plant project to Asia Industrial Estate Company Limited, making the Company to hold a 75% stake in SPP1 power plant project with installed capacity of 124.0 MW for power generation and 90.0 tons/hour for steam generation and demineralised water of 190 m<sup>3</sup>/h.
- Industrial-waste-to-energy power plant project began commercial operation (with installed capacity of 4.8 MW for power generation).
- B.Grimm Solar Power 1 Company Limited (a subsidiary in which the Company holds a 100% stake) received the transfer of all shares (100%) in Ray Power Supply Company Limited to develop ground-mounted solar power plant project in Cambodia (with installed capacity of 39.0 MW for power generation).



- B.Grimm Power - Energy China Consortium was awarded as EPC contractor for EGAT's Floating Solar Power Plant for Sirindhorn Dam Hydro - Floating Solar Hybrid Pilot Project with installed capacity of 45 MW for power generation.

## The Group's Shareholding Structure as of 31 December 2019

(Please see the additional information from <https://www.bgrimpower.com/en/company/shareholding-structure>)



<sup>1</sup> Preferred shares

<sup>2</sup> Based on the right of economic benefit



## The Group's Power Plant Projects

As of 31 December 2019, the Group had a total of 40 commercially operated power plant projects in Thailand, 3 projects in Vietnam and 3 projects in Lao PDR through subsidiaries and joint venture companies with an aggregate installed capacity of 2,896.4 MW (an aggregate equity capacity totalling 1,819.4 MW).

Information on the Group's commercially operated power plant projects as of 31 December 2019 can be summarised as below:

| Power Plant Project                                 | Project Owner | Installed Capacity |                   | Economic Equity Ratio (%) <sup>1</sup> | Equity Capacity <sup>2</sup> |                   | Type of Fuel | Commercial Operation Date                |
|-----------------------------------------------------|---------------|--------------------|-------------------|----------------------------------------|------------------------------|-------------------|--------------|------------------------------------------|
|                                                     |               | Electricity (MW)   | Steam (Tons/Hour) |                                        | Electricity (MW)             | Steam (Tons/Hour) |              |                                          |
| Amata City Chonburi Industrial Estate, Chonburi     |               |                    |                   |                                        |                              |                   |              |                                          |
| Amata B.Grimm Power 1                               | ABP1          | 166.4              | 30.0              | 51.2                                   | 85.2                         | 15.4              | Natural Gas  | 17 September 1998                        |
| Amata B.Grimm Power 2                               | ABP2          | 171.2              | 30.0              | 15.3                                   | 26.3                         | 4.6               | Natural Gas  | 28 September 2001                        |
| Amata B.Grimm Power 3                               | ABP3          | 132.5              | 30.0              | 60.7                                   | 80.5                         | 18.2              | Natural Gas  | 1 October 2012                           |
| Amata B.Grimm Power 4                               | ABP4          | 131.1              | 30.0              | 55.5                                   | 72.7                         | 16.6              | Natural Gas  | 15 November 2015                         |
| Amata B.Grimm Power 5                               | ABP5          | 131.1              | 30.0              | 55.5                                   | 72.7                         | 16.6              | Natural Gas  | 1 June 2016                              |
| Amata City Rayong Industrial Estate, Rayong         |               |                    |                   |                                        |                              |                   |              |                                          |
| Amata B.Grimm Power (Rayong) 1                      | ABPR1         | 123.3              | 30.0              | 61.7                                   | 76.1                         | 18.5              | Natural Gas  | 1 November 2013                          |
| Amata B.Grimm Power (Rayong) 2                      | ABPR2         | 124.4              | 30.0              | 61.7                                   | 76.8                         | 18.5              | Natural Gas  | 21 June 2013                             |
| Amata B.Grimm Power (Rayong) 3                      | ABPR3         | 133.0              | 30.0              | 55.5                                   | 73.8                         | 16.6              | Natural Gas  | 1 February 2018                          |
| Amata B.Grimm Power (Rayong) 4                      | ABPR4         | 133.0              | 30.0              | 55.5                                   | 73.8                         | 16.6              | Natural Gas  | 1 June 2018                              |
| Amata B.Grimm Power (Rayong) 5                      | ABPR5         | 133.0              | 30.0              | 55.5                                   | 73.8                         | 16.6              | Natural Gas  | 1 October 2018                           |
| Laem Chabang Industrial Estate, Chonburi            |               |                    |                   |                                        |                              |                   |              |                                          |
| B.Grimm Power (Laem Chabang) 1                      | BPLC1         | 103.0              | 50.0              | 100.0                                  | 103.0                        | 50.0              | Natural Gas  | 16 July 2001 <sup>3</sup>                |
| B.Grimm Power (Laem Chabang) 2                      | BPLC2         | 56.1               | 20.0              | 100.0                                  | 56.1                         | 20.0              | Natural Gas  | 20 February 2009 <sup>3</sup>            |
| Bangkadi Industrial Park, Pathum Thani              |               |                    |                   |                                        |                              |                   |              |                                          |
| B.Grimm BIP Power 1                                 | BIP1          | 114.6              | 20.0              | 74.0                                   | 84.8                         | 14.8              | Natural Gas  | 29 April 2015                            |
| B.Grimm BIP Power 2                                 | BIP2          | 114.6              | 20.0              | 74.0                                   | 84.8                         | 14.8              | Natural Gas  | 1 January 2016                           |
| WHA Chonburi Industrial Estate 1, Chonburi          |               |                    |                   |                                        |                              |                   |              |                                          |
| B.Grimm Power (WHA) 1                               | BPWHA1        | 130.2              | 30.0              | 75.0                                   | 97.6                         | 22.5              | Natural Gas  | 1 November 2016                          |
| WHA Eastern Industrial Estate (Map Ta Phut), Rayong |               |                    |                   |                                        |                              |                   |              |                                          |
| SPP 1 (2 projects)                                  | SPP1          | 124.0              | 90.0              | 75.0                                   | 93.0                         | 67.5              | Natural Gas  | February and September 1998 <sup>4</sup> |

| Power Plant Project                                                  | Project Owner | Installed Capacity  |                      | Economic<br>Equity<br>Ratio (%) <sup>1</sup> | Equity Capacity <sup>2</sup> |                      | Type of Fuel | Commercial<br>Operation Date |
|----------------------------------------------------------------------|---------------|---------------------|----------------------|----------------------------------------------|------------------------------|----------------------|--------------|------------------------------|
|                                                                      |               | Electricity<br>(MW) | Steam<br>(Tons/Hour) |                                              | Electricity<br>(MW)          | Steam<br>(Tons/Hour) |              |                              |
| Nakhon Pathom                                                        |               |                     |                      |                                              |                              |                      |              |                              |
| Sai Luang 2                                                          | BGYSP         | 8.0                 | -                    | 99.0                                         | 8.0                          | -                    | Solar        | 28 December 2015             |
| Sai Luang 3                                                          | BGYSP         | 8.0                 | -                    | 99.0                                         | 8.0                          | -                    | Solar        | 28 December 2015             |
| Sai Luang 9                                                          | BGYSP         | 7.2                 | -                    | 99.0                                         | 7.2                          | -                    | Solar        | 28 December 2015             |
| Sai Luang 10                                                         | BGYSP         | 7.5                 | -                    | 99.0                                         | 7.5                          | -                    | Solar        | 28 December 2015             |
| Sai Yai Nha                                                          | BGYSP         | 8.0                 | -                    | 99.0                                         | 8.0                          | -                    | Solar        | 28 December 2015             |
| Sai Manow                                                            | BGYSP         | 8.0                 | -                    | 99.0                                         | 8.0                          | -                    | Solar        | 28 December 2015             |
| Sai Putsa                                                            | BGYSP         | 8.0                 | -                    | 99.0                                         | 8.0                          | -                    | Solar        | 28 December 2015             |
| Sai Lui Rim Nam                                                      | Solarwa       | 8.0                 | -                    | 47.5 <sup>5</sup>                            | 3.8                          | -                    | Solar        | 28 December 2015             |
| Sai Chalouw 1                                                        | Solarwa       | 8.0                 | -                    | 47.5 <sup>5</sup>                            | 3.8                          | -                    | Solar        | 28 December 2015             |
| Sai Sab                                                              | Solarwa       | 8.0                 | -                    | 47.5 <sup>5</sup>                            | 3.8                          | -                    | Solar        | 17 December 2015             |
| Phra Nakhon Si Ayutthaya                                             |               |                     |                      |                                              |                              |                      |              |                              |
| Sai Sena 2                                                           | BGYSP         | 5.0                 | -                    | 99.0                                         | 5.0                          | -                    | Solar        | 22 December 2015             |
| Saraburi                                                             |               |                     |                      |                                              |                              |                      |              |                              |
| BGTTRE 2                                                             | Solarwa       | 8.0                 | -                    | 47.5 <sup>5</sup>                            | 3.8                          | -                    | Solar        | 18 December 2015             |
| BGTTRE 3                                                             | Solarwa       | 6.5                 | -                    | 47.5 <sup>5</sup>                            | 3.1                          | -                    | Solar        | 25 December 2015             |
| BGTTRE 1                                                             | TPS           | 8.0                 | -                    | 47.5 <sup>5</sup>                            | 3.8                          | -                    | Solar        | 18 December 2015             |
| Sa Kaeo                                                              |               |                     |                      |                                              |                              |                      |              |                              |
| BGSPS1                                                               | BGSPS1        | 8.0                 | -                    | 100.0                                        | 8.0                          | -                    | Solar        | 27 April 2016                |
| Petchabun                                                            |               |                     |                      |                                              |                              |                      |              |                              |
| The Chon Daen agricultural<br>cooperatives project                   | BSPCD         | 2.3                 | -                    | 100.0                                        | 2.3                          | -                    | Solar        | 3 December 2018              |
| Chachoengsao                                                         |               |                     |                      |                                              |                              |                      |              |                              |
| The WVO project, namely the<br>Veteran Support Office of<br>Chonburi | BGRIM         | 3.6                 | -                    | 100.0                                        | 3.6                          | -                    | Solar        | 24 December 2018             |
| Surat Thani                                                          |               |                     |                      |                                              |                              |                      |              |                              |
| The Ban Na Doem agricultural<br>cooperatives project                 | BSPCB         | 5.0                 | -                    | 100.0                                        | 5.0                          | -                    | Solar        | 25 December 2018             |



| Power Plant Project                                                              | Project Owner | Installed Capacity |                   | Economic Equity Ratio (%) <sup>1</sup> | Equity Capacity <sup>2</sup> |                   | Type of Fuel             | Commercial Operation Date |
|----------------------------------------------------------------------------------|---------------|--------------------|-------------------|----------------------------------------|------------------------------|-------------------|--------------------------|---------------------------|
|                                                                                  |               | Electricity (MW)   | Steam (Tons/Hour) |                                        | Electricity (MW)             | Steam (Tons/Hour) |                          |                           |
| Bangkok                                                                          |               |                    |                   |                                        |                              |                   |                          |                           |
| The WVO project, namely the Office of Agriculture, Industry and Services Affairs | BGPSP         | 5.0                | -                 | 100.0                                  | 5.0                          | -                 | Solar                    | 27 December 2018          |
| The WVO project, namely the Veterans General Hospital                            | BGRIM         | 5.0                | -                 | 100.0                                  | 5.0                          | -                 | Solar                    | 27 December 2018          |
| Samut Prakan                                                                     |               |                    |                   |                                        |                              |                   |                          |                           |
| The WVO project, namely the WVO Office of Terminal Production Workshop           | BGRIM         | 5.0                | -                 | 100.0                                  | 5.0                          | -                 | Solar                    | 27 December 2018          |
| Nonthaburi                                                                       |               |                    |                   |                                        |                              |                   |                          |                           |
| The WVO project, namely the WVO Office of Security Services                      | BGRIM         | 5.0                | -                 | 100.0                                  | 5.0                          | -                 | Solar                    | 27 December 2018          |
| Ratchaburi Industrial Estate, Ratchaburi                                         |               |                    |                   |                                        |                              |                   |                          |                           |
| Progress Interchem                                                               | PIC           | 4.8                | -                 | 48.0                                   | 2.3                          | -                 | Industrial Waste         | 27 December 2019          |
| Lao PDR                                                                          |               |                    |                   |                                        |                              |                   |                          |                           |
| Xenamnoy 2 and Xekatom 1 hydro power plants (2 projects)                         | XXHP          | 20.1               | -                 | 70.0                                   | 14.7                         | -                 | Hydro                    | 1 August 2017             |
| Nam Che 1                                                                        | Nam Che 1     | 15.0               | -                 | 72.0                                   | 10.8                         | -                 | Hydro                    | 1 June 2019               |
| Vietnam                                                                          |               |                    |                   |                                        |                              |                   |                          |                           |
| Amata Power (Bien Hoa)                                                           | APB           | 13.0               | -                 | 30.7                                   | 4.0                          | -                 | Backup for power trading | 9 April 1999              |
| Dau Tieng 1&2                                                                    | DTE           | 420.0              | -                 | 55.0                                   | 231.0                        | -                 | Solar                    | 3 and 13 June 2019        |
| Phu Yen TTP                                                                      | Phu Yen TTP   | 257.0              | -                 | 80.0                                   | 205.6                        | -                 | Solar                    | 10 June 2019              |
| Total Installed Capacity                                                         |               | 2,896.4            | 530.0             |                                        | 1,819.4                      | 347.8             |                          |                           |

<sup>1</sup> Calculated from B.Grimm Power's direct and/or indirect investments

<sup>2</sup> Estimated equity capacity is calculated from the multiple of estimated installed capacity and B.Grimm Power's economic portion of the project.

<sup>3</sup> The Group acquired BPLC1 and BPLC2 projects in June 2014.

<sup>4</sup> The Group acquired SPP1 (2 projects) in March 2019

<sup>5</sup> BGSENA (a joint venture company in which B.Grimm Power holds a 49% stake) holds preferred shares in Solarwa and TPS, which entitles BGSENA to 97.0% of total dividends paid. B.Grimm Power therefore has an economic benefit of 47.5% in Solarwa and TPS power projects.

## Power Plant Projects under Construction or Development

Power plants under construction or development refer to power plant projects for which PPAs with EGAT, PEA, EDL, EVN, EDC or other relevant agencies have been obtained or guaranteed in writing. Projected capacity, equity ratio and scheduled commercial operation date (SCOD) of these projects may be subject to change depending on project suitability.

As of 31 December 2019, the Group had a total of 16 power plant projects under construction or development with an aggregate installed capacity of 527.9 MW. Among these, 11 projects were power plant projects under construction or development with an aggregate installed capacity of 392.5 MW and 5 projects were replacement projects with an aggregate installed capacity of 700.0<sup>1</sup> MW which an aggregate installed capacity projects to expire of 564.6 MW.

<sup>1</sup> The replacement projects will have installed capacity of 140 MW each. However, these projects may be subject to change depending on project suitability.

The Table showing the overview of the Group's power plant projects under construction or development as of 31 December 2019

| Power Plant Project                               | Project Owner      | Estimated Installed Capacity |                   | Economic Equity Ratio (%) <sup>1</sup> | Estimated Equity Capacity <sup>2</sup> |                   | Type of Fuel | Commercial Operation Date |
|---------------------------------------------------|--------------------|------------------------------|-------------------|----------------------------------------|----------------------------------------|-------------------|--------------|---------------------------|
|                                                   |                    | Electricity (MW)             | Steam (Tons/Hour) |                                        | Electricity (MW)                       | Steam (Tons/Hour) |              |                           |
| Mukdahan                                          |                    |                              |                   |                                        |                                        |                   |              |                           |
| Bo Thong Wind Farm (2 projects)                   | BTW                | 16.0                         | -                 | 92.2                                   | 14.8                                   | -                 | Wind         | 31 December 2020          |
| Cambodia                                          |                    |                              |                   |                                        |                                        |                   |              |                           |
| Ray Power                                         | Ray                | 39.0                         | -                 | 100.0                                  | 39.0                                   | -                 | Solar        | 30 October 2020           |
| V.R.M. Industrial Estate, Ratchaburi <sup>3</sup> |                    |                              |                   |                                        |                                        |                   |              |                           |
| B.Grimm Power (Ratchaburi) 1 <sup>3</sup>         | BGPR1 <sup>3</sup> | 120.0                        | 30.0              | 100.0 <sup>4</sup>                     | 120.0                                  | 30.0              | Natural Gas  | 1 June 2021               |
| B.Grimm Power (Ratchaburi) 2 <sup>3</sup>         | BGPR2 <sup>3</sup> | 120.0                        | 30.0              | 100.0 <sup>4</sup>                     | 120.0                                  | 30.0              | Natural Gas  | 1 October 2021            |
| Lao PDR                                           |                    |                              |                   |                                        |                                        |                   |              |                           |
| Nam Khao 1                                        | Nam Khao 1         | 15.0                         | -                 | 72.0                                   | 10.8                                   | -                 | Hydro        | 2025                      |
| Nam Khao 2                                        | Nam Khao 2         | 15.0                         | -                 | 72.0                                   | 10.8                                   | -                 | Hydro        | 2025                      |
| Nam Khao 3                                        | Nam Khao 3         | 15.0                         | -                 | 72.0                                   | 10.8                                   | -                 | Hydro        | 2022                      |
| Nam Khao 4                                        | Nam Khao 4         | 15.0                         | -                 | 72.0                                   | 10.8                                   | -                 | Hydro        | 2024                      |
| Nam Khao 5                                        | Nam Khao 5         | 7.5                          | -                 | 72.0                                   | 5.4                                    | -                 | Hydro        | 2023                      |
| Tadsakoi                                          | Tadsakoi           | 30.0                         | -                 | 70.0                                   | 21.0                                   | -                 | Hydro        | 2022                      |
| Total Installed Capacity                          |                    | 392.5                        | 60.0              |                                        | 363.4                                  | 60.0              |              |                           |

<sup>1</sup> Calculated from B.Grimm Power's direct and/or indirect investments

<sup>2</sup> Estimated equity capacity is calculated from the multiple of estimated installed capacity and B.Grimm Power's economic portion of the project.

<sup>3</sup> Location, name of power plant project and project owner may be subject to change according to the related parties' approval.

<sup>4</sup> Although BGPR1 and BGPR2 are B.Grimm Power's associated companies, however, B.Grimm Power may sell part of its shares in BGPR1 and BGPR2 to minority shareholder(s) which may include owner(s) of industrial estates where the power plants are located.



## New SPP Replacement Projects with PPAs Expiring during 2017-2025

At present, the Company has 5 combined cycle power plant projects under PPAs with EGAT expiring during 2017-2025 and has a plan for construction to replace the existing power plant projects pursuant to the Cabinet's approval on 30 April 2019, specifying that SPPs to expire during 2017-2025 can construct new replacement power plants under the 25-year PPAs, while power plants under PPAs to expire by 2021 were approved to extend PPAs for not more than 3 years during new power plants are being constructed. However, estimated installed capacity, equity ratio, and scheduled date for commercial operation may be changed during the development according to project suitability.

| Power Plant Project                                | Project Owner | Installed Capacity under PPAs to expire before the end of 2022 |                           |                                                            |                                                                                                        | Installed Capacity of Newly Constructed / Continued Power Plants |                           |                       |
|----------------------------------------------------|---------------|----------------------------------------------------------------|---------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------|-----------------------|
|                                                    |               | Installed Capacity (MW)                                        | Economic Equity Ratio (%) | Installed Capacity according to Economic Equity Ratio (MW) | PPA Expiration Date                                                                                    | Installed Capacity (MW)                                          | Economic Equity Ratio (%) | Installed Equity (MW) |
| Amata City Chonburi Industrial Estate, Chonburi    |               |                                                                |                           |                                                            |                                                                                                        |                                                                  |                           |                       |
| Amata B.Grimm Power 1                              | ABP1          | (166.4)                                                        | 51.2                      | (85.2)                                                     | On the process of renewal for not more than 3 years after the end of existing PPAs (16 September 2022) | 140.0 <sup>1</sup>                                               | 51.2                      | 71.7                  |
| Amata B.Grimm Power 2                              | ABP2          | (171.2)                                                        | 15.3                      | (26.3)                                                     | 27 September 2022                                                                                      | 140.0 <sup>1</sup>                                               | 51.2 <sup>2</sup>         | 71.7                  |
| Laem Chabang Industrial Estate, Chonburi           |               |                                                                |                           |                                                            |                                                                                                        |                                                                  |                           |                       |
| B.Grimm Power (Laem Chabang) 1                     | BPLC1         | (103.0)                                                        | 100.0                     | (103.0)                                                    | 15 July 2022                                                                                           | 140.0 <sup>1</sup>                                               | 100.0                     | 140.0                 |
| WHA Eastern Industrial Estate (MapTa Phut), Rayong |               |                                                                |                           |                                                            |                                                                                                        |                                                                  |                           |                       |
| SPP1 (2 projects)                                  | SPP1          | (124.0)                                                        | 75.0                      | (93.0)                                                     | February and September 2021                                                                            | 280.0 <sup>1</sup>                                               | 75.0                      | 210.0                 |
| Total Installed Capacity                           |               | (564.6)                                                        |                           | (307.5)                                                    |                                                                                                        | 700.0                                                            |                           | 493.4                 |

<sup>1</sup> Subject to change depending on project suitability.

<sup>2</sup> After the expiration of the Revenue Sharing Agreement between ABP2 and ABPIF, B.Grimm Power's economic benefit in ABP2 will increase from 15.3% to 51.2%.

## Business Strategy

B.Grimm Power's vision is to empowering the world compassionately. We strive to achieve 3 strategic goals of profitability, sustainability and continuous growth of the business through robust domestic and international business partnerships.

B.Grimm Power has set its 5-year goals (2018-2022) to enter into the PPAs to develop power plant projects with installed capacity of 5,000 MW by emphasising power plants with low environmental impacts i.e. natural gas-fired combined cycle power plants and renewable energy power plants, which correspond to future types of power plants with sustainable development. In addition, the Company gradually embraces the smart energy where a digital system has been introduced to analyse data and manage the energy, and conducts a feasibility study to apply an energy storage system (ESS) to efficient and highly stable smart micro grid management to accommodate disruptive technology, respond to electricity demand from customers and lay down a basic infrastructure for transition into the smart city.

### 1. Profitability

#### 1.1 Continuous and efficient management of the Group's power plant projects

B.Grimm Power's main goal is to effectively manage the Group's power plant projects so that it can generate

power with stability and reliability while reducing costs and adding profitability. To achieve this goal, B.Grimm Power has introduced the following strategies to operate and manage the power plant projects:

- 1.1.1 Develop transmission and distribution networks of electricity and steam for maximum efficiency in production and distribution while being able to reserve distribution sources among power plants within the same industrial estate.
- 1.1.2 Effectively manage the maintenance of the Group's power plant projects where its maintenance team collaborates with external technicians through long-term service agreements.
- 1.1.3 Manage the transmission and operation systems for maximum efficiency throughout the day.
- 1.1.4 The Group's power plants utilise highly-efficient machinery and cutting-edge technology from internationally-recognised manufacturers. Its combined cycle power plants currently use machines manufactured by Siemens and GE.
- 1.1.5 Focus on the sale of electricity and steam to IUs in the vicinity of power plant projects to reduce loss of electricity in the grid.



Supported by a team of personnel with expertise, skills and know-how necessary to foster effective management of power plant projects, the Group assigns this team and existing personnel with power plant management experiences to oversee newly-operated power plants. This will enable them to become part of the development process of a new power plant project from construction till completion, which will eventually equip them with a true understanding of the entire engineering process of the power plant and thereby allow them to leverage such know-how to control the operation and maintain the power plant once it starts commercial operation.

When the Group enters into long-term service agreement with third-party, its in-house maintenance team will work side-by-side with the contractors to acquire the much-needed know-how. The Group plans to introduce this in-house team to oversee major maintenance tasks after the expiration of long-term service agreement in order to lower maintenance costs.

## **1.2 Proper management of the Group's capital structure**

The Group plans to manage its capital structure to reduce funding costs and strengthen its financial position. The Group will implement policies that will allow the development of its power plants to meet international standards in order to strengthen confidence of local and international financial institutions to continue financing power plant projects. The Group will also use various financial instruments to hedge both foreign currencies and interest rates of power plant projects during the construction period and after they start commercial operation. The Group commits to maintain an appropriate ratio of its USD and THB loans to act as a natural hedge since EGAT's capacity payment will vary in accordance with the exchange rates between USD and THB.



## **1.3 On-time completion of the development of power plant projects within defined budgets**

The Group will comply with its operation plan to ensure that the power plant projects are completed within a scheduled timeframe where engineers and engineering consultants will coordinate and supervise EPC and non-EPC contractors in each project. The project management procedures will be uniformed on the basis of the Group's standards to encourage effective coordination and collaboration between EPC and non-EPC contractors.

The Group will continue exercising cost-control measures through a fair and transparent bidding process with suppliers interested in offering goods or services for us. The work of EPC and non-EPC contractors will be allocated and balanced to control project costs.

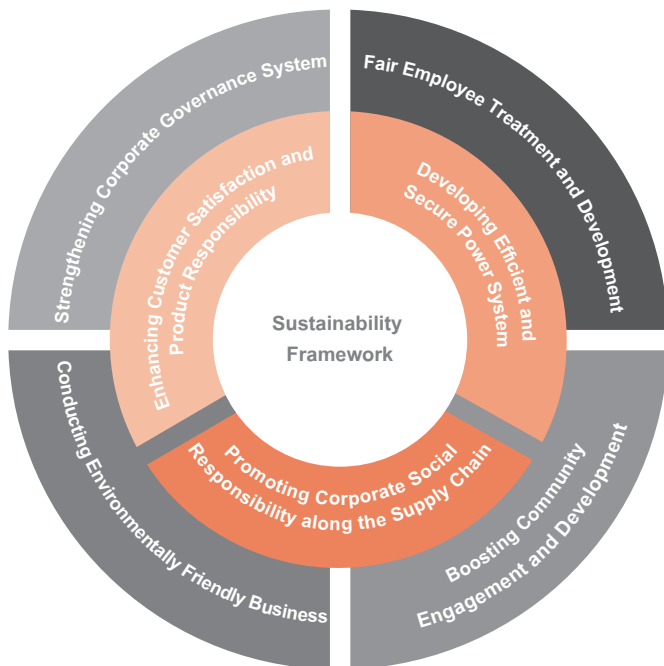


## 2. Sustainability

The Company has established its sustainability framework as guidelines for corporate sustainability management covering economic, social, environmental and good governance aspects by taking into account the organisational context for excellence and professionalism at international level as well as enhancing benefits and values that respond to stakeholder expectations, thereby leading to long-term growth, stability and sustainable success.

The “**outer circle**” refers to corporate responsibility towards all stakeholders which will lead to mutual growth in a sustainable manner, including strengthening the corporate governance system, fair employee treatment and development, boosting community engagement and development, and conducting environmentally friendly business.

The “**Inner circle**” refers to the systematic and professional business management to achieve business leadership and excellence, including developing efficient and secure power system, promoting corporate social responsibility along the supply chain, and enhancing customer satisfaction and product responsibility.



## 3. Continuous growth in Thailand and overseas

The Company has set goals to expand its installed capacity of power plant projects based on projects in operation and in development to 5,000 MW by 2022. The Company has a plan to apply for licenses and / or concession agreements to develop and construct additional power plants both in Thailand and other countries such as Lao PDR, Vietnam, South Korea, Cambodia, and the Philippines as well as conduct a feasibility study on investments in domestic power plant projects by using other alternative energy, e.g. industrial waste power plant or biomass power plant and acquisition of power plants which had already been closed.







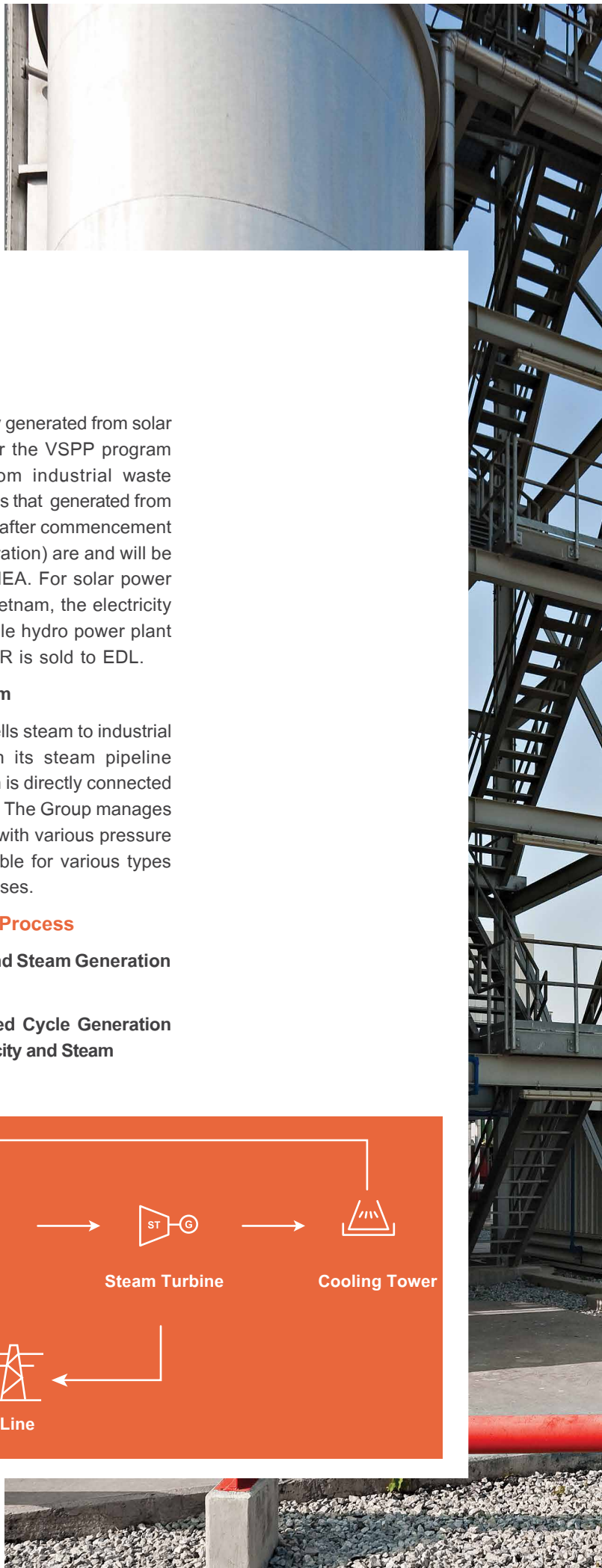
## Revenue Structure

B.Grimm Power core revenues are from 1) generating and supplying electricity to EGAT, PEA, MEA, EDL, EVN and industrial users 2) generating and supplying steam to industrial users and 3) other revenues from sales and services as per table below:

|                                                | For the year ended 31 December |              |                |              |                |             |
|------------------------------------------------|--------------------------------|--------------|----------------|--------------|----------------|-------------|
|                                                | 2017                           |              | 2018           |              | 2019           |             |
|                                                | (Million Baht)                 | (%)          | (Million Baht) | (%)          | (Million Baht) | (%)         |
| <b>Revenue from sales of electricity</b>       |                                |              |                |              |                |             |
| Sales to EGAT                                  | 19,354                         | 61.5         | 23,664         | 64.7         | 28,726         | 65.1        |
| Sales to industrial users in Thailand          | 9,394                          | 29.8         | 10,040         | 27.4         | 10,174         | 23.0        |
| Sales to industrial users in Vietnam           | 1,189                          | 3.8          | 1,183          | 3.2          | 1,238          | 2.8         |
| Sales to PEA / MEA                             | 65                             | 0.2          | 300            | 0.8          | 773            | 1.8         |
| Sales to EDL                                   | 107                            | 0.3          | 107            | 0.3          | 268            | 0.6         |
| Sales to EVN                                   | -                              | -            | -              | -            | 1,623          | 3.7         |
| <b>Total revenue from sales of electricity</b> | <b>30,109</b>                  | <b>95.6</b>  | <b>35,294</b>  | <b>96.5</b>  | <b>42,802</b>  | <b>97.0</b> |
| Steam sales                                    | 529                            | 1.7          | 554            | 1.5          | 927            | 2.1         |
| Demineralised Water sales                      | -                              | -            | -              | -            | 36             | 0.1         |
| Others <sup>1</sup>                            | 843                            | 2.7          | 737            | 2.0          | 366            | 0.8         |
| <b>Sales and services income<sup>2</sup></b>   | <b>31,482</b>                  | <b>100.0</b> | <b>36,585</b>  | <b>100.0</b> | <b>44,132</b>  | <b>100</b>  |

<sup>1</sup> primarily include the construction revenue recognises based on the percentage of completion of hydro power projects in Lao PDR which offset with the construction cost recognises based on actual incurred construction cost according to TFRIC 12 - Concession Agreement

<sup>2</sup> Total revenue from sales and services may not equal to a total sum of figures expressed in the table due to the rounding to million Baht.



## Nature of Business

### 1. Characteristics of Products and Services

#### 1.1 Electricity and Steam Generation Business

##### Sale of Electricity

The Group generates electricity for sale to the Electricity Generating Authority of Thailand (EGAT), the Provincial Electricity Authority (PEA), the Metropolitan Electricity Authority (MEA), the Electricite du Laos (EDL), and the Vietnam Electricity (EVN). The electricity generated from the combined cycle power plants is sold to EGAT, Thailand's largest electricity buyer, under the SPP program. The electricity sold to EGAT will be transmitted to its nationwide power transmission network for resale to PEA and MEA, who will transmit it to household and industrial users all over the country. The remaining electricity is directly sold to industrial users.

The electricity generated from solar power plants under the VSPP program and generated from industrial waste (used tires) as well as that generated from wind power plants (after commencement of commercial operation) are and will be sold to PEA and MEA. For solar power plant projects in Vietnam, the electricity is sold to EVN, while hydro power plant projects in Lao PDR is sold to EDL.

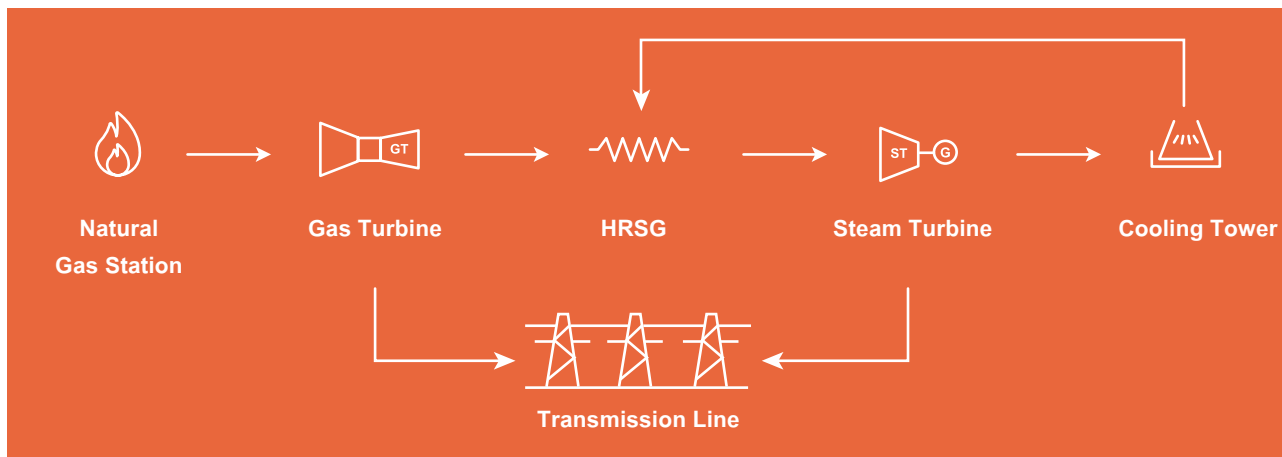
##### Sale of Steam

The Group sells steam to industrial customers through its steam pipeline infrastructure which is directly connected with the customers. The Group manages to generate steam with various pressure levels proven suitable for various types of industrial processes.

#### 1.2 Generation Process

##### 1.2.1 Electricity and Steam Generation Process

##### (1) Combined Cycle Generation Process for Electricity and Steam





A combined cycle generation process consists of a gas turbine, a heat recovery steam generator (HRSG), and a steam turbine that can work together efficiently. The generation process is as follows:

(1.1) In the gas turbine, air is drawn through an air inlet section where it is cooled or heated to the desired temperature and purified before passing into a compressor. Here, the air is compressed to higher pressure and temperature before being combined with fuel (natural gas or diesel) in the combustion chamber where combustion takes place.

(1.2) The hot and high pressure air generated by the combustion moves through the gas turbine blades, making them spin in the process. The fast-spinning turbine drives an electric generator on the same axis before converting a portion of the spinning energy into electricity.

(1.3) The HRSG captures exhaust heat of hot gases from the gas turbine to transform water into high-pressure and high-temperature steam. These hot gases are then released through the exhaust stack. In the HRSG, water evaporation results in water loss and highly purified water is added to the HRSG by the control system. The feed water flows in tubes and the hot gases pass around these tubes to produce steam in the process.

(1.4) The HRSG then delivers the steam to the steam turbine.

(1.5) The steam rotates the steam turbine, which then drives the coupled generator to generate electricity.

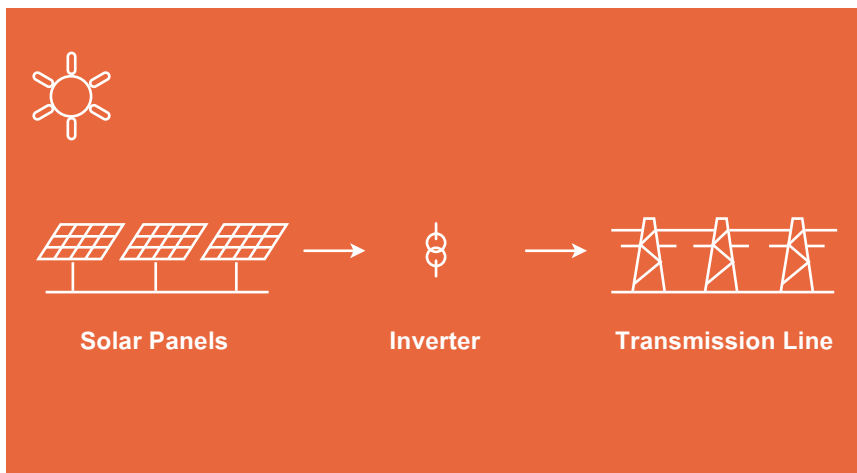


(1.6) A portion of high-pressure steam extracted from an intermediate stage of the steam turbine is modulated and sold to industrial users according to their steam temperature and pressure requirements.

(1.7) Exhaust steam is subsequently sent to a condenser and cooled by a cooling tower into a liquid. This form of water is sent to the feed water for reuse for steam generation process.

From this process, all our combined cycle power plants can generate electricity and steam for sale to EGAT and industrial users.

## (2) Solar Power Generation Process



All solar power plants use PV technology where solar panels collect energy from the sun and convert solar power into the direct current power through the following generation process:

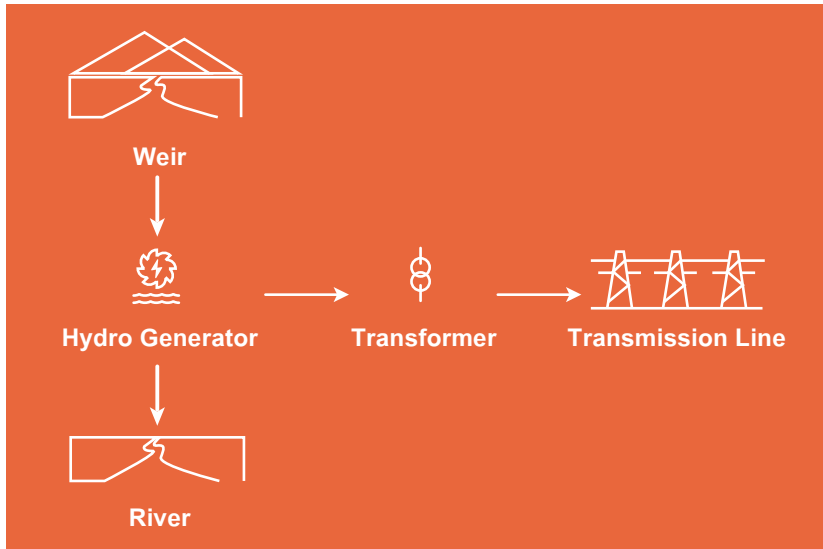
(2.1) Solar panels are arranged in integrated groups to generate the required capacity.

(2.2) The output electric currents from the solar panels are transferred to a string combiner box for collecting and combining to higher levels for input into the inverter.

(2.3) The inverter converts the direct current power to alternating current for use with electric appliances.

(2.4) The voltage is increased using a step-up transformer to connect the power with the transmission line system.

### (3) Hydro Power Generation Process



The hydro power plants, consisting of 2 commercially operated and under construction and development with PPAs in Lao PDR, are using run-of-the-river hydro electric power plants, which means no reservoir is needed since the operation will be done using the naturally running water in the river. The generation process is as follows:

(3.1) By design, the power plant projects are located in hilly terrain where there is a difference between water levels to regulate water into hydro turbines.

(3.2) Water flows through the penstock into the hydro turbine at the lower elevation. Due to differences in altitude, potential energy from the upstream will be transformed into kinetic energy while flowing downstream through the penstock, giving it more gravitational force required to spin the turbines.

(3.3) The force of the moving water spins the hydro turbine and drives a generator.

(3.4) The electricity is generated and transferred to an electric transformer where the voltage will be increased before the power is sent into the transmission line system.

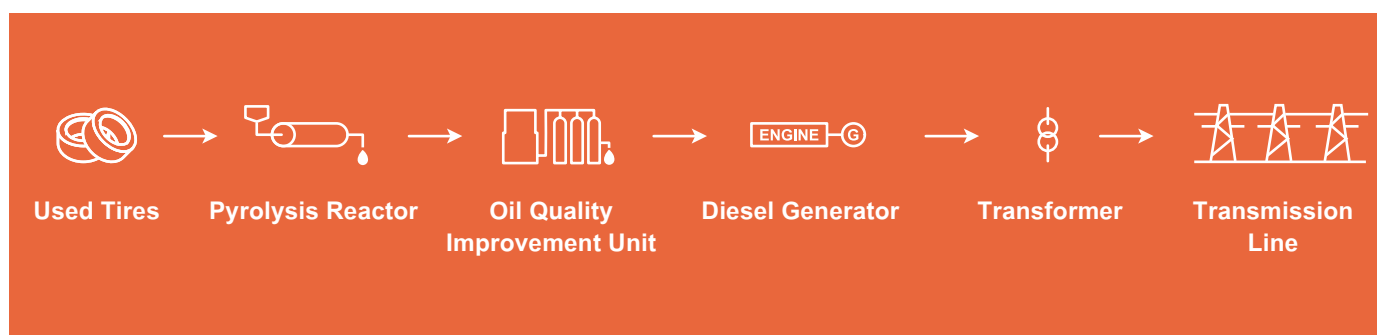
### (4) Wind Power Generation Process

The wind power plants currently under development with secured PPAs are located in Mukdahan province. The wind turbine will be activated by air motion to turn the generator to convert motive power into the electricity.

The wind turbines are equipped with a control system that optimises electricity generation output. This allows the Company to remotely operate and control the wind power plants to suit the changing of weather patterns as well as shut down the operation during strong lightning storms and adjust wind turbine position to align with the shifts of wind direction.

## (5) Power Generation Process from Industrial Waste (used tires)

One power generation project from industrial waste under the PPA was commercially operated with the following generation process:



(5.1) Used tires will be cut into small pieces before proceeding to the Pyrolysis system.

(5.2) Shredded tire will be fed to the Pyrolysis reactor to break down the molecules of the hydrocarbons by heating without the presence of oxygen until the shredded tire evaporate and condense to pyrolysis oil.

(5.3) Pyrolysis oil will be feed to fuel treatment unit in order to adjust oil property to meet diesel engine requirement.

(5.4) The diesel engine generator set will generate alternating currents at the voltage level of 6.6 kV and step up 22 kV by transformer before connecting to the grid.

### 1.2.2 Infrastructure for Electricity and Steam Transmission and Distribution

(1) The Group builds and maintains an interconnected system of power transmission lines and steam pipelines used in the distribution of electricity and steam generated at its power plants to the customers.



(2) Electricity generated by all combined cycle power plants (except BIP2) for sale to EGAT is distributed to the grid through 115 kV transmission lines connected to a PEA substation. Although the Group builds these transmission lines, it only owns those within the power plant area while PEA owns and maintains the transmission lines between terminal substations located in the power plant premise to the connection point with PEA.

Electricity generated by BIP2 for sale to EGAT is distributed to the grid through 69 kV transmission line connected to an EGAT substation. In this case, the Group builds, owns and maintains the entire transmission lines.

(3) Electricity generated by the Group's combined cycle power plants for industrial users is directly distributed to each customer through 22 kV or 115 kV transmission lines built, owned and maintained by the Group. The steam generated by the Group's combined cycle power plants for industrial users is directly distributed to each customer through steam pipelines which are also built, owned and maintained by the Group.

(4) Electricity generated by the Group's solar power plants for PEA or MEA is distributed to the grid through 22 kV or 115 kV transmission lines connected to a PEA or MEA substation. Although the Group builds these transmission lines, it only owns those within the power plant area while PEA or MEA owns and maintains the transmission lines between terminal substations located in the power plant premise to the connection point with PEA or MEA.

(5) Electricity generated from industrial waste power plants for PEA is distributed to the grid through 22 kV transmission lines connected to a PEA substation.

(6) In Vietnam, the Group purchases electricity from EVN's subsidiaries for reselling to industrial users in the Amata City Bien Hoa Industrial Estate through 110 kV and 22 kV transmission lines. The Group builds, owns and maintains 110 kV transmission lines only, but lease 22 kV transmission lines from industrial estate manager or owner.

(7) In Lao PDR, electricity from the Group's hydro power plants to be sold to EDL will be distributed to the grid through 115 kV transmission lines built by the Group but owned by EDL.

### 1.2.3 Operations and Maintenance (O&M)

The Group's operations and maintenance ("O&M") capabilities can generate reliable and stable power and provide quality service considered a crucial factor for industrial users. The Group's engineering teams are ready to provide 24-hour service daily to respond to all O&M issues facing the Group's customers.

Proper maintenance not only allows the Group's power plants to operate more efficiently i.e. generating power and steam while using less fuel, but it also prevents the plants from the risk of major machinery breakdown or failure.

The power purchase agreements the Group made with EGAT, EDL, EVN and industrial users allow for scheduling maintenance outages to ensure that the Group fall within these permitted periods.

(1) Under the PPAs with EGAT, the Group may shut down its power plants for no more than 840 hours (35 days) for repairs and maintenance, and no more than 1,080 hours (45 days) for major overhauls within each calendar year. However, the Group may not schedule maintenances during the peak period of March, April and May each year unless it is necessary where the maintenance period must not exceed 30 hours.



(2) Under the PPAs with EDL, EVN and industrial users, we may schedule the maintenance ourselves but an advanced notice is required in which it must specify the approximate starting date and duration for the maintenance.

The Group will coordinate with customers to plan the maintenance shutdown in advance to maximise efficiency and minimise the outage time.

The Group's maintenance team at each power plant is tasked to undertake routine maintenance. In addition, combined cycle power plants also require major overhauls every three and / or six years, which include the following tasks:

1. Partial or complete disassembly of gas turbines;
2. Detecting damaged, defective or worn parts in gas turbines;
3. Repair and replacement of such parts;
4. Reassembling, testing and conducting trial-run before returning gas turbines to the full operating level

With regard to combined cycle power plants, the Company entered into long-term service agreements with Siemens Limited for Siemens gas turbines, and IHI Corporation, IHI Power System (Thailand) Company Limited and Wood Group Heavy Industrial Turbines (Thailand) Company Limited, who provide after-sales maintenance services for GE gas turbine customers in Thailand and ASEAN region. These agreements allow the Group to (1) maintain gas turbines in power plants based on the standards through maintenance teams of experienced personnel; and (2) control maintenance costs as the service fees under these agreements are inclusive of the cost of supply of spare parts and consumables.

The Group's in-house maintenance teams at the power plants will work alongside with the third-party contractors during the major overhauls to obtain their know-how. The Group intends to conduct major overhauls ourselves as soon as the long-term service agreements expire.

#### **1.2.4 Environment and Safety**

In Thailand, the electricity generation business is regulated by the Enhancement and Conservation of the National Environmental Quality Act. The Office of Natural Resources and Environmental Policy and Planning has already approved environment impact assessment (EIA) reports for each of its combined cycle power plants.

In Lao PDR, the Group is obliged to prepare environmental and social impact analysis reports and the impact mitigation plans, which will be subject to review and approval by Ministry of Natural Resources and Environment.

In Vietnam, under the law on environmental protection, the Group is obliged to prepare APB's annual EIA report and submit it to relevant agencies annually.

All commercially operated power plants are materially compliant with the concerned environmental laws. The Group has complied with all existing environmental standards and is confident that its operations are in compliance with the World Bank Group Environmental, Health and Safety Guidelines applicable to thermal power plants. Moreover, the Group has not been involved or become a party in any arbitration, litigation or dispute in respect to environment or compliance with the environmental laws. The Group continues to supervise and control its electricity generation process to ensure that emissions from the power plants are lower or within maximum levels allowed by the laws.

The Group establishes emission-monitoring systems resulting from its power plants. In addition, the Group monitors

ambient air quality at several locations within the power plant premises. For each combustion process, the Group monitors and controls nitrogen oxides, sulphur oxides and carbon monoxide. The temperature and the fuel/air ratio are controlled to maintain emission within applicable limits. The quality of wastewater discharged is controlled against the environmental impact mitigation and monitoring plans specified in the EIA reports to ensure compliance with legal and regulatory requirements.

The Group has implemented policies, processes and control mechanisms to reduce the risk from chemical leakages and staff exposure to hazardous chemicals. Chemicals for water treatment processes are carefully selected and only those with minimum environmental impacts and employee health effects are chosen.

In addition, the Group has put in place an environmental, health and safety training program to create awareness among employees in the environmental, health and safety issues, including spill prevention and emergency responses. The Group also has a chemical leakage contingency plan in place while its employees are trained in case of emergency. The Group will prepare reports for government agencies on the disposal of hazardous and non-hazardous waste and will also set up practices regarding waste classification and storage. The Group has entered into contracts with noise control specialists to monitor noise levels in order to meet legal compliance.

#### **1.2.5 ISO Accreditation for Environmental Management**

The Company is committed to improving its business and service processes by introducing several quality management systems set out. To enhance confidence in environmental and safety practices, the Group's commercially operated combined cycle power plants have all been certified with ISO 4001 as well as the TIS / OHSAS 18001 ISO 45001 certification for safety, which indicate our power plants are operated in accordance with internationally recognised standards.

#### **1.2.6 Information Technology**

The Group applies information technology ("IT") to enhance higher efficiency in operation and management.

B.Grimm Power believes that its IT, which consists of a mainframe computer for data management and computer networks, allows smooth internal communication among local and regional offices.

The Group implements a variety of IT systems to manage the organisation and support decision-making processes. The systems consist of commercially available programs such as accounting, maintenance, procurement and inventory management as well as software exclusively designed for internal use such as systems for personnel and payroll. The Group implements the IBM Cognos program to reduce time spent on budget preparation and human error, which increases the efficiency in budget control and management system.

The Group also benefits from the automation system to supervise, control and acquire data for monitoring and controlling power plants through the online control centres. The automation allows the Group to monitor the transmission and promptly control its power plants. This enables the Group to analyse and respond to actual or potential mistakes while shortening service interruption time.

### **1.3 Rights and Privileges from Investment Promotion (BOI)**

The Group's investments have been supported by the Board of Investment of Thailand pursuant to the Investment Promotion Act. Power plant projects under investment support are detailed as follows:



| Company             | Exemption of Corporate Income Tax on Profit from Promoted Activities for 8 Years from COD | 50% Reduction of Corporate Income Tax on Profit from Promoted Activities for 5 Years from the Expiration of the Corporate Income Tax Exemption | Import Duty Exemption on Imported Machinery as Approved by the BOI | Treatment of Dividends from Promoted Activities Entitled to Corporate Income Tax Exemption as Non - Taxable Income throughout the Period of Corporate Income Tax Exemption Entitlement |
|---------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ABP3                | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| ABP4                | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| ABP5                | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| ABPR1               | ✓                                                                                         | ✓                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| ABPR2               | ✓                                                                                         | ✓                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| ABPR3               | ✓                                                                                         | ✓                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| ABPR4               | ✓                                                                                         | ✓                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| ABPR5               | ✓                                                                                         | ✓                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| Solarwa             | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| BGYSP               | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| BGPSK               | ✓                                                                                         | ✓                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| TPS                 | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| BIP1                | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| BIP2                | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| BPWHA1              | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| BPLC2               | ✓                                                                                         | ✓                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| Solar WVO and CO-OP | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |
| PIC                 | ✓                                                                                         | -                                                                                                                                              | ✓                                                                  | ✓                                                                                                                                                                                      |



## 1.4 Power Purchase Agreements (PPAs)

### 1.4.1 Contracted Capacity

The following table features contracted capacity of power plant projects as of 31 December 2019.

| As of 31 December 2019 |                                              |               |                     |
|------------------------|----------------------------------------------|---------------|---------------------|
| Contracted Capacity    |                                              |               | Number of Contracts |
| Electricity            | EGAT                                         | 1,310 MW      | 16                  |
|                        | PEA                                          | 146 MW        | 21                  |
|                        | MEA                                          | 20 MW         | 4                   |
|                        | EDL                                          | 133 MW        | 9                   |
|                        | EVN                                          | 564 MW        | 2                   |
|                        | Industrial customers in Thailand             | 600 MW        | 186                 |
|                        | Industrial customers in Vietnam <sup>1</sup> | 364 MW        | 252                 |
| Steam                  |                                              | 189 Tons/Hour | 20                  |

<sup>1</sup> consisting of electricity resold to industrial customers in the Amata City Bien Hoa Industrial Estate where ABP directly purchases the electricity from EVN's subsidiaries for resale to industrial users.







## Market Overview and Competition

### 1. Customers

The Group's electricity and steam customers are Electricity Generating Authority of Thailand (EGAT), Provincial Electricity Authority (PEA), Metropolitan Electricity Authority (MEA), Electricite du Laos (EDL), Electricity of Vietnam (EVN) and industrial users.

#### 1.1 Electricity Generating Authority of Thailand

The Group's significant portion of electricity is sold to EGAT, a state-owned enterprise established in accordance with the Electricity Generating Authority of Thailand Act, B.E 2512 (1969). EGAT is the country's electricity generator and distributor under the supervision of the Ministry of Energy. It is also a major wholesale buyer of electricity and responsible for wholesale electricity transmission in Thailand, as well as the country's largest electricity generator.

Playing as a vital role in Thailand's energy system, EGAT generates electricity through its own power plants and simultaneously purchases electricity from IPPs and SPPs in Thailand and neighbouring countries. EGAT also sells and transmits electricity to MEA and PEA, which resell it to end-users. So far, the Group



has never experienced any material problem with EGAT in respect of its capacity payment and electricity that the Group generates and transmits to EGAT under the power purchase agreement (PPA) signed with EGAT.

#### 1.2 Provincial Electricity Authority

PEA is a state-owned enterprise mandated to oversee public utilities and supervised by the Ministry of Interior. Founded on 28 September 1960 by the Provincial Electricity Authority Act, B.E 2503 (1960), PEA's primary responsibilities is to generate, procure, distribute and sell electricity to the public, business and industrial sectors in 74 provinces in Thailand, covering more than 510,000 square kilometres or 99.4% of the country. PEA, however, does not offer service in Bangkok, Nonthaburi and Samut Prakan provinces.

PEA purchases electricity generated from the Group's solar power plants. It is also the sole off-taker of electricity generated from our wind power plants and power generation process from industrial waste power plant.

#### 1.3 Metropolitan Electricity Authority

MEA is a state-owned enterprise established to oversee public utilities services and supervised by the Ministry of Interior. Founded on 1 August 1958 by the Metropolitan Electricity Authority Act, B.E 2501 (1958), MEA's main function is to generate, procure, distribute and sell electricity to the public as well as business and industrial sectors in 3 provinces including Bangkok, Nonthaburi and Samut Prakan provinces encompassing more than 3,192 square kilometres.

MEA purchases electricity generated from the Group's solar power plants.

## 1.4 Electricite Du Laos

EDL is Lao PDR's state-owned enterprise incorporated under the law governing state-owned enterprises (No. 46/NA dated 26 December 2013) and is wholly owned by the Lao PDR's government. EDL owns and operates electricity generation, transmission and distribution in Lao PDR. It also manages imports and exports of electricity from Lao PDR's national electricity grid.

## 1.5 Electricity of Vietnam

EVN is Vietnam's state-owned enterprise incorporated under the Royal Decree (No. 14/CP dated 27 January 1995) on 10 October 1994. EVN, the country's primary electricity generator, is responsible for the transmission and distribution of electricity.

## 1.6 Industrial users

Most of the industrial users are large-scale companies in various industries including automobile, electronics and steel. Several are subsidiaries or affiliates of multi-national corporations. Since most industrial users in industrial estates have high demands for electricity, the Group has then established criteria for selecting customers to maximise the Group's power generation capacity and offer long-term benefits to the Group.

# 2. Marketing and Sales

## 2.1 Pricing

The Group's Sales and Marketing Department is exclusively responsible for industrial users by identifying new business opportunities, either from new customers or from expansion of our business with existing customers. The Sales and Marketing Department is also responsible for preparing and negotiating a new power purchase agreement (PPA) with industrial users. In general, the Group will determine some of electricity and steam prices from the avoided-cost (which refers to expenses customers may have to face if they procure the energy themselves, or if they purchase it from other sources such as PEA, or costs of installation and generation of steam), which is an effective means to price electricity and maximise profit margins.

## 2.2 Customer Relationship Care

Since the Group signs long-term agreements with its customers, it is therefore obliged to appoint a sales and marketing manager with competency to nurture the relationship with major clients.

The Sales & Marketing Department develops a plan for each individual customer that helps the Group understands customers even more and thereby effectively responds to their needs. The Sales & Marketing Department also manages electricity demands of industrial users where it takes into account their business plans, survey of the factory's entire area and the actual power utilisation. If there is significant growth in electricity demand from industrial users, the Sales & Marketing Department, through negotiation with customers, may install a new measuring device and enter into a new power purchase agreement. The Department also handle any technical or commercial complaints. As a leader in the electricity generation industry, the Group is committed to maintaining operation excellence and offering quality service with stability and reliability as part of its key strategic characters to retain customers.

# 3. Competition

## 3.1 Competition in the Electricity Industry

The Group faces no competition when selling electricity to EGAT, and EDL and EVN since the Group has already signed a long-term PPA. However, the Group will have to compete for new power generation projects with domestic energy business operators, leading energy companies in the region and other parties. Nevertheless, the Group is confident that with experience in the development of power plant projects, readiness of personnel and executives and good relationship with business partners and communities, the Group has the potential to succeed in the competition.

When selling electricity to industrial users, the Group pays attention to retain existing industrial users and acquire new customers in the industrial estates where power plants are located. However, in Thailand, the Group inevitably faces strong competition from PEA.

The Group aims to retain relationship with our existing customers to increase its competitiveness with the following reasons:

1. Stability of electricity distribution system and sufficient response to customer needs
2. Long-term PPA with our existing customers, and
3. Direct power transmission and steam pipelines to each customers' plants which re-connection is quite costly.

### 3.2 Competition in Steam Business

Steam transmission is restricted by distance due to heat loss during the transportation, which prevents the Group from having to compete with others.

## 4. Thailand Market Overview

### 4.1 Electricity Industry Management

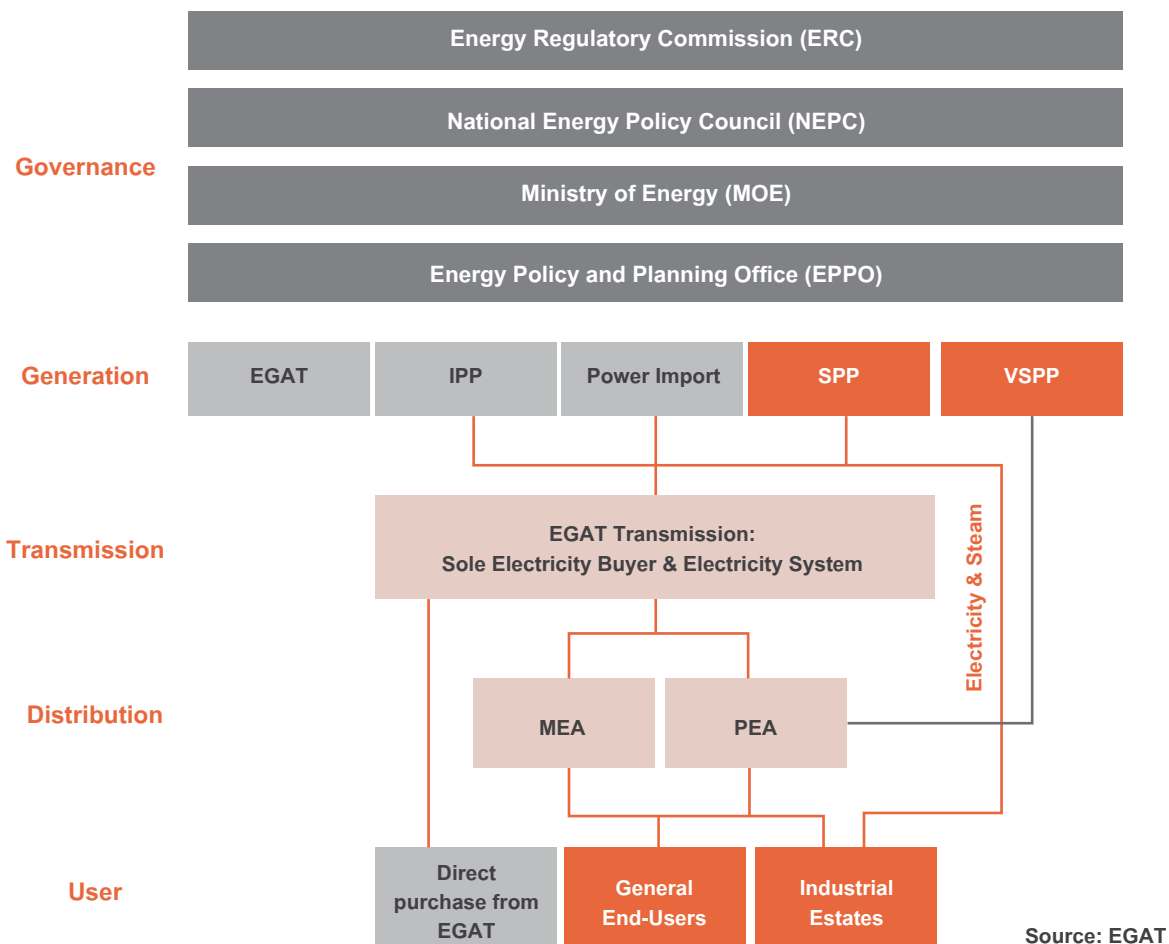
EGAT is a main organisation in Thailand's electricity industry. As a state-owned enterprise, EGAT is responsible for generating, transmitting and wholesaling electricity. As of the end of 2019, EGAT's generating capacity accounted for 33% of Thailand's total electricity generating capacity (excluding contract capacity agreements of Independent Power Supply (IPS) and Very Small Power Producer (VSPP).

As the Transmission System Operator (TSO), EGAT oversees the balance of demand and supply in the transmission system and ensure service efficiency to all electricity users. EGAT is also responsible for administering

and controlling electricity generated in provincial areas from all power plants connecting with high-voltage transmission system via the National Control Centre and 5 control centres in the provinces before dispatching it into the distribution system, which in turn will deliver low-voltage electricity to households and other end-users. EGAT also owns and controls the national transmission network including transmission lines and high-voltage substations.

Under the Thai laws, all electricity dispatched into the national transmission system, whether from private electricity generators, other government agencies or producers in neighbouring countries, is to be exclusively sold to EGAT. This has made EGAT the sole and only organisation that can wholesale electricity to distributors (with certain exceptions when electricity is directly sold to distributors). Figure 1 illustrates an overview of the organising structure of the electricity industry and the value chain structure in Thailand.

**Figure 1 Organisation Structure of Thailand's Electricity Industry**





PEA and MEA are Thailand's only two electricity providers distributing electricity to general end-users. While MEA is responsible for distributing and procuring electricity in Bangkok, Nonthaburi and Samut Prakan provinces, PEA services the remaining areas nationwide. In 2019, the market share in electricity distribution of PEA and MEA totalled 71% and 28%, respectively. The remaining 1% consisted of a small number of large electricity users directly served by EGAT through existing agreements of which the number is not expected to increase.

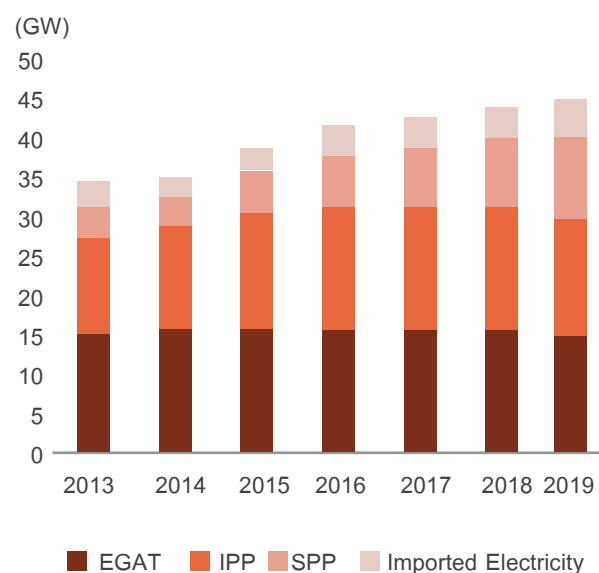
In some cases, private electricity companies may have a transmission system in industrial estates to which they service. The system is usually operated along with the PEA's transmission system located at the same industrial estate. PEA also owns some assets considered an electricity transmission system such as high-voltage transformers and power lines.

Since 2007, the Energy Regulatory Commission (ERC) has supervised the energy sector as an independent regulatory agency where it supervises the energy market, regulates electricity tariffs, provides licensing and conducts dispute settlements. The 7-member commission is entrusted to maintain fairness among consumers, generators and other stakeholders in the energy sector. The ERC's primary function is to control regulations in electricity generation, transmission, distribution and system operator (EGAT).

#### 4.2 Operational Framework of Independent Power Producers (IPPs) and Small Power Producers (SPPs)

To meet rapidly growth demands during the past 20-30 years, Thailand has allowed private operators to participate in the energy business where electricity can be purchased from independent power producers (IPPs), small power producers (SPPs) and very small power producers (VSPPs) as illustrated in Figure 2.

Figure 2: Growth of IPPs and SPPs in Thailand



Source: EPPO

Power purchased from the IPPs in Thailand started in 1994 when 3 IPPs bidding rounds were carried out to award 16.2 GW of generation capacity.

EGAT and the National Energy Policy Council (NEPC) started purchasing electricity from SPPs in 1992 in order to alleviate the power shortage situation, promote the private sector investment in the generation business as well as enhance energy efficiency and alternative energy such as renewable energy and waste heat. In this regard, the private sector was allowed to propose projects with capacity sales up to 90 MW to EGAT which is within the discretion of EGAT to accept on a case-by-case basis. (it has done so in many cases including with most of B.Grimm Power's SPPs) Additional capacity above the threshold can be used internally (inside the fence) or sold to industrial users located next to the SPP plant. The SPP program was successful in attracting investment into the electricity business, balancing the needs of investors, EGAT and the government's policy. Table 1 illustrates types of power producers.

**Table 1: Types of Power Producer  
in Thailand's Power Generation Market**

| Types of Power Producer          | Capacity sold to | Capacity Constraint              |
|----------------------------------|------------------|----------------------------------|
| Independent Power Producer (IPP) | EGAT             | > 90 MW                          |
| Small Power Producer (SPP)       | EGAT             | From 10 MW to no more than 90 MW |
| Very Small Power Producer (VSPP) | PEA and MEA      | Not exceeding 10 MW              |

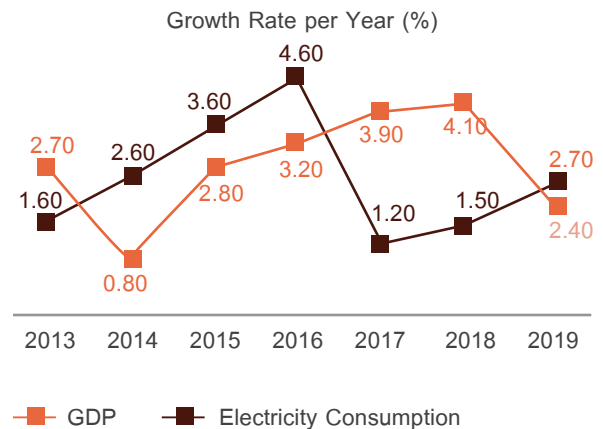
Source: ERC

IPPs and SPPs have signed long-term PPAs with EGAT where EGAT is the sole buyer of electricity from IPPs and a major buyer of electricity of SPPs (the PPA terms are mostly 20 or 25 years).

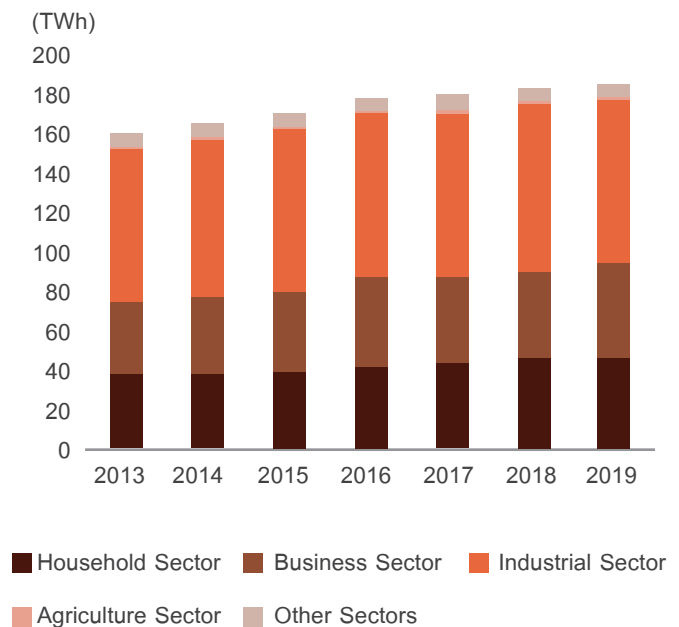
As of 31 December 2019, IPPs and SPPs accounted for 24.4 GW (14.9 GW and 9.5 GW, respectively) of total power generation capacity in the EGAT system (or approximately 54% of total power generation capacity).

### 4.3 Electricity Consumption Trends

Electricity consumption in Thailand has increased at an average of 2.5% per annum as shown in Figure 3 below. The increase in electricity consumption correlates with the country's economic growth, which kept rising since 2014 after the world witnessed an economic slowdown and Thailand suffered from its political situation. In 2019, total final energy consumption rose to 192,956 GWh or a 2.7% year-on-year increase. The industrial sector consumed the highest electricity or 44.6% of the country's total electricity consumption, followed by the commercial and small enterprise sector totalling 25.5% and the household sector totalling 25.5%. Figure 3 and 4 illustrates this information.

**Figure 3: Comparison of Electricity Consumption and the GDP Growth Rates (2013 - 2019)**

Source: EPPO and NESDC

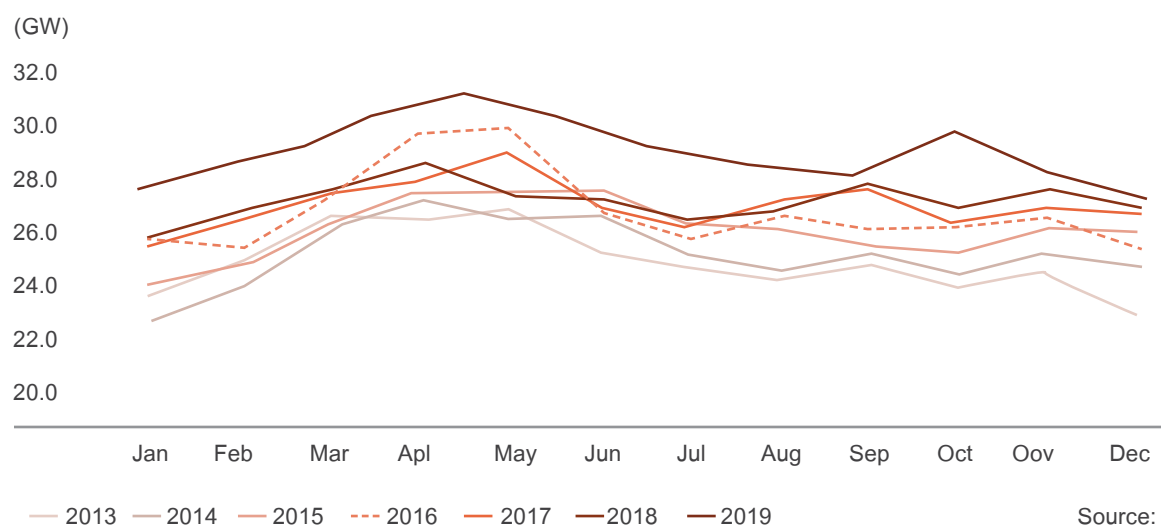
**Figure 4: Thailand's Electricity Consumption (2013 - 2019)**

Source: EPPO

## Peak Demand Trends

Peak demand increased from 16.7 GW in 2002 to 30.9 GW in 2019. Figure 5 indicates that peak demand usually takes places during second quarter of the year either in April or May each year.

**Figure 5: Thailand's Monthly Peak Demand (2013-2019)**



Source: EPPO

## 4.4 Key Principles and Guidelines for the Preparation of the PDP 2018

The PDP 2018 embraces 3 major issues, namely security, economy and ecology.

**Security :** Increase the stability of the country electricity system including generation, transmission and distribution systems to support the national economic and social development plan and manage the proportion of fuel diversification aimed to reduce the overdependence on a particular type of fuel. This is the reason why the country needs to have suitable power plants for energy security in case of energy crisis.

**Economy :** Maintain appropriate costs of electricity to reduce end-user's burden and implement energy efficiency for power generation.

**Ecology :** Reduce CO<sub>2</sub> intensity of power generation, promote micro grid in remote areas and special economic zones, and enhance efficiency in the electricity system.

## 4.5 Forecast of Electricity Demand under the PDP 2018

According to the PDP 2018 as of the end of 2027 and 2037, forecast of electricity demand under the 3 power-

generating agency organisation structure will be around 41,079 MW and 53,997 MW, respectively, while peak demand forecasts will be around 47,065 MW and 61,965 MW, respectively.

These forecasts have implications to the electricity business, especially the timing of the need for new power plants. The downward revisions in the demand forecasts lead to revisions in the timing of new capacity additions, delays in new IPP / SPP bidding rounds and so forth. This places B.Grimm Power that already secured the PPAs in a better position compared to those hoping to enter the market through new bidding rounds.

## 4.6 Forecast of Additional Installed Capacity under the PDP 2018

In 2017, the electricity demand under the 3 power-generating agency organisation structure is 30,303 MW compared to reliable generation capacity approximately 34,538 MW. In 2037, the electricity demand under the 3 power-generating agency organisation structure is 53,997 MW, which is higher than reliable generation capacity of 27,229 MW. The gap demand will keep increasing because more expiring power plants will be decommissioned from their operation.



As a result, there is a need to allocate enough reliable generation capacity to match electricity demands in 2037 on the basis of the following principles:

- Procure the reliable power plant from firm baseload;
- Promote waste-to-energy plant or electricity purchased from overseas power plants;
- Maintain generation from renewable energy and promote energy conservation to comply with the COP21; and
- Introduce economic competition including innovation disruptions such as microgrid system, energy-storage system and prosumers concept.

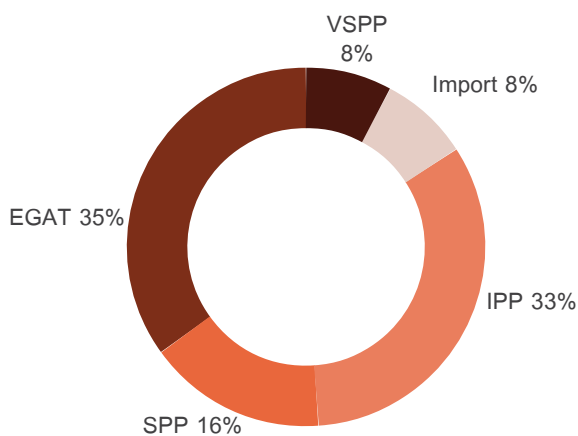
#### 4.7 New Power Generation Capacity from 2018 - 2037 under the PDP 2018

|                                                  |               |           |
|--------------------------------------------------|---------------|-----------|
| Generation capacity as of the end of 2017        | 46,090        | MW        |
| New generation capacity during 2018-2037         | 56,431        | MW        |
| Decommissioning capacity during 2018-2037        | (25,310)      | MW        |
| <b>Generation capacity as of the end of 2037</b> | <b>77,211</b> | <b>MW</b> |

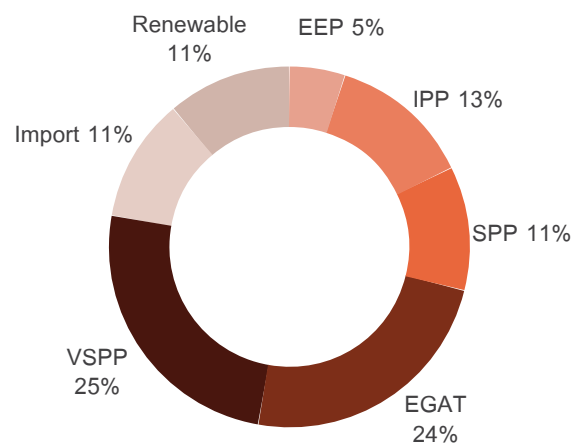
##### New Power Generation Capacity by Fuel during 2018 - 2037:

|                                       |               |           |
|---------------------------------------|---------------|-----------|
| Renewable power plant                 | 20,766        | MW        |
| EGAT pumped-storage hydropower plant  | 500           | MW        |
| Cogeneration power plant              | 2,112         | MW        |
| Combined cycle power plant (EGAT/IPP) | 13,156        | MW        |
| Coal-fired/Lignite (EGAT/IPP)         | 1,740         | MW        |
| Purchase from neighbouring countries  | 5,857         | MW        |
| IPP Bidding (EGAT/IPP)                | 8,300         | MW        |
| Energy Efficiency Plan (EEP)          | 4,000         | MW        |
| <b>Total</b>                          | <b>56,431</b> | <b>MW</b> |

Figure 6: Comparison of Power Generation Categorised by Types of Power Producer under the PDP 2018



46,090 MW capacity as the end of 2017



77,211 MW capacity as the end of 2037

**Figure 7: Comparison of Power Generation Categorised by Fuel Types under the PDP 2018**

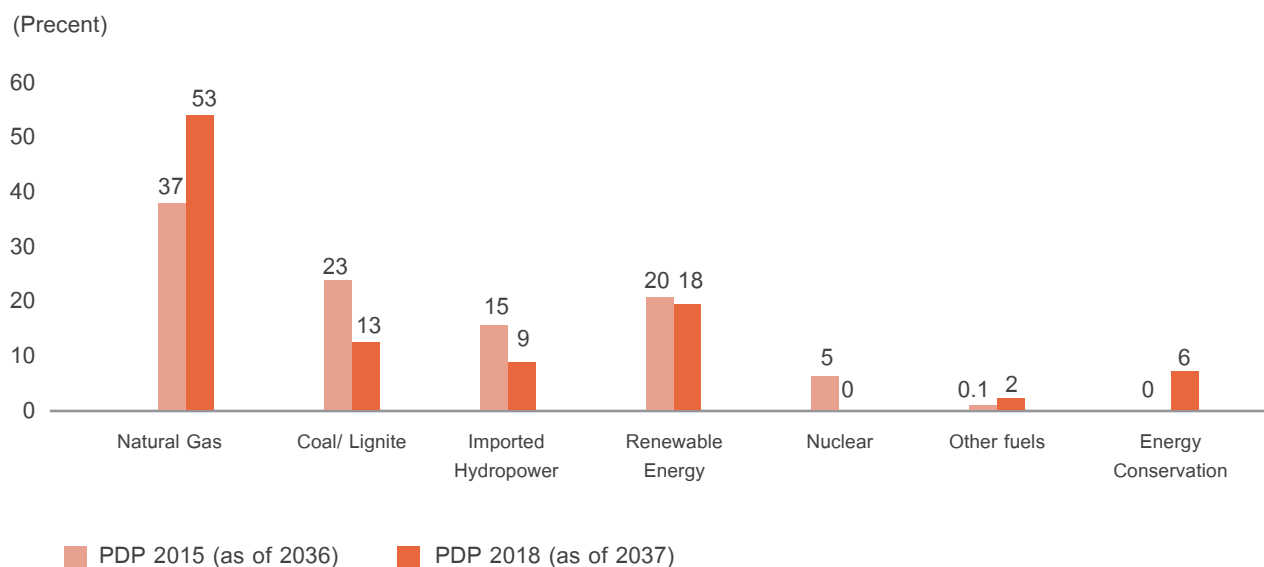
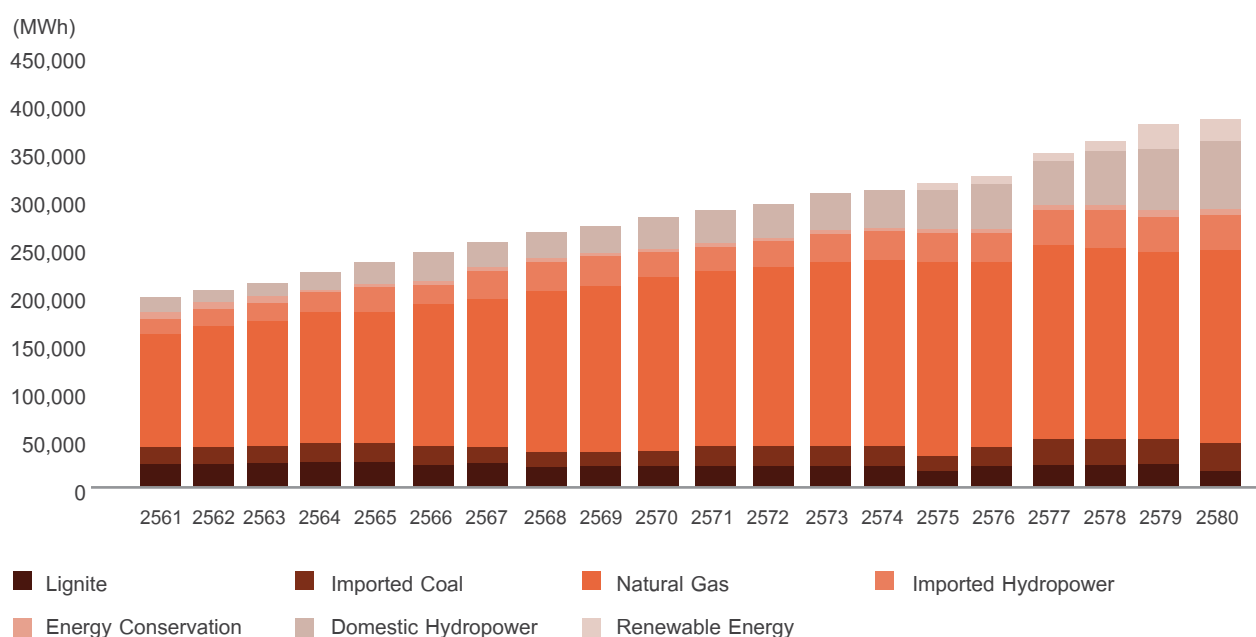


Figure 8 below illustrates the breakdown of the forecast proportion of capacity by fuel types in accordance with the PDP 2018 up to 2037. Total installed capacity in 2019 is estimated to be more than 200 GWh of which 60% of the total capacity will be from natural gas, followed by 22% of the total capacity will be from imported coal and lignite, 8% of the total capacity will be from renewable energy, 7% of the total capacity will be from hydropower from abroad and 3% of the total capacity will be from domestic hydropower.

In 2037, natural gas is expected to increase its share to 53% of total capacity while only 13% of imported coal and lignite will be utilised for power generation. Share of renewable energy other than hydro will reduce to 18% of the total capacity. Hydropower from abroad will decrease to 9% of total capacity and an additional portion from energy efficiency plan (EEP) of 6% of the country's total capacity by 2037.

**Figure 8: Forecast Capacity Mix by Fuel Types under the PDP 2018**



## 4.8 Small Power Producer Overview

### 4.8.1 Value Chain Management and Structure of Business Sector

EGAT and the National Energy Policy Office (NEPO, now known as EPPO) established the SPP program in 1992. The regulations allow SPPs to delivery up to 60 MW for sale to EGAT, although up to 90 MW is within the discretion of EGAT to accept project-by-project. The SPP program was initiated with a desire to promote renewable-energy power plants (such as wind, solar and small hydro), waste-to-energy power plants, biomass, cogeneration power plants using natural gas and petroleum (subject to meet the certain conditions of power generation business). SPPs may sell all or part of capacity to EGAT and additional capacity and steam will be sold to industrial users in the nearby area or to captive customers.

SPPs conditions as following:

- from non-conventional / renewable sources such as wind, biomass, solar, small hydro, waste or by-products from farming and industrial activities; or
- from conventional sources and using cogeneration system of natural gas or petroleum-fired has to fulfil the requirement (such as an overall net efficiency rate<sup>1</sup> must achieve 45% (measured from a low heating value) and at least 10% of the energy output<sup>2</sup> annually must be utilised in thermal application.

**Table 2: Installed and Contracted Capacity of SPPs by Fuel Type (February 2018)**

| <b>Fuel Type</b> | <b>Installed Capacity<br/>(MW)</b> | <b>Contracted Capacity<br/>(MW)</b> |
|------------------|------------------------------------|-------------------------------------|
| Biomass          | 1,075                              | 718                                 |
| Bunker Oil       | -                                  | -                                   |
| Coal             | 851                                | 423                                 |
| Natural Gas      | 9,611                              | 6,332                               |
| Solar            | 589                                | 436                                 |
| Waste            | 180                                | 163                                 |
| Wind             | 1,455                              | 1,421                               |
| Hydro            | 23                                 | 22                                  |
| Others           | 21                                 | 14                                  |
| <b>Total</b>     | <b>13,805</b>                      | <b>9,528</b>                        |

Source: ERC

<sup>1</sup> Overall net efficiency = (power export + heat export - heat import) / fuel consumption (lower heating value) where heat import includes the heat of condensate return and make-up water

<sup>2</sup> Measured from heat-to-power ratio = (heat export - heat import) / power export



For renewable power plant projects, power producers may use fossil fuel up to 25% of the total amount of thermal energy on an annual basis. Generators exceeding this maximum are subject to penalties. Eligible SPP cogeneration power plants will receive the full fuel saving (FS) payment, if the overall thermal efficiency of the plants achieve 45% or higher and at least 10% of the energy output must be used for thermal applications such as process heat or district cooling.

The SPP program benefits for overall economic and energy business, which leads to the formulation of the FS mechanism. Several industrial users using steam and heat for their production and other processes which have to rely on steam distributed by the SPPs since most do not have back up boiler; or if they do, the boiler may not be insufficient to sustain their operations. As a result, cogeneration and the utilisation of waste heat from electricity generation increases the overall energy efficiency.

#### 4.8.2 Power Purchase Framework

Different tariff structures are applied to different types of power producers (IPP, SPP and VSPP). These structures depend on types of contract (firm or non-firm) and energy sources (conventional or renewable). Firm contract means the SPP guarantees availability of electricity supply during the system peak months.

EGAT has defined two types of SPP tariff structures, namely firm and non-firm contracts. Table 3 illustrates SPPs categorised by types of contract.

**Table 3: Installed and Contracted Capacity of SPPs by Contract Type (February 2018)**

| <b>Contract Type</b> | <b>Fuel Type Installed Capacity (MW)</b> | <b>Contracted Capacity (MW)</b> |
|----------------------|------------------------------------------|---------------------------------|
| Firm                 | 10,032                                   | 6,805                           |
| Non - firm           | 3,774                                    | 2,723                           |
| <b>Total</b>         | <b>13,805</b>                            | <b>9,528</b>                    |

Source: ERC

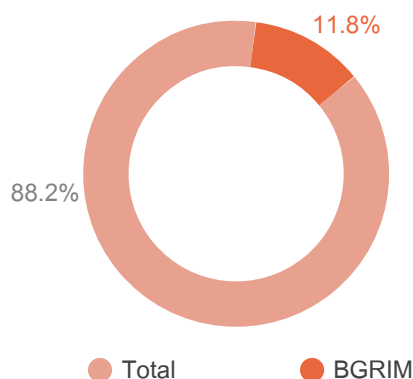
Firm conventional sources SPPs must generate electricity for at least 7,008 hours per year and the power must be generated during the months of March, April, May, June, September and October. EGAT will pay a capacity and a FS payment for firm SPP to cover investment costs and fuel cost.

Firm SPP from conventional sources receive a capacity payment, an energy payment and a fuel savings payment. Firm SPP from renewable sources receive a base tariff and two adder tariffs, consisting of fixed payment or renewable energy promotion, and variable payment vary to each form of renewable as concluded in Table 4 below.

Table 4: Breakdown of Firm SPPs' Tariff Structure

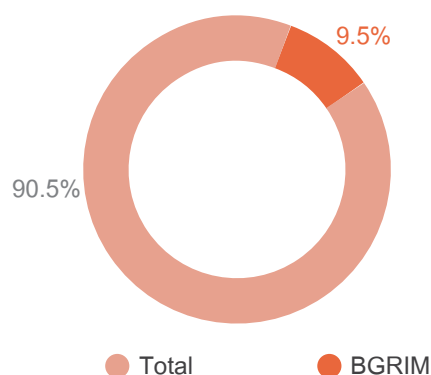
| Component                        | Unit     | Description                                                                                                                                                                                                         |
|----------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capacity Payment (CP)            | Baht/kWh | Fixed payment on capacity available on a monthly basis                                                                                                                                                              |
| Energy Payment (EP)              | Baht/kWh | Variable payment based on energy provided to EGAT; this includes operations and maintenance expenses, fuel expense and other variable charges and is intended to cover costs without providing significant margins. |
| Fuel Saving (FS)                 | Baht/kWh | FS is scaled based on how well SPPs meet the 10% energy saving target.                                                                                                                                              |
| Renewable Energy Promotion (REP) | Baht/kWh | Defined by the government based on technology type                                                                                                                                                                  |
| Adder                            | Baht/kWh | Defined by the government based on technology type                                                                                                                                                                  |

Figure 9 : Proportion of commercially operated SPPs (March 2019)



Source: ERC

Figure 10 : Proportion of Equity Capacity Compared to Installed Capacity of commercially operated SPPs (March 2019)



Source: ERC

## 5. Market Overview in Vietnam

### 5.1 Power Business in Vietnam

Vietnam is one among countries with the highest economic growth rate in Asia. Its GDP growth increased as high as 6-7% during the past 5 years, which leads to a significant increase of demands for electricity and power in Vietnam.

In 2016, the Vietnamese government announced the revised Power Development Plan 7 (PDP 7 Revised) aimed to establish power security, increase power efficiency, develop renewable energy and liberalise Vietnamese energy market. At present, Vietnam's power business is under a reform to become a competitive wholesale market. The PDP 7 Revised contains details as follows:

- Expand domestic capacity by increasing domestic generation and import to accommodate the economic growth on the basis of the 7% GDP growth rate between 2016 - 2030;
- Increase share of renewable energy to 7% by 2020 (from 4.5% in the PDP 7) and more than 10% by 2030 (from 6% in the PDP 7);
- Increase and develop flexibility to the national transmission system; enhance the automatic control system in order to increase efficiency in national electricity grid and transmission; and
- Speed up the development of electricity distribution to rural areas so that most of Vietnamese will be able to access to electricity by 2020.

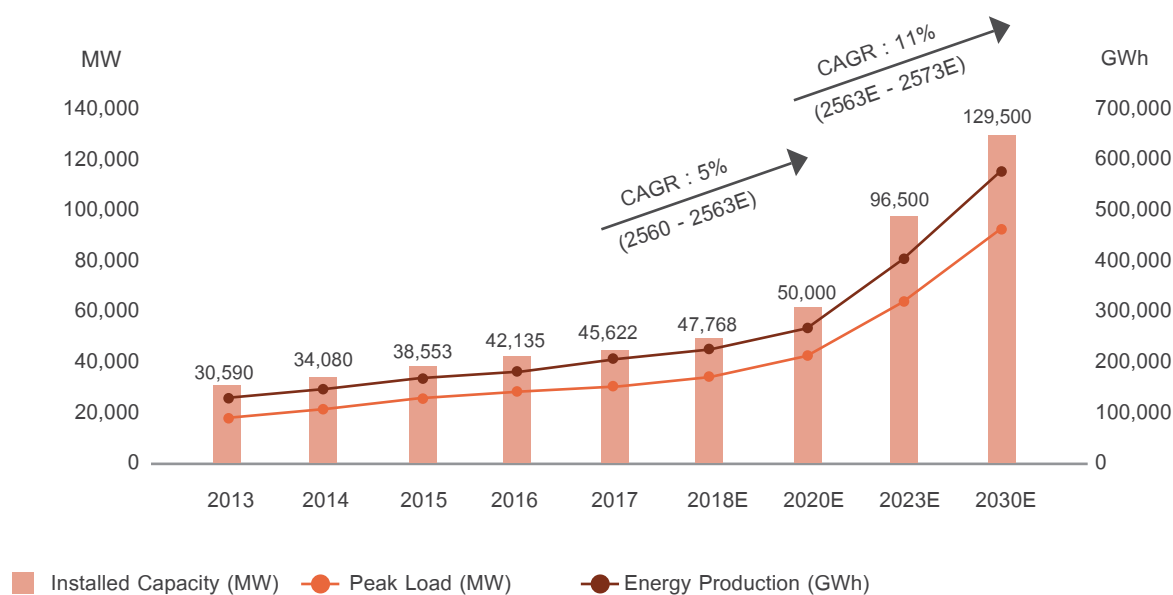
## 5.2 Electricity Consumption Trends and Peak Demand Projection

For the overall electricity consumption trends in 2019, Vietnam had a 4,600 MW solar power plant and EVN utilised a 2,000 MW of diesel-fired power plant to adjust a balance of the national grid.

It has been projected that during 2020–2022, there will be a shortage of electricity due to delay in the construction of a 20,000 MW power plant project, allowing the Vietnamese government to offer more opportunities to the private sector and foreign investors.

Vietnam's peak demand was recorded at 35,100 MW in November 2019, an increase from 34,462 MW a year earlier (representing 2% increase or 638 MW). Power substations of 220 kV and 500 kV and transmission lines were constructed to accommodate growth of all types of power plants. To accommodate the demand, Vietnam needs to continue increasing its installed capacity. During the first 10 months of 2019, its aggregate installed capacity was 200,977 GWh, an increase of 10% compared to the same period of 2018, making it the second largest power producer among the ASEAN countries and the twenty-third in the world. While Vietnam's PDP 7 Revised has developed a plan to increase the installed capacity to 60,000 MW in 2020 and 129,500 MW in 2030 to accommodate the country's economic growth, especially the demands for electricity from industrial, construction and transportation sectors.

Figure 11 : Power Generation Capacity Forecast



Source: Power Development Plan VII  
Revised (PDP 7 Revised)



At present, Vietnam mainly depends on hydropower and coal, which account for 40% and 38% of the total capacity, respectively, followed by natural gas and petroleum of 19% while renewable energy's share is less than 1%. Under the PDP 7 Revised, the country plans to increase the share of renewable energy in its total capacity to more than 21% by 2030 where it will focus at power generated from solar, wind and biomass.

### 5.3 Renewable Energy Policy

Under its PDP 7 Revised, Vietnam prioritises power development from renewable energy since the country has high potential for develop renewable energy by cause of its geographical location along the equator and its proximity to the sea along the eastern coast. This is translated into a potential to generate as much as 843,000 GWh per year of solar power as well as wind power plants with total installed capacity of 21,520 MW. Vietnam plans to generate 12,000 MW of total installed capacity from solar power plants, another 6,000 MW from wind power plants and 3,281 MW from biomass power plants by 2030.

During the past two years, Vietnam adjusted the Feed-in-Tariffs (FiT) applicable to renewable energy under long-term PPAs signed with Electricity of Vietnam (EVN) in order to depend less on fossil fuels. Types of renewable energy and FiT that attract investors' interest are as follows:

|                       | FiT (USD cents/kWh) | Remarks              |
|-----------------------|---------------------|----------------------|
| Solar energy          | 9.35                | COD by June 2019     |
| Wind energy           |                     | COD by November 2021 |
| - Wind On-shore       | 8.5                 |                      |
| - Wind Off-shore      | 9.8                 |                      |
| Biomass energy        | 5.5                 |                      |
| Floating solar energy | 7.69                |                      |
| Solar energy          | 7.09                | COD by June 2019     |

## 6. Market Overview in Lao PDR

### 6.1 Power Business in Lao PDR

Lao PDR's policy is to become the Battery of Asia to serve energy to the ASEAN region. At present, most electricity comes from hydropower plants and more than 60% of generated power is exported to its neighbouring countries.

Based on the data of Lao PDR's power generation projects as of the end of 2019, Lao PDR had 75 power generation projects with an aggregate installed capacity approximately 10,000 MW. This consisted of 67 hydropower plants, 1 coal-fired power plant, 2 renewable power plants and 5 solar power plants.

Domestic power distribution and power distribution to the neighbouring countries can be elaborated as follows:

(1) Domestic power distribution

- There were 65 power plants that generated and distributed domestic power with an aggregate installed capacity of 3,565 MW, owned by Electricite Du Laos, (EDL) and private investors.
- In 2019, there was power consumption of 1,222 MW, an increase of 20% from 2018 and tended to continuously increase in the future. However, as most power plants in Lao PDR were run-of-river hydropower plants, the electricity generated during the rainy season exceeded the need for domestic consumption. This excess can be sold to the neighbouring countries. However, in summer, the electricity might be imported from the neighbouring countries as well since the amount of water was inadequate for power generation according to the highly increasing needs.

(2) Power distribution for foreign sale

At present, Lao PDR has a total of 10 overseas power plant projects with an aggregate installed capacity of approximately 6,300 MW. The MOUs for the purchase and sale of electricity of 16,800 MW have been signed, dividing into countries as follows:

- 2.1 Thailand : Approximately 5,700 MW has been sold to Thailand and around 600 MW under PPAs is under construction. Approximately 2,700 MW is to be purchased according to MOU. It has been expected that 9,000 MW will be sold by 2030.
- 2.2 Vietnam : With an MOU of 5,000 MW, over 300 MW has currently been sold and it has been expected that 1,000 MW, 3,000 MW and 5,000 MW will be sold in 2020, 2025 and 2030, respectively.
- 2.3 Malaysia : 100 MW has been sold and 300 MW has been expected to be sold in 2020 through transmission lines in Thailand.
- 2.4 Cambodia : With an MOU of 2,400 MW, 200 MW has been currently sold and it has been expected that 300 MW and 2,400 MW will be sold in 2021 and 2024, respectively.
- 2.5 Myanmar : 5 MW has been currently been sold and 100 MW has been expected to be sold in 2021.

In the next 10 years, Lao PDR will have to construct a number of power plants totalling 7,000 MW for exporting electricity to its neighbouring and foreign countries according to the MOUs as well as for domestic



consumption, especially hydropower dams to generate electricity exploiting from its geographic advantage. The Lao PDR's government policy to attract foreign investment has successfully increased the number of IPPs investing in the power business and collaboration between local and international private sectors.

## 6.2 Electricity Consumption Trends and Peak Demand Projection

The study on "Electricity Demand and Supply Forecast of Lao PDR, 2026-2030", which was conducted by the Department of Energy Policy and Planning, the Ministry of Energy and Mines in collaboration with EDL in February 2016, was considered based on economic and social growth, population growth and implementation of activities according to the Lao PDR's government policy.

The study shows that peak demands for electricity all over the country from 2016 to 2030 continue to increase, with an annual rate of 12%, which is equivalent to 322 MW per year. During 2016-2020, an average increase is projected to be 20% or 343 MW per year. In 2019, national peak demand was 30% higher than 2018, especially in the northern part and around Vientiane where peak demands were higher than the south-middle part and the southern part.

In the future, electricity demands in the southern part of Lao PDR are projected to increase due to the electricity demands in Cambodia and Vietnam as well as the development of areas. Lao PDR has also planned to construct a 500 kV backbone transmission system and electricity transmission stations to connect the country's whole system by 2022, thereby making the purchase-sale and transmission of electricity for domestic consumption and neighbouring countries in a more effective manner.

## 6.3 Renewable Energy Policy

Lao PDR witnessed a rapid growth in the development of power generation facilities, which correlated with the significant increase of domestic demands and the wholesaling of electricity to its neighbouring countries. In addition, the Lao PDR's government encouraged the private sector to invest in the energy sector, which was reflected by its installed capacity nationwide in 2010 which increased from 2,547 MW to 5,806 MW in 2016. In 2019, the Lao PDR's government, in collaboration with EDL, also encouraged people to use EV cars and install charging stations to promote sustainable energy consumption and reduce pollution to the world environment.

From the electricity capacity development of Lao PDR during 2016-2025, the Lao PDR's government still promotes hydropower generation in particular and supports the electricity system from other types of power plants to increase stability of the system by establishing a policy to increase the share in renewable energy (such as wind, solar and biomass) by 30% of the total electricity generated in the country.





## Risk Factors

B.Grimm Power Public Company Limited realises the importance of risk management as a tool and guidelines for business operations to achieve objectives and goals efficiently and effectively in such a way that impacts and damages arising from risks can be reduced; and risk management can be implemented to create current and future business opportunities.

The Company has established risk management practices under the COSO Enterprise Risk Management Framework (COSO ERM) as well as assessment of environmental, social and governance (ESG) risks as guidelines for managing risks that may affect the achievement of its objectives and goals. The Company ensures that risk management and assessment embrace corporate risk, business unit risk and functional risk, which are regularly reviewed and monitored, in all business processes.

The Risk Management Committee has duties to develop a risk management policy, oversee compliance based on the risk management policy and guidelines in an efficient manner, foster a risk management culture throughout the

organisation, and report risk management performance to the Management Committee. The Audit Committee and the Board of Directors, respectively.

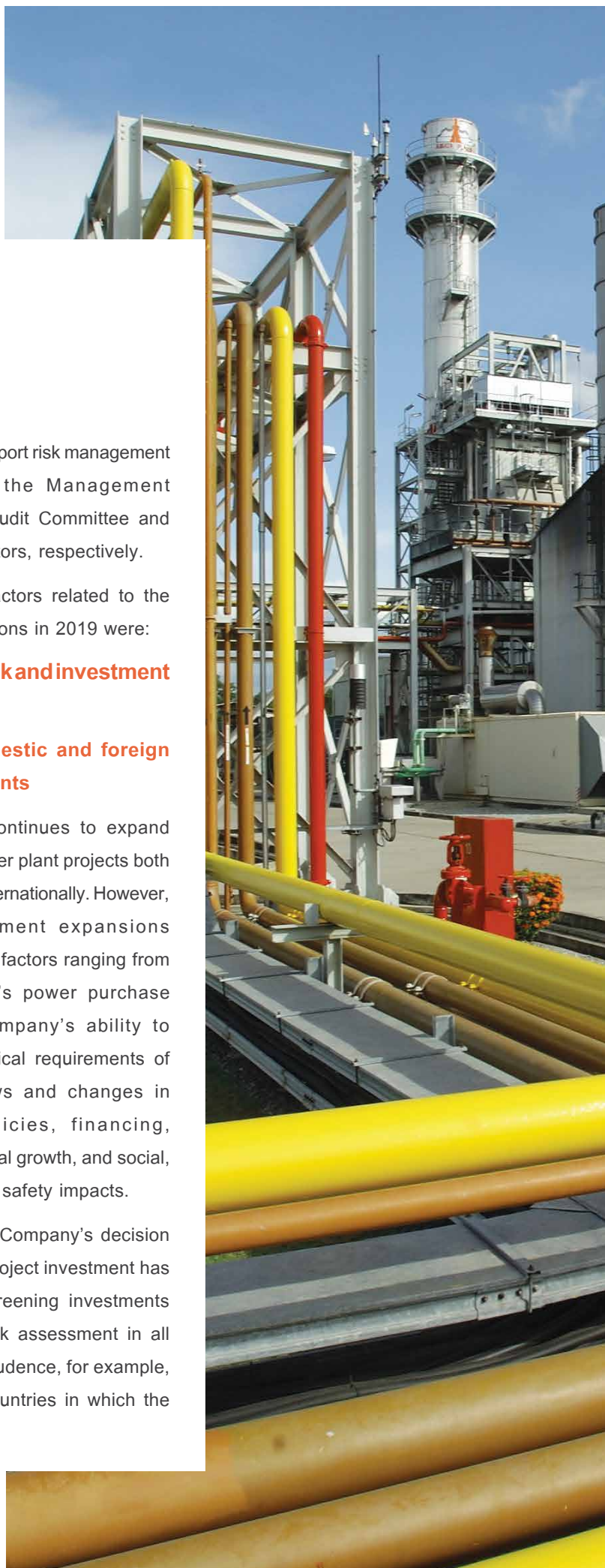
Critical risk factors related to the Company's operations in 2019 were:

### 1. Strategic risk and investment risk

#### 1.1 Risk of domestic and foreign project investments

The Group continues to expand investments in power plant projects both domestically and internationally. However, business investment expansions depend on various factors ranging from the public sector's power purchase policy to the Company's ability to comply with technical requirements of each project, laws and changes in government policies, financing, competition, industrial growth, and social, environmental and safety impacts.

However, the Company's decision to engage in any project investment has been made by screening investments and conducting risk assessment in all dimensions with prudence, for example, reliability of the countries in which the





Company will invest, economic, social and political environment, technical risk, financial risk, and legal aspects, an analysis of changing environmental factors as well as return on investment. Consideration of foreign investment must come with partners and consultants which have strong capability and expertise in the field in a particular country. This is meant to ensure adequate protection against risks and provide returns appropriate to the risk level of that project before proposing to senior management members who have long-standing expertise and experience in the industry and presenting the proposition to the Board of Directors for consideration.

## **1.2 Risk of changes in policies of the government and agencies related to energy and electricity business**

The Group has developed plans to expand investments in energy and electricity business in a continuous manner, both domestically and internationally. If there are changes in policies of the government and / or other relevant agencies such as a national power generation capacity development plan, a renewable and alternative energy development plan, and a national energy reform plan, these may affect the operations and future business plans as well.

However, the Group has personnel and staff with experience and knowledge of energy and electricity business to catch up with news and information of government sector and other relevant agencies to study such information and evaluate the situation in determining the Company's operational guidelines as well as future business plans.



## 2. Operational risk

### 2.1 Risks of the under construction and development projects

The Company has 16 projects under construction and development. The Company has recognised the importance of risks from the construction of projects that have not been completed within the specified timeframe, probably due to delays of contractors in the construction and installation of machinery, natural disasters, engineering technical problems as well as some problems and constraints that may occur during the construction arising from internal and external factors, thereby resulting in the inability to operate power plants as specified in the PPAs.

The Company has put in place a systematic and effective project management plan and system with guidelines and measures for supervising the construction to be completed as planned and within budget. This includes selecting the contractors with high standards and expertise, drafting concise contracts, utilising high-quality tools and equipment, delivering goods on time, managing operational costs, communicating and enhance understanding with surrounding communities and societies, ensuring compliance with laws and rules and taking out insurance to cover potential damage during the construction period. The management has also appointed a project management committee to supervise and monitor construction progress and budget disbursement regularly and continuously so as to ensure that power plant constructions can proceed according to the defined plan and budget.

In 2019, the Company had 4 power plant projects completed according to the plan and commercially operated, namely Nam Che 1 hydro power plant project in Lao PDR., DT 1&2 solar power plant projects and Phu Yen TTP solar power plant project in Vietnam and Progress Interchem industrial-waste-to-energy power plant project in Ratchaburi Province, and 16 projects under construction and development, namely Bo Thong wind farm at Mukdaharn province (2 projects), Sisophon farm project in Cambodia,

2 combined cycle power plant projects in Thailand, 6 hydro power plant projects in Lao PDR. and 5 SPP replacement projects in Thailand. From close management of project construction, it has been expected that the projects will be completed within the specified timeframe.

### 2.2 Risks of the efficiency of operating power plants

The Group's power generation process must be supervised to ensure efficiency and stability of power plants. Maintenance and improvement of machinery must be implemented to reduce impacts arising from halted machinery or power generators which may cause power generation capacity to be lower than the projected level or the heat rate to be higher than that specified in the PPAs, resulting in higher production costs.

With more than 20 years of experience in power plant business, the Company has planned for its human resource management to ensure employees with skills and expertise, formation of partners that are knowledgeable and expert in machinery and technology as well as systematic supply management for maintenance to ensure that all power plants are regularly maintained and machines are improved, by implementing strategies and measures for preventing possible risks as follows:

2.2.1 Development of power plant staff to have knowledge in overseeing and controlling machines since the construction of power plants about 6-12 months prior to the commencement of operation as well as the development and enhancement of skills, knowledge, and capabilities of related parties in a continuous manner.

2.2.2 Grouping of multiple power plants within the same industrial estate to optimise efficiency in the plant operation and to allow switching load in case of disturbance caused by machine failure.

2.2.3 Engagement of specialised technicians for machinery maintenance through long-term service agreements with equipment manufacturers, which will be supervised by the Company's in-house O&M team.



2.2.4 B.Grimm Power Service acts as a central body to coordinate and schedule maintenance timetables as well as manage maintenance supply of each power plant as required by manufacturers to complete maintenance in the shortest time possible.

2.2.5 Insurance for protection of damages to machines, equipment and assets of power plants as well as ceasing of operation and income loss.

### **2.3 Risks of dependence on PTT's delivery and transportation of primary fuel**

The Group, which operates combined cycle power plant business, uses natural gas as the primary fuel to generate electricity and steam. The Group purchases all natural gas solely from PTT Public Company Limited (PTT) and therefore could be exposed to risk incurred from PTT's inability to deliver and transport natural gas for the Group, which could disrupt combined cycle power plants from generating electricity and steam in accordance with the PPAs.

The Group has specified the required quantity of natural gas supplied and delivered by PTT in the natural gas supply agreement. The Group also collaborates with PTT to identify the natural gas supply consumed by the Group each year. PTT is duty-obligated to supply natural gas in accordance with the agreement and to partially compensate the Group in case of the Company's revenue loss. However, the Group has explored opportunities to develop and improve power plants using other alternative fuels such as Liquefied Natural Gas (LNG), solar, hydro and wind energy to reduce sole dependence on PTT's natural gas.

### **2.4 Risks of dependence on electricity purchase from EGAT**

As Thailand's largest electricity generator controlling Thailand's entire system of electricity transmission, EGAT, a state-owned enterprise, is the Company's largest customer. The Group's major revenue comes from sales of electricity to EGAT, whereby the Group must comply with the obligations under the PPAs.

So far, the Group has complied with the obligations under the PPAs made with EGAT. The Operation Control Department acts as a central body to supervise, coordinate and submit operation results of power plants, power distribution, maintenance plans and plans to prevent problems arising from the operations.

### **2.5 Risks of fuel price fluctuations**

Natural gas is the primary fuel for the Group's combined cycle power plants. The price of natural gas may rise during certain periods. If the Group is unable to adjust the electricity price, the Group's profit margin might be impacted during certain periods where the price of natural gas soars.

Under the PPAs, The Group will fix the electricity price based on the price of natural gas as follows: 1) under the PPAs signed with EGAT, natural gas cost could be used to determine the price of electricity sold to EGAT based on the formula stated in the agreements; and 2) under the PPAs signed with industrial users in Thailand, the Group sells electricity at the rates based on the retail electricity tariff charged by the PEA as specified in the PPAs.

### **2.6 Safety, occupational health and environment risk**

The Group continues to put priority on the management and operation of Occupational Health, Safety and Environment (OHSE) by taking into account the quality of life and safety of employees and surrounding communities to ensure effective and stable operations and to conduct business with responsibility towards related stakeholders.

The Company has implemented a policy that requires power plants to develop a standardised operation system. In this regard, the internationally-recognised management system is introduced to manage occupational health and safety, environment and continuity as well as supervise and measure the environment to reduce impacts arising from the operations. The Group has a policy and supervision of safety, occupational health and environment in place by using clean technology and develop and improve machinery

efficiency to reduce environmental impacts in a continuous manner as well as overseeing and controlling environmental quality management and waste disposal in compliance with relevant laws, rules and regulations. The Group has also raised awareness of safety, occupational health and environment for employees, community and society continuously.

## 2.7 Risks of loss of the Group's key senior executives or employees

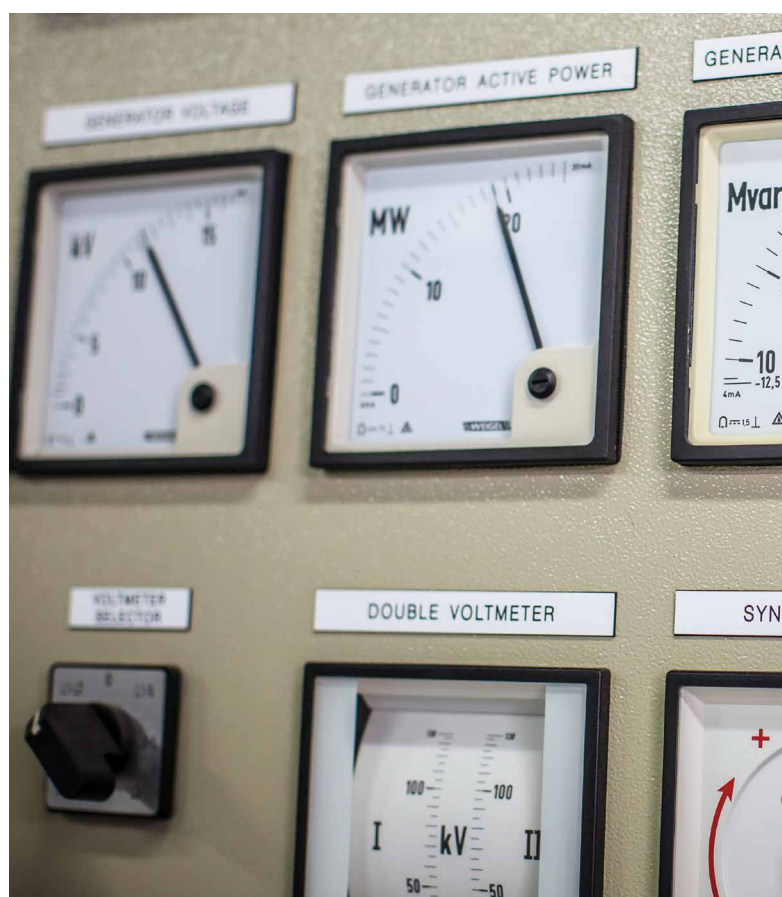
The Group has placed importance on personnel as its most valuable resource and success factor. Key senior executives and employees are all knowledgeable, competent, expert in specific areas and highly experienced, beneficial to the business development and operation and continuous success. Therefore, if the Company loses such personnel, it may deteriorate business continuity and efficiency in operations.

The Group has therefore put priority on human resource management with an aim to induce, develop and retain personnel with qualifications according to the Individual Development Plans and attitudes based on its core values of 4Ps, namely Positivity, Professionalism, Partnership and Pioneering Spirit. In addition, the Company has a plan to recruit personnel with ability to succeed positions, enhance knowledge and capability of employees to prepare for succession to senior executive positions as well as ensure compensation and benefits which are appropriate and competitive in the same type of business market by taking into account knowledge, competence and experience appropriate for such position to ensure alignment with personnel function and business expansion of the Group in the future in a continuous and stable manner.

## 3. Financial risk

### 3.1 Foreign exchange risk

The Group has made loans in USD and purchased machinery for power plant projects using foreign currencies. Its partial revenue is in foreign currencies such as USD,

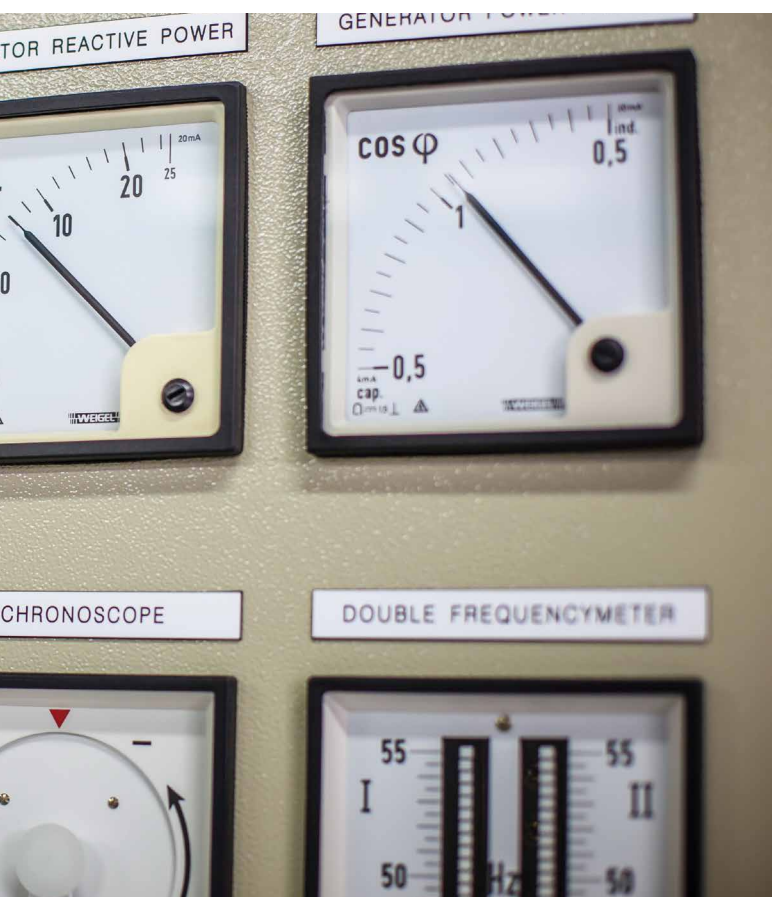


Lao Kip and Vietnam Dong or Dollar-linked Thai Baht. The Group therefore could be exposed to the foreign exchange risk.

However, the Group has put in place strategies to manage the risk by natural hedging where the ratio of loans taken by a project company in USD is aligned with incomes earned in the same currency, which naturally restricts the exchange rate risk of commercially operational projects; and using derivatives such as forward contract to hedge against the exchange rate risk associated with the import of machinery for power plant projects under construction.

### 3.2 Interest rate volatility risk

Developing a power plant is very capital intensive. The majority of the Company's funding is financed by bank loans using London Interbank Offered Rate (LIBOR), Minimum Lending Rate (MLR) or Thai Baht Interest Rate Fixing (THBFIX). Through the Company's policy to manage



and hedge against the interest rate risk, the Company regularly monitors interest rate changes, manages funding costs and chooses the right financial instrument such as issuing derivatives or debentures. The goal is to convert floating rate loans to fixed rate ones to reduce risk associated with interest rate fluctuation.

### 3.3 Risk of high debt-to-equity ratio

The Company's investment expansion in power plant projects is funded by capital market to construct power plants. Most investments are project finance with project assets as collateral. If the Company has net debt ratio higher than equity, this may affect the equity and financial stability and overall capital structure of the Group.

The Group has developed a financial plan and adopted financial instruments to ensure efficiency. The Company's most net debt is debt of corporate level or its subsidiaries

which are majority shareholders and have the controlling power. Therefore, the consolidated financial statements are prepared whereby assets and debts of its subsidiaries are gathered. Project-level debts are project finance with limited recourse. The Group has maintained net debt to equity at a proper level. Moreover, over the years, the Company has strictly complied with financial conditions and other relevant requirements and does not experience any problems of liquidity or late payments.

## 4. Risk of legal and regulatory compliance

### 4.1 Risks on government policies and compliance with relevant laws, rules and regulations

The Group's business operation will be regulated by relevant authorities, while conducting business domestically and internationally. Any changes in government policies, relevant laws, rules and regulations may affect the competitiveness and compliance, thereby exposing the Group to risks and affecting the operation and confidence in the Group.

The Group recognises and emphasises the importance of legal and regulatory compliance in various aspects. The Company has closely and constantly monitored to consider impacts and practice guidelines for compliance with laws that may change and are enforceable. Nevertheless, the Company has engaged legal counsels with knowledge and expertise, both in Thailand and abroad, to ensure that the Group has strictly complied with relevant laws, rules and regulations applicable in countries where the Group operates in a correct manner.

## 5. New emerging risks

### 5.1 Technological change risk

Due to fast-changing energy technological developments such as Renewable Energy System, Energy Storage System, Micro Grid System, Peer to peer System and Distributed Generation. Such technology and innovation will increasingly play a role in electricity power business and



may undermine future business competitiveness. Meanwhile, such technological change may create opportunities for the Company. The Company has therefore conducted a study and kept abreast with changing directions of energy technology continuously, developed relationships with business partners who are leaders and experts in technology and energy innovation as well as built and developed internal knowledge, thereby enabling the Company to adapt to technological changes and maintain its energy business leadership in the long run.

## 5.2 Climate change risk

The Group is expanding investment in alternative energy power plant projects such as solar and hydro power plants. The projects however may be affected from climate change, for example, from the sun's intensity, changing weather patterns, long-lasting draught or erratic rainfalls that could disrupt supply and speed of water flow required in electricity generation. This could in turn disrupt the generating capacity and efficiency and thereby affect its sales revenue.

However, before investing in renewable energy projects, the Company conducts a detailed study of past statistics and future probability of disruptive events mentioned earlier. This includes, for example, a study of past statistics and future trends of solar irradiance in an area where the solar power plant will be built or river flow where a hydro power plant will be located. The Company has closely monitored incidents from climate change which will affect its operations. The Group has developed a risk management plan and a business continuity management plan to reduce impacts and optimise operational efficiency. Moreover, the Group has a policy to develop and improve efficiency by

using clean technology for efficient use of natural resources and reduction of environmental impacts. The Group also has a policy to expand investments in renewable energy to reduce greenhouse gas emissions which is 30% of the total production capacity.

## 5.3 Cyber security risk

Information technology management has increasingly played a vital role in business operations. The information technology system is therefore a critical infrastructure used to manage tasks and enhance business efficiency. If the Company lacks good management in the maintenance of important information and has no sound information technology protection system, the Company may be exposed to cyber security risk, which can lead to information leakage and causing damage to the operations.

Therefore, the Company has established policies and measures to prevent the leakage of important information and developed an information security system based on the ISO / IEC 27001 international standards. The Company has conducted risk assessment and developed an information security management plan, organised trainings for employees related to the information technology management system, prepared and conducted drills for the prevention, surveillance and management of potential impacts arising from cyberattacks, and enhanced awareness and understanding of employees in preventing and taking precaution when sending and receiving important information that is prone to leakage continuously. So far, neither incidents nor impacts from cyber threats have been found.

## General Information

|                                                    |                                                                                                                                                                                                                           |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>                                        | B.Grimm Power Public Company Limited                                                                                                                                                                                      |
| <b>Stock Symbol</b>                                | BGRIM                                                                                                                                                                                                                     |
| <b>Establishment Date</b>                          | 26 July 1993                                                                                                                                                                                                              |
| <b>Registration Date as Public Company Limited</b> | 9 September 2016                                                                                                                                                                                                          |
| <b>First Trade Date</b>                            | 19 July 2017                                                                                                                                                                                                              |
| <b>Corporate Registration Number</b>               | 0107559000427                                                                                                                                                                                                             |
| <b>Registered Capital</b>                          | As of 31 December 2019, B.Grimm Power had a total registered capital of Baht 5,400,000,000 and paid-up capital of Baht 5,213,800,000 which consisted of 2,606,900,000 ordinary shares at a par value of Baht 2 per share. |
| <b>Type of Business</b>                            | A holding company holding shares in other companies, of which core business is generation and sale of electricity and steam and other related businesses in Thailand and other countries.                                 |
| <b>Business Sector</b>                             | Energy and utilities                                                                                                                                                                                                      |
| <b>Industry Group</b>                              | Resources                                                                                                                                                                                                                 |
| <b>Number of Employees</b>                         | 962 employees as of 31 December 2019                                                                                                                                                                                      |
| <b>Website</b>                                     | <a href="http://www.bgrimmpower.com/">http://www.bgrimmpower.com/</a>                                                                                                                                                     |
| <b>Contact Information</b>                         | Investor Relations Division<br>Tel: +66 (0) 2710 3528<br>Fax: +66 (0) 2379 4258<br>Email: <a href="mailto:ir@bgrimmpower.com">ir@bgrimmpower.com</a>                                                                      |
| <b>Company Secretary</b>                           | Tel: +66 (0) 2710 3162<br>Fax: +66 (0) 2379 4277<br>Email: <a href="mailto:companysecretary@bgrimmpower.com">companysecretary@bgrimmpower.com</a>                                                                         |
| <b>Head Office</b>                                 | 5 Krunghtheprakreetha Road, Huamark, Bangkok, Bangkok 10240                                                                                                                                                               |

## Referral Parties

### Securities Registrar

Thailand Securities Depository Co., Ltd. (TSD)  
The Stock Exchange of Thailand Building (Next to the Embassy of China)  
93 Ratchadaphisek Road, Din Daeng, Bangkok 10400  
Tel: +66 (0) 2009 9999  
Fax: +66 (0) 2009 9991

### Debenture Holders' Representative (Debentures of B.Grimm Power Public Company Limited, Amata B.Grimm Power SPV1 Ltd., B.Grimm BIP Power 1 Ltd., B.Grimm BIP Power 2 Ltd., and Subordinated Perpetual Debentures)

Bank of Ayudhya Public Company Limited  
17<sup>th</sup> Floor, 1222 Rama III Road, Bang Phongphang,  
Yannawa, Bangkok 10120  
Tel: +66 (0) 2296 3582  
Fax: +66 (0) 2683 1298

### Auditor

Mr. Kajornkiet Aroonpirodkul  
CPA License No. 3445  
PricewaterhouseCoopers ABAS Limited  
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

## Other Significant Information

The utilisation of funds raised by the offering of subordinated perpetual debentures no.1/2019 totalling Bath 8,000 million.

| Purposes of Utilisation of Funds                                                                                                | Approximate Amount of Funds Utilised (Million Baht) | Approximate Utilisation Period                       | Details                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To serve as a funding source of the Company and / or affiliates for current and future projects                              | 5,500 - 6,000                                       | Within 1-3 years from the issuing date of debentures | To accommodate growth of the debenture issuer and affiliates for current and future projects, both in the form of equity and inter company loan                                                                           |
| 2. To be used for capital structure adjustment of the Company and / or affiliates e.g. lending among affiliates, debt repayment | 1,500 - 2,000                                       | Within 1-3 years from the issuing date of debentures | To repay debt owed to other financial institutions and / or other parties who have no relationship with the debenture issuer as financial advisors or joint lead arrangers to the utmost benefits of the debenture issuer |
| 3. To be used for normal operations and other cases                                                                             | 500                                                 | Within 1-3 years from the issuing date of debentures | For normal operations of the debenture issuer and affiliates                                                                                                                                                              |



## Description of Securities and Shareholders

### Registered and Paid-up Capital

B.Grimm Power Public Company Limited is listed in the Stock Exchange of Thailand (SET) with a total registered and paid-up capital of Baht 5,213,800,000 as of 31 December 2019 comprising 2,606,900,000 ordinary shares at a par value of Baht 2 per share.

### Major Shareholders

Top ten shareholders as of 30 December 2019, the book closing date, were as follows:

| Major Shareholders                                    | Number of<br>Shares Held | %            |
|-------------------------------------------------------|--------------------------|--------------|
| 1. B.Grimm Power (Singapore) Pte.Ltd. <sup>1</sup>    | 886,002,000              | 33.99        |
| 2. Mr. Harald Link                                    | 635,399,700              | 24.37        |
| 3. B.Grimm Joint Venture Holding Limited <sup>2</sup> | 235,997,750              | 9.05         |
| 4. ASIAN DEVELOPMENT BANK                             | 123,000,000              | 4.72         |
| 5. Thai NVDR Company Limited                          | 92,968,597               | 3.57         |
| 6. Bualuang Long-Term Equity Fund                     | 31,914,100               | 1.22         |
| 7. Ms. Caroline Monique Marie Christine Link          | 28,350,000               | 1.09         |
| 8. SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED       | 28,138,501               | 1.08         |
| 9. Muang Thai Life Assurance Public Company Limited   | 20,315,300               | 0.78         |
| 10. Thai Life Insurance Public Company Limited        | 19,413,300               | 0.75         |
| <b>Total</b>                                          | <b>2,101,499,248</b>     | <b>80.61</b> |

<sup>1</sup> A limited company incorporated under the Singapore law, in which Mr. Harald Link and Ms. Caroline Monique Marie Christine Link are beneficiaries.

<sup>2</sup> A limited company incorporated under the Thai law, of which the shares are directly and indirectly held by Mr. Harald Link.

## Issuance of Other Securities

B.Grimm Power Public Company Limited issued and offered subordinated perpetual debentures totalling Baht 8,000 million through the Public Offering in (institutions and / or public), with Bank of Ayudhya Public Company Limited as the debenture holders' representative. Details are as follows.

| Debentures   | Issue Size<br>(Million Baht) | Maturity Date | Interest Rate<br>(% P.a.)                                                                                                                                                                                                                                                                                                                          | Latest<br>Credit<br>Rating <sup>1</sup> |
|--------------|------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| BGRIM19PA    | 8,000                        | Perpetual     | 1 <sup>st</sup> - 5 <sup>th</sup> year at 5.00%<br>6 <sup>th</sup> - 25 <sup>th</sup> year equivalent to 5-year<br>government bond yield+3.61%+0.25%<br>26 <sup>th</sup> - 50 <sup>th</sup> year equivalent to 5-year<br>government bond yield+3.61%+1.00%<br>From 51 <sup>st</sup> year equivalent to 5-year<br>government bond yield+3.61%+2.00% | BBB+                                    |
| <b>Total</b> | <b>8,000</b>                 |               |                                                                                                                                                                                                                                                                                                                                                    |                                         |

<sup>1</sup> All debentures are rated by TRIS Rating Co., Ltd.

B.Grimm Power Public Company Limited issued and offered 2 series of Green Bond totalling Baht 5,000 million with a fixed interest rate to Asian Development Bank (ADB), which was in compliance with regulations and criteria of the SEC. Details are as follows.

| Series       | Issue Size<br>(Million Baht) | Unredeemed Amount<br>(Million Baht) | Maturity Date    |
|--------------|------------------------------|-------------------------------------|------------------|
| 1            | 1,500                        | 1,500                               | 20 December 2023 |
| 2            | 3,500                        | 3,500                               | 20 December 2025 |
| <b>Total</b> | <b>5,000</b>                 | <b>5,000</b>                        |                  |

B.Grimm Power Public Company Limited issued and offered 4 series of debentures totalling Baht 9,700 million to institutional investors and / or high net worth investors, with Bank of Ayudhya Public Company Limited as the debenture holders' representative. Details are as follows.

| Series       | Issue Size<br>(Million Baht) | Unredeemed<br>Amount<br>(Million Baht) | Maturity Date   | Interest Rate<br>(% p.a.) | Latest Credit<br>Rating <sup>1</sup> |
|--------------|------------------------------|----------------------------------------|-----------------|---------------------------|--------------------------------------|
| BGRIM20OA    | 500                          | 500                                    | 19 October 2020 | 2.81                      | A-                                   |
| BGRIM21OA    | 2,700                        | 2,700                                  | 19 October 2021 | 3.12                      | A-                                   |
| BGRIM23OA    | 1,500                        | 1,500                                  | 19 October 2023 | 3.49                      | A-                                   |
| BGRIM28OA    | 5,000                        | 5,000                                  | 19 October 2028 | 4.36                      | A-                                   |
| <b>Total</b> | <b>9,700</b>                 | <b>9,700</b>                           |                 |                           |                                      |

<sup>1</sup> All debentures are rated by TRIS Rating Co., Ltd.

B.Grimm BIP Power 1 Co., Ltd. (BIP1) and B.Grimm BIP Power 2 Co., Ltd. (BIP2) issued and offered 2 amortized debentures totalling Baht 6,700 million to institutional investors and / or high net worth investors, with Bank of Ayudhya Public Company Limited as the debenture holders' representative. Details are as follows.

| Debentures   | Issue Size<br>(Million Baht) | Unredeemed<br>Amount<br>(Million Baht) | Maturity Date | Interest Rate<br>(% p.a.) | Latest Credit<br>Rating <sup>1</sup> |
|--------------|------------------------------|----------------------------------------|---------------|---------------------------|--------------------------------------|
| BIPA335A     | 3,350                        | 3,200                                  | 31 May 2033   | 3.95                      | A-                                   |
| BIPB335A     | 3,350                        | 3,200                                  | 31 May 2033   | 3.95                      | A-                                   |
| <b>Total</b> | <b>6,700</b>                 | <b>6,400</b>                           |               |                           |                                      |

<sup>1</sup> All debentures are rated by TRIS Rating Co., Ltd.

Amata B.Grimm Power SPV 1 Co., Ltd. (ABPSPV1) issued and offered 11 series of secured debentures totalling Baht 11,500 million to institutional investors and / or high net worth investors, with ABP3, ABPR1 and ABPR2 as guarantors and Bank of Ayudhya Public Company Limited as the debenture holders' representative. Details are as follows.

| Debentures   | Issue Size<br>(Million Baht) | Unredeemed<br>Amount<br>(Million Baht) | Maturity Date | Interest Rate<br>(% p.a.) | Latest Credit<br>Rating <sup>1</sup> |
|--------------|------------------------------|----------------------------------------|---------------|---------------------------|--------------------------------------|
| ABPSPV204A   | 1,800                        | 1,800                                  | 21 April 2020 | 2.68                      | A-                                   |
| ABPSPV214A   | 600                          | 600                                    | 21 April 2021 | 3.00                      | A-                                   |
| ABPSPV224A   | 1,500                        | 1,500                                  | 21 April 2022 | 3.25                      | A-                                   |
| ABPSPV234A   | 900                          | 900                                    | 21 April 2023 | 3.58                      | A-                                   |
| ABPSPV244A   | 900                          | 900                                    | 21 April 2024 | 3.76                      | A-                                   |
| ABPSPV264A   | 1,000                        | 1,000                                  | 21 April 2026 | 4.01                      | A-                                   |
| ABPSPV274A   | 1,500                        | 1,500                                  | 21 April 2027 | 4.17                      | A-                                   |
| ABPSPV284A   | 800                          | 800                                    | 21 April 2028 | 4.33                      | A-                                   |
| ABPSPV294A   | 1,000                        | 1,000                                  | 21 April 2029 | 4.35                      | A-                                   |
| ABPSPV304A   | 600                          | 600                                    | 21 April 2030 | 4.48                      | A-                                   |
| ABPSPV324A   | 900                          | 900                                    | 21 April 2032 | 4.79                      | A-                                   |
| <b>Total</b> | <b>11,500</b>                | <b>11,500</b>                          |               |                           |                                      |

<sup>1</sup> All debentures are rated by TRIS Rating Co., Ltd.



# Dividend Policy

## Dividend Policy of B.Grimm Power

B.Grimm Power's dividend policy is to pay shareholders at least 40% of normalised net profit (net profit excluding unrealised gain / loss on exchange rate and non-recurring income / expense) based on its consolidated financial statements after tax and statutory reserves deduction and after obligations under loan agreements. This rate, however, is subject to change depending on operating performances, cashflow, investment requirements, conditions and restrictions in loan agreements and other future considerations. Once resolved and approved by the Board of Directors, the payment of dividend must be submitted to a shareholders' meeting for approval unless it is an interim dividend payment where, in such a case, the Board of Directors may approve the payment and subsequently report it at the next shareholders' meeting.

The Board of Directors' Meeting No. 2/2020 held on 24 February 2020 resolved to propose to the 2020 Annual General Meeting of Shareholders (AGM) on 23 April 2020 a dividend payment for B.Grimm Power's 2019 performance at the rate of Baht 0.37\* per share, or approximately 45.0% of the 2019 normalised net profit.

\*Divided into an interim dividend payment for the first half of 2019 performance at the rate of Baht 0.15 per share paid on 10 September 2019 and the payment for performance during the second half of 2019 at Baht 0.22 per share, which will be submitted to the 2020 AGM for approval.

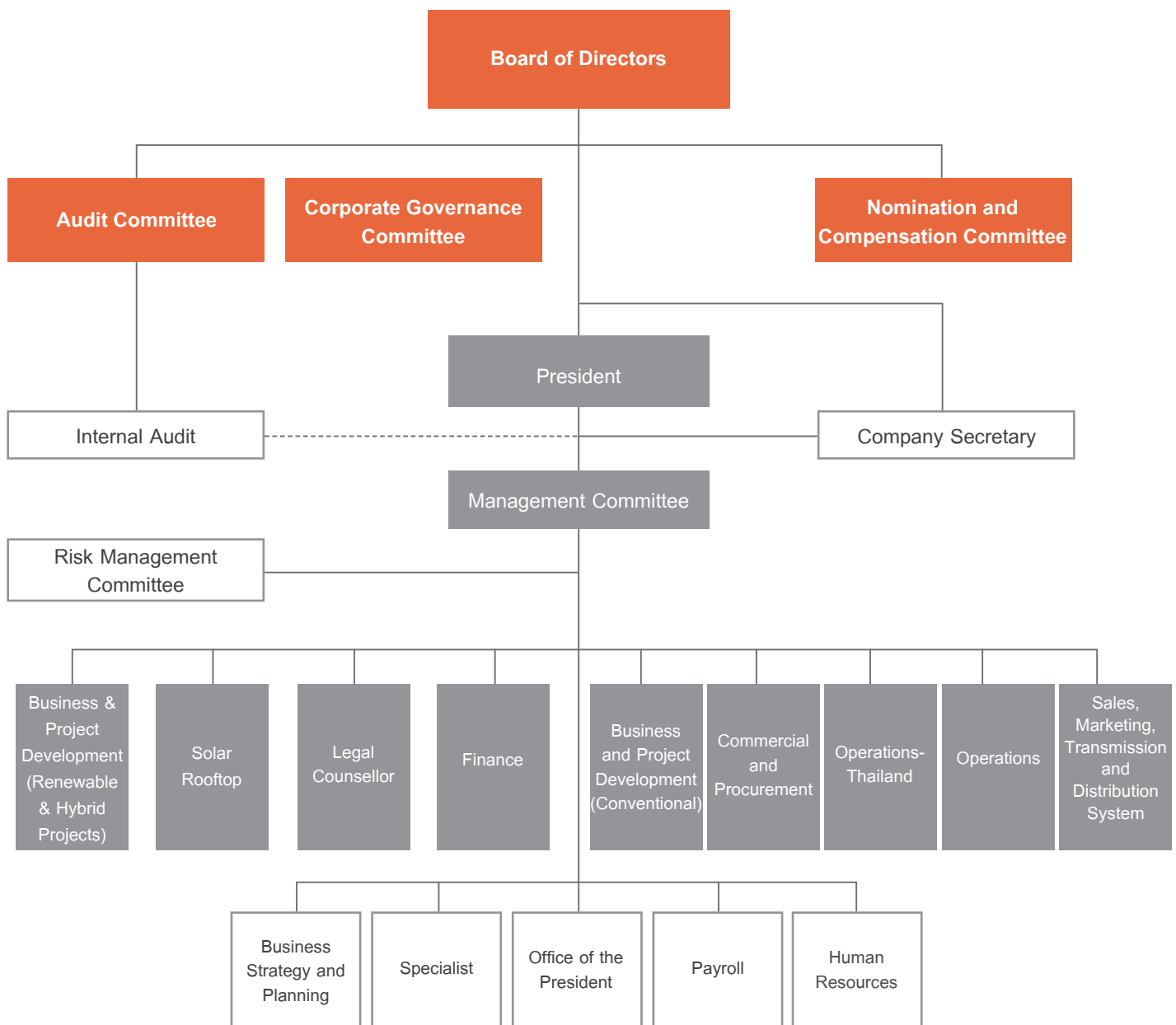
## Dividend Policy of Subsidiaries and Joint Ventures

The dividend policy of B.Grimm Power's subsidiaries and joint ventures will reflect what their Board of Directors considers and approves before seeking approval from their shareholders' meeting each year. Dividend will be paid from net profit stated in the financial statements of a particular subsidiary and joint venture after tax and statutory reserves deduction and after obligations under loan agreements. The payment rate will be based upon operating performances, cashflow, investment requirements, conditions and restrictions stipulated in loan agreements and other reasons deemed appropriate by subsidiaries and joint ventures. Meanwhile, the Board of Directors of B.Grimm Power's subsidiaries and joint ventures may approve an interim dividend payment, which however will be subsequently reported to shareholders at the next shareholders' meeting.

## Management Structure

### 1. B.Grimm Power Public Company Limited

As of 31 December 2019, the Company's management structure was as follows:



**Remark** "Management Structure" and "Executives" according to the definition stated in the Notification of the Securities and Exchange Commission No. KorChor. 17/2551 (2008) Re: Determination of Definitions in the Notifications relating to Issuance and Offer for Sale of Securities (as amended) (Information as of 31 December 2019).

## 1.1 Committees

### 1.1.1 Board of Directors

As of 31 December 2019, the Board of Directors consisted of eight directors, of which one was an executive director, two were non-executive directors and five were independent directors. Details are as follows:

| Name                                         | Position             |
|----------------------------------------------|----------------------|
| 1. Mr. Harald Link                           | Chairman             |
| 2. Mrs. Preeyanart Soontornwata              | Director / President |
| 3. Ms. Caroline Monique Marie Christine Link | Director             |
| 4. Mr. Somkiat Sirichatchai                  | Independent Director |
| 5. Mrs. Katevalee Napasab                    | Independent Director |
| 6. Mr. Anusorn Sangnimnuan                   | Independent Director |
| 7. Mrs. Anchalee Chavanich                   | Independent Director |
| 8. Mrs. Sunee Sornchaitanasuk                | Independent Director |

Remark Mr. Surachai Saibua resigned from the directorship of the Company, effective from 1 June 2019 onwards.

#### Authorised Directors with binding authority:

Any two of the following three directors, namely, Mr. Harald Link or Ms. Caroline Monique Marie Christine Link or Mrs. Preeyanart Soontornwata may co-sign with the Company's seal as the authorised directors with binding authority.

#### Authorities, Roles and Responsibilities of the Board of Directors:

1. Define vision, mission, policies, strategies and business goals of the Company and subsidiaries, approve policies and directions proposed by the management, and supervise the management to conduct the business in accordance with the vision, mission, policies, strategies and business goals by taking into account all stakeholders with a purpose to enhance economic values to shareholders.
2. Review the Board of Directors' Charter at least once a year.
3. Establish the structure and work process of the Company and subsidiaries to ensure that it is equipped with appropriate risk management, internal supervision and audit, and internal control systems for compliance with the Articles of Association and resolutions of the Board of Directors and the shareholders' meetings with integrity and care.
4. Supervise, monitor and assess management performance of the Company and subsidiaries to carry out strategic plans within budget approved by the Board of Directors.
5. Review possible risk factors and establish risk management guidelines in a comprehensive manner, ensure that the management has an efficient risk management system and procedures to manage risks as well as possible risk factors arising from the exploitation of business opportunities.



6. Set up internal control and internal audit systems adequately, efficiently and effectively and regularly arrange for an evaluation of the appropriateness of the internal control system of the Company and its subsidiaries.
7. Establish a system or mechanism to determine appropriate remunerations for senior executives that reflect their performance to provide short-term and long-term incentives.
8. Approve investment and operating expenditures, loans or credits from financial institutions, and lending and guaranteeing for the normal operation of the Company and its subsidiaries with no limit, subject to the Company's Articles of association and regulations as well as rules and laws relating to the SEC and the SET.
9. Require the Company and its subsidiaries to implement appropriate and efficient systems of accounting, financial reporting and auditing as well as maintenance of accounting records and related documents and disclosure of information to shareholders and the public.
10. Provide appropriate communication channels to each group of shareholders, supervise the information disclosure to ensure its accuracy, clarity, transparency, reliability and highest standards.
11. Assure that the Company and its subsidiaries have complied with business ethics defined by the Board of Directors and establish a policy on corporate governance and social responsibility for the Company and its subsidiaries.
12. Appoint candidates as a director or an executive of subsidiaries based on the Company's minimum shareholding ratio in the subsidiaries, clearly determine their roles and responsibilities, establish a clear scope of their authority where they can exercise their discretion i.e. voting at the subsidiary's Board of Directors Meeting in material matters which must firstly be approved by the Company's Board of Directors, supervise the management in accordance with the Company's policy, and ensure that transactions including disclosure of financial status, operation results, related party transactions, and acquisition and disposal of material assets are complete, accurate and in compliance with the laws.
13. Appoint the President, subcommittees, and the Company Secretary and determine remunerations for subcommittee members (not exceeding a total amount approved by shareholders).
14. Approve the operation of the Company and its subsidiaries, which must be in line with the Articles of Association of each company covering these areas:
  - 14.1 Vision, mission, policy and strategic plan (subject to an annual review)
  - 14.2 Annual business plan
  - 14.3 Annual budget
  - 14.4 Quaterly and annual financial statements
  - 14.5 Interim dividend payment
  - 14.6 Organisational structure change at the group level and other significant changes in the organisation
  - 14.7 Acquisition, establishment, disposal of, transfer or suspension of any major asset or business of the Company
  - 14.8 Any change relating to the authority the Board of Directors entrusts to other parties to act on its behalf

15. Delegate authorities from time to time to subcommittees

Such authorisation by the Board of Directors will, however, not allow the Board of Directors or an authorised representative to approve a transaction in which he / she or the related party with a possible conflict of interest (as defined in the Notification of the SEC or the Capital Market Supervisory Board) may have an interest or benefit therein or may have any other conflict of interest against the Company or its subsidiaries unless the transaction requires approval in accordance with the policy or criteria approved by the shareholders' meeting or the Board of Directors.

16. Establish a system for the overall monitoring of the Company's anti-corruption practices, formulate a policy, rules and regulations for effective anti-corruption practices, disclose the Board of Directors' role in corruption risk management to auditors. The Board of Directors plays a pivotal role as a leader with commitment to counter corruption in the eyes of employees, business partners and the public.

In 2019, the Board of Directors already reviewed its Charter.

### Board of Directors Meeting

The Company scheduled the Board of Directors Meeting in advance for the entire year of 2019 during which the meeting convened 13 times.

Supporting documents in each agenda were sent to directors 7 days prior to the meeting date in each meeting for directors to have enough time to study.

Details of the meeting attendance of directors in 2019 were as follows:

| Name                                         | Meeting Attendance/<br>Total Number of Meetings |
|----------------------------------------------|-------------------------------------------------|
| 1. Mr. Harald Link                           | 13/13                                           |
| 2. Mrs. Preeyanart Soontornwata              | 13/13                                           |
| 3. Ms. Caroline Monique Marie Christine Link | 5/13 <sup>1</sup>                               |
| 4. Mr. Somkiat Sirichatchai                  | 13/13                                           |
| 5. Mrs. Katevalee Napasab                    | 10/13                                           |
| 6. Mr. Surachai Saibua <sup>2</sup>          | 6/6                                             |
| 7. Mr. Anusorn Sangnimnuan                   | 13/13                                           |
| 8. Mrs. Anchalee Chavanich                   | 13/13                                           |
| 9. Mrs. Sunee Sornchaitanasuk                | 12/13                                           |

**Remarks** <sup>1</sup> Since Ms. Caroline Monique Marie Christine Link was on overseas assignments, she therefore participated in 4 conference calls.

<sup>2</sup> Mr. Surachai Saibua resigned from the directorship of the Company, effective from 1 June 2019 onwards.

### 1.1.2 Audit Committee

As of 31 December 2019, the Audit Committee consisted of 3 members as follows:

| Name                          | Position                       |
|-------------------------------|--------------------------------|
| 1. Mrs. Anchalee Chavanich    | Chairperson of Audit Committee |
| 2. Mr. Anusorn Sangnimnuan    | Member of Audit Committee      |
| 3. Mrs. Sunee Sornchaitanasuk | Member of Audit Committee      |

Mrs. Sunee Sornchaitanasuk is the Member of the Audit Committee who has adequate expertise and experience to review creditability of the Company's financial statements.

The Company required the Audit Committee to regularly convene for no fewer than 6 meetings each year to act within the scope of their responsibilities stated in the Audit Committee's Charter. The Board of Directors were informed of the results of all of its meetings.

In 2019, the Audit Committee convened 12 times. The meetings with external auditors and the Internal Audit Department were also held. Details of the meetings were as follows:

| Name                          | Meeting Attendance /<br>Total Number of Meetings |
|-------------------------------|--------------------------------------------------|
| 1. Mrs. Anchalee Chavanich    | 12/12                                            |
| 2. Mr. Anusorn Sangnimnuan    | 12/12                                            |
| 3. Mrs. Sunee Sornchaitanasuk | 12/12                                            |

#### Authorities, Roles and Responsibilities of the Audit Committee:

1. Select and nominate an auditor, propose its audit fee to the Board of Directors to further seek approval from the shareholders' meeting, and evaluate the auditor's performance.
2. Endorse the appointment, transfer, termination and evaluation of performance of Head of the Internal Audit Department.
3. Able to access corporate information at any level, invite executives, employees or related persons to attend its meeting, and provide relevant information within the scope of authority and duties entrusted by the Board of Directors.
4. Seek independent opinions and suggestions from an auditor or a professional consultant as deemed appropriate at the Company's cost. A meeting with the auditor must be held once a year.
5. Review the Company's compliance with the policy and regulations relating to anti-corruption as well as corruption risk management covering anti-corruption measures, detection and response to corruption, review and revision of policy, regulations, Code of Conduct and business ethics to ensure organisation-wide implementation.



The Audit Committee has additional roles and responsibilities as follows:

1. Internal control and risk management
  - 1.1 Review that the Company has appropriate, efficient and effective internal control and internal audit systems in place.
  - 1.2 Review reports of the Risk Management Committee and discuss with the management about the risk management and risk assessment policies.
2. Compliance with laws and regulations
  - 2.1 Review the Company's compliance with the law on securities and exchange, the SET's requirements and laws relating to the Company's business and subsidiaries' compliance with criteria stated in the control policy and supervisory mechanisms of businesses in which the Company invest.
  - 2.2 Review related party transactions, connected transactions and acquisition and disposal of assets in compliance with relevant laws and regulations to ensure that the transactions are carried out as required by the laws in a reasonable manner and for the Company's best interest.
3. Financial reporting
  - 3.1 Review the accuracy and adequate disclosure of the Company's financial reports according to the financial reporting standards.
  - 3.2 Assess the appropriateness of accounting principles applied to the financial reports.
  - 3.3 Jointly review the Management Discussion & Analysis (MD&A) with the management.
4. Supervision of auditors and internal auditors
  - 4.1 Auditor
    - 4.1.1 Hold a joint meeting with the auditor to acknowledge audit results of the quarterly financial statements and the annual financial statements, discuss problems resulted from the auditor's auditing activities. A joint meeting with the auditor without the management's presence shall be held at least once a year.
    - 4.1.2 Evaluate the efficiency and effectiveness of the auditor's performance and review the independence of auditor.
  - 4.2 Internal Auditor
    - 4.2.1 Review the independence of the Internal Audit Department by requiring that it directly reports to the Audit Committee.
    - 4.2.2 Meet with Head of the Internal Audit Department without the presence of the management at least once a year to discuss important issues.
    - 4.2.3 Review and approve the Internal Audit Department's Charter at least once a year.
    - 4.2.4 Approve annual budget, manpower and necessary resources for the Internal Audit Department.
    - 4.2.5 Approve an annual audit plan, review and approve any significant change of the internal audit plan.

4.2.6 Supervise the Internal Audit Department for compliance with its annual audit plan previously approved as well as international standards of professional practices of internal auditing.

4.2.7 Evaluate the quality of internal auditing annually and have an independent third party evaluate the quality of internal auditing at least every five years.

5. Reporting

5.1 Prepare the Audit Committee's report signed by the Chairman of the Audit Committee to be disclosed in the Annual Report.

5.2 In case suspicious transactions or activities which may significantly affect the Company's financial status and operation results are found, the Audit Committee must report the Board of Directors for a remedy within a timeframe it finds appropriate. The above-mentioned transactions or activities are:

5.2.1 Transactions that cause conflicts of interest.

5.2.2 Fraud or significant irregularities or deficiencies found in the internal control system.

5.2.3 Violation of laws relating to the Company's business

If the Board of Directors or the management fails to remedy them within a timeframe, any member of the Audit Committee may report the transactions or the activities mentioned above to the SEC or the SET.

5.3 The Chairman of the Audit Committee will report the result of its performance to the Board of Directors Meeting for acknowledgement or consideration on a regular basis.

6. Other aspects

6.1 Perform any other tasks required by the laws now or thereafter

6.2 Perform other duties as assigned by the Board of Directors of the Company with the consent of the Audit Committee. Any order must be made in writing.

6.3 Review the Audit Committee's Charter at least once a year before seeking the Board of Directors' approval.

6.4 Evaluate the Audit Committee's performance for efficiency and ability to achieve the objectives before reporting the evaluation results to the Board of Directors.

In 2019, the Audit Committee already reviewed its Charter.

**1.1.3 Corporate Governance Committee**

As of 31 December 2019, the Corporate Governance Committee consisted of 3 independent directors as follows:

| Name                        | Position                                   |
|-----------------------------|--------------------------------------------|
| 1. Mr. Anusorn Sangnimnuan  | Chairman of Corporate Governance Committee |
| 2. Mrs. Anchalee Chavanich  | Member of Corporate Governance Committee   |
| 3. Mr. Somkiat Sirichatchai | Member of Corporate Governance Committee   |

In 2019, the Corporate Governance Committee's meetings were held 6 times as follows:

| Name                        | Meeting Attendance /<br>Total Number of Meetings |
|-----------------------------|--------------------------------------------------|
| 1. Mr. Anusorn Sangnimnuan  | 6/6                                              |
| 2. Mrs. Anchalee Chavanich  | 6/6                                              |
| 3. Mr. Somkiat Sirichatchai | 6/6                                              |

#### **Authorities, Roles and Responsibilities of the Corporate Governance Committee:**

1. Define the corporate governance policy, the anti-corruption policy, the Code of Conduct and business ethics within the framework of the laws, the Cabinet's resolutions, current rules and regulations of regulatory agencies such as the SET, the SEC and related agencies before proposing them to the Board of Directors for approval and announcement as the best practices for directors, the management and employees at all levels.
2. Supervise and recommend policy and guidelines to encourage directors, executives and employees to perform duties and responsibilities in accordance with the framework of the corporate governance policy and the anti-corruption policy as well as the Code of Conduct and business ethics of the Company's directors, executives, employees and staff.
3. Review and update the corporate governance policy and the anti-corruption policy at least once (1) a year to ensure compliance with laws, rules, regulations and recommendations made by the internal unit responsible for overseeing corporate governance practices as well as those of shareholders concerning good corporate governance.
4. Monitor and evaluate performance of directors and the management based on the best practices defined in the corporate governance policy, the anti-corruption policy and the annual corporate governance practice evaluation for submission to the Board of Directors within January of the following year; and submit necessary opinions and recommendations.
5. Review the Corporate Governance Committee's Charter at least once a year to stay updated and for compliance with the laws, rules and regulations.
6. Define a policy framework and an operation plan for short-term and long-term social responsibility practices before seeking the Board of Directors' approval and follow up the operation by requiring the working committee to submit a social responsibility report to the Corporate Governance Committee and the Board of Directors on a quarterly basis.
7. Discuss with an advisor or expert in corporate governance if necessary at the Company's cost
8. Evaluate the Corporate Governance Committee's performance and report the evaluation result to the Board of Directors at the end of each year.
9. Perform any other tasks designated by the Board of Directors.



In 2019, the Corporate Governance Committee already reviewed its Charter.

#### 1.1.4 Nomination and Compensation Committee

As of 31 December 2019, the Nomination and Compensation Committee consisted of 4 members as follows:

| Name                                         | Position                                          |
|----------------------------------------------|---------------------------------------------------|
| 1. Mr. Somkiat Sirichatchai                  | Chairman of Nomination and Compensation Committee |
| 2. Mr. Harald Link                           | Member of Nomination and Compensation Committee   |
| 3. Mrs. Katevalee Napasab                    | Member of Nomination and Compensation Committee   |
| 4. Ms. Caroline Monique Marie Christine Link | Member of Nomination and Compensation Committee   |

In 2019, the Nomination and Compensation Committee's meetings convened 3 times as follows:

| Name                                         | Meeting Attendance / Total Number of Meetings |
|----------------------------------------------|-----------------------------------------------|
| 1. Mr. Somkiat Sirichatchai                  | 3/3                                           |
| 2. Mr. Harald Link                           | 3/3                                           |
| 3. Mrs. Katevalee Napasab                    | 3/3                                           |
| 4. Ms. Caroline Monique Marie Christine Link | 3/3                                           |

#### Authorities, Roles and Responsibilities of the Nomination and Compensation Committee:

1. Nominating directors
  - 1.1 Define the nomination method to seek appropriate candidates to become a director and a subcommittee member that suits the nature of the Company's business by identifying required qualifications and expertise.
  - 1.2 Nominate directors when required to the Board of Directors. The nomination can be made from existing directors nominated for re-election or obtaining candidate's names from shareholders or considering a list of professional directors or allowing each director to nominate a candidate.
  - 1.3 Review nominated candidates and select those with qualifications according to the Company's criteria.
  - 1.4 Review whether the nominated person as a director is qualified according to the laws and requirements of relevant agencies.
  - 1.5 Seek the Board of Directors' approval for the nominated candidates and include their names in the invitation to the shareholders' meeting for the meeting to appoint directors.
  - 1.6 Nominate the President

## 2. Considering remuneration

- 2.1 Review remuneration payment criteria applicable to directors, subcommittee members and the President by looking into the existing rules and see if they remain appropriate in comparison to what other companies in the same industry offer, and define appropriate criteria and standards that reflect the status and responsibility of a person to induce an effective and fair performance as expected by the Company and to remunerate the person for his/her contribution to the Company's success.
- 2.2 Review all forms of remuneration such as fixed remuneration, performance-based remuneration and meeting allowance by taking into account the practices implemented by the same industry, operation results, size of the business as well as responsibilities, knowledge, competencies and experience of directors and the President.
- 2.3 Define an annual remuneration framework of directors and the President based on payment criteria previously approved before submitting the President's remuneration for the Board of Directors' approval. For remuneration of directors, the Board of Directors will seek the approval from the shareholders' meeting.

In 2019, the Nomination and Compensation Committee already reviewed its Charter.

### 1.1.5 Management Committee

As of 31 December 2019, the Management Committee consisted of 6 executives as follows:

| Name                                 | Position                            |
|--------------------------------------|-------------------------------------|
| 1. Mrs. Preeyanart Soontornwata      | Chairperson of Management Committee |
| 2. Mr. Surasak Towanich              | Member of Management Committee      |
| 3. Mr. Chote Chusuwan                | Member of Management Committee      |
| 4. Mr. Arunphun Pootong <sup>1</sup> | Member of Management Committee      |
| 5. Mr. Peradach Patanachan           | Member of Management Committee      |
| 6. Mr. Nopadej Karnasuta             | Member of Management Committee      |

**Remarks** <sup>1</sup> The Board of Directors' Meeting No. 5/2019 held on 25 April 2019, resolved to appoint Mr. Arunphun Pootong to be a member of the Management Committee.

<sup>2</sup> Mr. Surachai Saibua resigned from the member of the Management Committee, effective from 1 June 2019.

### Authorities, Roles and Responsibilities of the Management Committee:

1. Review and define goals of the Company and its subsidiaries and provide advice on strategic directions, management structure, annual operation plan and budget of the Company and its subsidiaries as entrusted by the President.
2. Review the operation of the Company and its subsidiaries and report it to the Board of Directors.
3. Review and offer advice regarding the dividend payment policy of the Company and its subsidiaries to the Board of Directors.

4. Review and approve transactions relating to investment, disposal of assets of the Company and its subsidiaries, human resources management, finance and accounting, general administration and other business-related transactions within the scope of power approved by the Board of Directors and in accordance with the line of authority. This includes approval of the procurement not included in the budget within the limit of Baht 50 million.
5. The Management Committee may authorise executives or employees to perform a particular task on its behalf in which case the Management Committee or the person designated thereby must not do anything or approve any transaction that he/she or the person with a conflict of interest may have any interest or benefit from the transaction, or that he/she may have any other conflict of interest against the Company and its subsidiaries (as defined by the Notification of the Capital Market Supervisory Board or the SEC). The approval, however, must be in line with laws, policies and principles defined by the Board of Directors.
6. Recruit an advisor or independent person to provide opinions or recommendations as the case may be.
7. Require executives or employees to attend its meetings or provide information for matters discussed there.
8. Report what the Management Committee has done within the scope of its authority including other matters considered necessary or appropriate to report to the Board of Directors on a regular basis.
9. Conduct a feasibility study for a new investment project.
10. Review and evaluate the adequacy of this Charter by comparing what the Committee has achieved with the requirements in the Charter. The Management Committee may use results from the evaluation to improve its performance.
11. Perform any other tasks entrusted by the Board of Directors or the President.
12. Define practice guidelines that support effective anti-corruption policy and regulations, communicate them and provide trainings in relation to the policy and regulations to all employees for sufficient understanding and efficient and effective implementation, and review the appropriateness of these practice guidelines to keep up with changes in the business, laws and regulations.

In 2019, the Management Committee already reviewed its Charter.

#### **1.1.6 Risk Management Committee**

##### **Authorities, Roles and Responsibilities of the Risk Management Committee:**

1. Develop a risk management policy for submission to the Board of Directors who oversees the overall risk management and ensure that the policy covers major risks such as business risk, liquidity risk, operation risk, and reputation risk.
2. Set strategies that correspond with the risk management policy by evaluating, monitoring and overseeing corporate risks in order to maintain them to an appropriate level.
3. Review the adequacy of the risk management policy and system, its efficiency and effectiveness and compliance.
4. Provide recommendations to the Management Committee for any improvement that will better reflect policies and strategies defined by the Management Committee.

5. Review its own charter at least once a year to reflect the operation of the Company before proposing it to the Board of Directors for approval.

## 1.2 Executives

As of 31 December 2019, the Company had 7 executives and 1 head of accounting as follows

| Name                                 | Position                                                                                                                                 |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Mrs. Preeyanart Soontornwata      | President                                                                                                                                |
| 2. Mr. Surasak Towanich              | Senior Executive Vice President - Sales, Marketing and Electricity Transmission and Distribution                                         |
| 3. Mr. Chote Chusuwan                | Chief Operations Officer - Thailand / Senior Executive Vice President - Operations                                                       |
| 4. Mr. Arunphun Pootong <sup>1</sup> | Executive Vice President<br>Business & Project Development<br>(Conventional) / Commercial & Procurement                                  |
| 5. Mr. Peradach Patanachan           | Senior Executive Vice President,<br>Legal Counsellor/ Business & Project<br>Development (Renewable & Hybrid Projects) /<br>Solar Rooftop |
| 6. Mr. Nopadej Karnasuta             | Chief Financial Officer / Senior Executive<br>Vice President - Finance and Accounting                                                    |
| 7. Ms. Siriwong Borvornboonrutai     | Deputy Chief Financial Officer /<br>Executive Vice President - Finance                                                                   |
| 8. Ms. Pornpip Tangpongbundit        | Executive Vice President - Accounting                                                                                                    |

**Remarks** <sup>1</sup> The Board of Directors' Meeting No. 5/2019 held on 25 April 2019, resolved to appoint Mr. Arunphun Pootong to be a member of the Management Committee and the Company's executive.

<sup>2</sup> Mr. Surachai Saibua resigned from the member of the Management Committee, effective from 1 June 2019 onwards.

<sup>3</sup> "Executives" refer to the definition of executives pursuant to the Notification of the SEC No. KorChor 17/2551 (2008) Re: Determination of Definitions in the Notifications relating to Issuance and Offer for Sale of Securities (as amended).

### Authorities, Roles and Responsibilities of the President:

The President is authorised to manage various corporate affairs as entrusted by the Board of Directors who will define and approve the President's remuneration. The President must strictly manage the Company in accordance with plans or budget approved by the Board of Directors with integrity and care. He/she will safeguard the Company's interest and that of shareholders to his/her best. Roles and responsibilities of the President include the following:



1. Oversee daily corporate affairs
2. Formulate strategic plan and an annual budget proposed by the management and the Management Committee to further submit them to the Board of Directors for approval.
3. Conduct corporate affairs based on the plans and budget approved by the Board of Directors.
4. Prepare reports, plans and financial statements for submission to the Board of Directors on a quarterly basis.
5. Prepare a business policy and enter into or terminate any agreement or commitment relating to sales or purchase of raw materials and goods on behalf of the Company, at present and in the future, within the scope of approval authority defined by the Board of Directors.
6. Enter into or terminate an agreement or commitment aside from what is stated in (5) within the scope of approval authority defined by the Board of Directors.
7. Hire, appoint, remove, transfer, promote, reduce, cut salary or wage, apply disciplinary action or terminate the employment of employees on behalf of the Company, appoint and remunerate any other employees and all supervisees whose title is lower than the President, and authorise his/her power and responsibilities to them as appropriate.
8. Approve transactions within the scope of approval authority stated in the Company's line of authority including approving procurement not included in the budget with value not exceeding Baht 10 million and seeking loan not exceeding Baht 300 million.
9. Comply with the anti-corruption policy by promoting and supporting the communication of the anti-corruption policy to employees and all related parties.

The Board of Directors has authorised the management authority to the President upon the following principles and scopes:

1. The President is authorised to manage corporate affairs based on the objectives, Articles of Association, policies, regulations, requirements, orders and resolutions of the Board of Directors Meeting and/or the shareholders' meeting.
2. The President is authorised to command, contact, order, act and sign to enter into a juristic act, an agreement, an order, a notice or any document for contacting with the government agencies, state-owned enterprises and other persons. The President is also authorised to act as necessary and appropriate to achieve these tasks.
3. The President is authorised to appoint a substitute and/or assign other persons to perform his/her task. The substitution and/or such authorisation will be within the scope of authorisation mentioned in the Power of Attorney, and/or correspond to the regulations, requirements or orders made by the Board of Directors and/or the Company.

The President may not exercise his/her power above if he/she has any interest or may have a conflict of interest in any nature against the Company.

### 1.3 Remuneration of Directors and Executives

#### 1.3.1 Remuneration of Directors

All form of remuneration for directors are annually approved by the shareholders' meeting. The 2019 Annual General Meeting of Shareholders held on 25 April 2019, resolved to approve the following 2019 remuneration for the Board of Directors and subcommittees:

(1) Monthly fixed fee and meeting allowance

| Committee                                | Position | Monthly fixed fee<br>(Baht/Month) | Meeting Allowance<br>(Baht/Meeting) |
|------------------------------------------|----------|-----------------------------------|-------------------------------------|
| Board of Directors                       | Chairman | 115,500                           | 27,300                              |
|                                          | Director | 105,000                           | 26,250                              |
| Audit Committee                          | Chairman | 42,000                            | 57,750                              |
|                                          | Member   | 36,750                            | 52,500                              |
| Nomination and<br>Compensation Committee | Chairman | 21,000                            | 28,875                              |
|                                          | Member   | 18,375                            | 26,250                              |
| Corporate<br>Governance Committee        | Chairman | 21,000                            | 28,875                              |
|                                          | Member   | 18,375                            | 26,250                              |

(2) Bonus Payment

Bonus payment is subject to an annual review based on the Company's normalised net profit. The 2019 Annual General Meeting of Shareholders approved to pay an annual bonus based on the 2018 operation results at the rate of no more than 0.3% of the Company's normalised net profit, or no more than Baht 5.4 million.

There are no other forms of remuneration for directors. All forms of director's remuneration will be paid on the basis of the director's tenure. Executive directors will not receive the director's remuneration in any form.

For the above director remuneration, the Board of Directors and the Nomination and Compensation Committee conducted benchmarking studies on remuneration payment with other listed companies of the same or similar business nature, mission, duties and responsibilities of the Board of Directors against previous practices of the Company. The Board of Directors considered that the remuneration structure was appropriate for responsibilities and was of the comparable level in the industry, and can induce directors to operate business according to short-term and long-term goals.

In 2019, the Company paid Baht 18,270,190 to directors. The following table summarises director's remuneration for the fiscal year ended 31 December 2019.

| Name                                                      | Director Remuneration (Baht) |                  |                                |                                       |                  |                   |
|-----------------------------------------------------------|------------------------------|------------------|--------------------------------|---------------------------------------|------------------|-------------------|
|                                                           | Board of Directors           | Audit Committee  | Corporate Governance Committee | Nomination and Compensation Committee | Annual Bonus     | Total             |
| 1. Mr. Harald Link <sup>1</sup>                           | -                            | -                | -                              | -                                     | 771,420          | 771,420           |
| 2. Mrs. Preeyanart Soontornwata <sup>2</sup>              | -                            | -                | -                              | -                                     | -                | -                 |
| 3. Ms. Caroline Monique Marie Christine Link <sup>1</sup> | -                            | -                | -                              | -                                     | 771,420          | 771,420           |
| 4. Mr. Surachai Saibua <sup>3</sup>                       | -                            | -                | -                              | -                                     | -                | -                 |
| 5. Mr. Somkiat Sirichatchai                               | 1,581,250                    | -                | 374,125                        | 331,750                               | 771,420          | 3,058,545         |
| 6. Mrs. Katevalee Napasab                                 | 1,505,000                    | -                | -                              | 295,375                               | 771,420          | 2,571,795         |
| 7. Mr. Anusorn Sangnimnuan                                | 1,581,250                    | 1,055,750        | 418,375                        | -                                     | 771,420          | 3,826,795         |
| 8. Mrs. Anchalee Chavanich                                | 1,581,250                    | 1,160,000        | 374,125                        | -                                     | 771,420          | 3,886,795         |
| 9. Mrs. Sunee Sornchaitanasuk                             | 1,556,250                    | 1,055,750        | -                              | -                                     | 771,420          | 3,383,420         |
| <b>Total</b>                                              | <b>7,805,000</b>             | <b>3,271,500</b> | <b>1,166,625</b>               | <b>627,125</b>                        | <b>5,399,940</b> | <b>18,270,190</b> |

**Remark** <sup>1</sup> Mr. Harald Link and Ms. Caroline Monique Marie Christine Link expressed their wishes to receive neither a monthly remuneration nor a meeting allowance.

<sup>2</sup> An executive director is not entitled to receive any form of director remuneration.

<sup>3</sup> Mr. Surachai Saibua resigned from the directorship of the Company, effective from 1 June 2019.

### 1.3.2 Remuneration of Executives

The Company and ABP paid Executives in a form of salary, bonus and others such as contribution to the provident fund (excluding a remuneration of an executive director) totalling Baht 116,961,968 for the fiscal year ended 31 December 2019. The remuneration of executives is considered based on the evaluation of performance according to duties and responsibilities of executives and work efficiency, the Company's overall operating results, the benchmarking studies on remuneration payment with other listed companies of the same business nature against the Company's previous practices to ensure appropriate remuneration structure for responsibilities and induce executives to operate business according to the goals.

## 2. Personnel of the Company and Subsidiaries Operating Core Business

### 2.1 Number of Personnel

For the fiscal year ended 31 December 2019, the Company and its subsidiaries had a total of 962 personnel of which details were as follows:

| Core Function                                                                   | For fiscal year ended 31 December 2019<br>(persons) |
|---------------------------------------------------------------------------------|-----------------------------------------------------|
| President and Directors                                                         | 11                                                  |
| Company Secretary                                                               | 2                                                   |
| Internal Audit Department                                                       | 6                                                   |
| Business and Project Development<br>(Renewable & Hybrid Projects) Solar Rooftop | 15                                                  |
| Legal Counsellor                                                                | 11                                                  |
| Finance                                                                         | 79                                                  |
| Business and Project Development (Conventional)                                 | 42                                                  |
| Commercial and Procurement                                                      | 11                                                  |
| Operations                                                                      | 673                                                 |
| Sales, Marketing, Transmission and Distribution System                          | 38                                                  |
| Business Strategy and Planning                                                  | 4                                                   |
| Specialist                                                                      | 5                                                   |
| Office of the President                                                         | 44                                                  |
| Payroll                                                                         | 6                                                   |
| Human Resources                                                                 | 15                                                  |
| <b>Total</b>                                                                    | <b>962</b>                                          |

### 2.2 Significant Changes in the Number of Employees over the Past 3 Years

None

### 2.3 Remuneration of Employees

For the fiscal year ended 31 December 2019, the Company and its subsidiaries operating core business paid total remuneration of Baht 1,539.27 million to employees (excluding executives) in the form of salary, bonus and other remunerations such as contribution to the provident fund.



## 2.4 Welfare and Benefits

For employees in Thailand, the Group provides welfare and benefits upon their retirement apart from those stipulated by the Labour Law. The employees will receive contributions from the provident fund comprising the employee's contribution and the Company's contribution as well as benefits derived from savings and those contributions. The net benefits employees will receive depend on the number of year of service. For employees who have been working for up to 3 years, the Company will contribute 5 percent of the salary. However, such welfare scheme is not provided for overseas employees.

## 2.5 Labour Disputes

The Group had no labour disputes might significantly affect the Group's business operation over the past three years.

## 2.6 Human Resources Management Policy

The Company is committed to managing and taking care of employees with fairness, providing welfare to promote employee well-being as well as creating and maintaining safe working environment according to international standards and with good atmosphere. All of which can lead to all employees' career growth and development based on compliance with laws and regulations on the principles of basic human rights and equality and diversity, ranging from employee recruitment, development and retention processes, and core values (4Ps B.Grimm Core Values).



Positivity



Partnership



Professionalism



Pioneering spirit

**Core Values** or what employees mutually believe and uphold, consist of Positivity, Partnership, Professionalism, and Pioneering Spirit. They aim at encouraging employees to develop positive attitudes, promote teamwork, have expertise and responsibilities in performing work as well as become proactive at work, have creativity to drive the Company's vision and mission, and promote employee engagement.

### Human Resources Management Guidelines

#### 1. Recruitment and Hiring

The recruitment and hiring process is critical to screening employees who have capabilities, experience, attitudes and values which are proper and in line with the Company. The Company recognises the importance of individual differences e.g. nationality, sex, economic and social status, age and religion. The Company adopts the scope of work of each unit and roles and duties defined for each position as recruitment and selection guidelines. Tests in different areas are arranged, for example, a personality test, an English test and a skills and knowledge test for specific positions as well as interviews for consideration of qualified employees suitable for positions. The recruitment

and selection is in accordance with the defined workforce plan to support the Company's strategic plan through recruitment and selection principles and fair, transparent and impartial recruitment, selection and hiring processes. The Company can recruit and select employees with qualifications suitable for and in harmony with the core values to fully exploit their knowledge, skills and capacity to drive the Company's growth along with their growth in a sustainable manner.

## **2. Human Resources Development**

The Company emphasises human resources management by ensuring a balance between the mind and body in parallel with business expansion on the basis of good attitudes, cooperation, professionalism and creativity with potential and skills along with self-management. The Company promotes a culture of "mindfulness" through self-awareness before trainings and meetings to adjust brainwaves to learning and working. The Company had an average of 70 hours/person/year of trainings. The Company organised a wide range of forms of trainings such as specific expertise development, especially for power plant operation and maintenance, of which the knowledge and skills were developed by both internal and external experts according to international standards of the energy business. Moreover, the Company had specialised engineers from the leading companies like Siemens and ABB arrange trainings on engines and power generation control systems for employees prior to its official power generation. The Company highlights developing capable employees to increase management and leadership capacity by developing mindset and skillset simultaneously through world-class programs as well as trainings of new work skills.

In addition, the Company places importance on promoting organisational learning and knowledge management by developing an Internal Facilitator from the operations line to support the Company's sustainable learning. The Internal Facilitator will be nurtured to be able to develop systematic thinking, stable state of mind and emotion, promote and create mutual learning through the organisation based on differences along with the development of the knowledge management system.

## **3. Employee Retention**

The Company puts a priority on employee retention by ensuring fair and competitive remuneration and welfare systems and promoting human resources management through the preparation of annual performance evaluation system and planning for individual learning and development whereby employees will have an opportunity to evaluate performance results and plan their self-learning before discussing with their supervisors to accept job duties and/or mutually set KPIs for the next year as well as identify behaviors in accordance with the core values to establish future work guidelines. Discussions about evaluation results against expected goals will help both employees and supervisors perceive strengths and weaknesses which must be further improved and possibly create better workpieces alongside career path in both operations and support functions to be in accordance with the Company's growth. Moreover, the Company promotes employee engagement in the organisation through the culture of generosity where all employees are given an opportunity to express opinions, exchange comprehensive talks as well as conduct an employee engagement survey every two years to offer employees an opportunity to express opinions and suggestions for the Company's stable growth.

### 3. Company Secretary

The Board of Directors appoints the Company Secretary in accordance with Section 89/15 of the Securities and Exchange Act, B.E. 2535 (1992) (as amended) as well as performs other tasks as required by the Notification of the Capital Market Supervisory Board. M.L. Kanidha Devakul was appointed by the Board of Directors' Meeting No. 1/2019 which was held on 14 January 2019 as the Company Secretary, replacing Mr. Peradach Patanachan, effective from 15 January 2019. Her profile is as follows.

#### M.L. Kanidha Devakul

Company Secretary

|                            |                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                           |                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Date of Appointment</b> | 15 January 2019                                                                                                                                                                                                                                                                                                                                                        | 2015 - 2016                                                                                                                                                                                                                                               | Assistant Vice President,<br>Corporate Secretary Department,<br>Total Access Communication<br>Public Company Limited |
| <b>Age</b>                 | 43 years                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                           |                                                                                                                      |
| <b>Education/training</b>  | <ul style="list-style-type: none"> <li>LL.B. (1<sup>st</sup> Class Honours), Chulalongkorn University</li> <li>Company Secretary Program (CSP Class 63/2015)</li> <li>Board Reporting Program (BRP Class 25/2018)</li> <li>Company Reporting Program (CRP Class 20/2018)</li> <li>Advances for Corporate Secretaries,<br/>Thai Listed Companies Association</li> </ul> | 2014 - 2015                                                                                                                                                                                                                                               | Senior Associate,<br>Weerawong, Chinnavat & Peangpanor<br>Limited                                                    |
| <b>Work Experience</b>     | 2019 - Present      Company Secretary,<br>B.Grimm Power Public Company Limited<br><br>2016 - 2018      Company Secretary,<br>Osotspa Public Company Limited                                                                                                                                                                                                            | <b>Shareholding Ratio in the Company (%)</b><br>-None-<br><br><b>Family Relationship with Director and Executive</b><br>-None-<br><br>Details of roles and responsibilities of the Company Secretary<br>are provided in the "Corporate Governance" topic. |                                                                                                                      |

## Board of Directors



### **Mrs. Anchalee Chavanich**

Independent Director /  
Chairperson of Audit Committee /  
Member of Corporate Governance  
Committee

### **Mr. Harald Link**

Chairman /  
Member of Nomination and  
Compensation Committee/ Authorised Director

### **Mr. Anusorn Sangnimnuan**

Independent Director /  
Chairman of Corporate Governance  
Committee / Member of Audit Committee

### **Mrs. Katevalee Napasab**

Independent Director /  
Member of Nomination and  
Compensation Committee

### **Mrs. Preeyanart Soontornwata**

Director / President /  
Chairperson of Management Committee /  
Chairperson of Risk Management  
Committee / Authorised Director





**Mrs. Sunee Sornchaitanasuk**

Independent Director /  
Member of Audit Committee

**Mr. Somkiat Sirichatchai**

Independent Director /  
Chairman of Nomination and Compensation Committee /  
Member of Corporate Governance Committee

**Miss Caroline Monique Marie Christine Link**

Director /  
Member of Nomination and Compensation Committee /  
Authorised Director

## Mr. Harald Link

Chairman / Member of Nomination and Compensation Committee / Authorised Director

**Date of Appointment** 26 July 1993

**Age** 64 years

### Education

- Honorary Doctor of Business Administration (Management), Rajamangala University of Technology Srivijaya
- Master of Business Administration, University of St. Gallen Switzerland

### Training Program of Thai Institute of Directors Association

- Director Accreditation Program, 2017 (DAP)

### Other Training Program

- Diploma, National Defence College, The Joint State-Private Sector Course, 2004 (NDC Class 17)
- Certificate, Top Executives Program, The Capital Market Academy (CMA Class 11)
- Certificate, Energy Literacy for Sustainable Future, Thailand Energy Academy (TEA Class 2)
- Certificate, Executive Management with Business Development and Investment, Institute of Business and Industrial Development (IBID Class 1)

### Current Positions in Other Entities

#### Other Listed Companies in Thailand

##### 2 Companies

- Independent Director and Chairman of the Compensation and Nominating Committee, True Corporation Public Company Limited
- Independent Director, Siam City Cement Public Company Limited

#### Organisation/ Agency/ Other Business (Non-Listed Companies)

##### 75 Companies

- Director, Amata B.Grimm Power Limited
- Director, Amata B.Grimm Power 1 Limited
- Director, Amata B.Grimm Power 2 Limited

- Director, Amata B.Grimm Power 3 Limited
- Director, Amata B.Grimm Power 4 Limited
- Director, Amata B.Grimm Power 5 Limited
- Director, Amata B.Grimm Power (Rayong) 1 Limited
- Director, Amata B.Grimm Power (Rayong) 2 Limited
- Director, Amata B.Grimm Power (Rayong) 3 Limited
- Director, Amata B.Grimm Power (Rayong) 4 Limited
- Director, Amata B.Grimm Power (Rayong) 5 Limited
- Director, Amata City Rayong Company Limited
- Director, B.Grimm BIP Power 1 Limited
- Director, B.Grimm BIP Power 2 Limited
- Director, B.Grimm Power (Laem Chabang) 1 Limited
- Director, B.Grimm Power (Laem Chabang) 2 Limited
- Director, B.Grimm Power (Ratchaburi) 1 Limited
- Director, B.Grimm Power (Ratchaburi) 2 Limited
- Director, B.Grimm Power (Chonburi) 1 Limited
- Director, B.Grimm Power (Chonburi) 2 Limited
- Director, Amata Power (Rayong) Limited
- Director, Amata B.Grimm Power Service Limited
- Director, B.Grimm Power (Bowin) 2 Limited
- Director, B.Grimm Power Holding (Laem Chabang) Limited
- Director, Amata B.Grimm Power Holding Limited
- Director, B.Grimm Yanhee Solar Power Limited
- Director, B.Grimm Sena Solar Power Limited
- Director, B.Grimm Power Service Limited
- Director, B.Grimm Power (WHA) 1 Limited
- Director, Amata B.Grimm Power SPV 1 Limited
- Director, B.Grimm Power Service (Laem Chabang) Limited
- Director, B.Grimm & Co Limited
- Director, B.Grimm Air Conditioning Limited
- Director, B.Grimm Air Conditioning Holding Limited
- Director, B.Grimm Alma Link Building Company Limited
- Director, B.Grimm Alma Link Building Services Company Limited
- Director, B.Grimm Carrier (Thailand) Limited

- Director, B.Grimm Country Club Limited
- Director, B.Grimm Dr. Gerhard Link Building Company Limited
- Director, B.Grimm International Company Limited
- Director, B.Grimm International Service Company Limited
- Director, B.Grimm Joint Venture Holding Company Limited
- Director, B.Grimm Maritime Limited
- Director, MBM Metalworks Limited
- Director, B.Grimm Multi Products Company Limited
- Director, B.Grimm Trading Corporation Company Limited
- Director, Hamon B.Grimm Company Limited
- Director, H & Co Company Limited
- Director, Phud Nam Limited
- Director, Anacot Company Limited
- Director, B.Grimm Cooling Company Limited
- Director, Link Manufacturing 1999 Limited
- Director, Newco Marketing Limited
- Director, Panrail (Thailand) Company Limited
- Director, PCM Transport and Industrial Supplies Limited
- Director, Ueang Naang Limited
- Director, Ueang Saai Limited
- Director, Grimm Installation Services Company Limited
- Director, B.Grimm Healthcare Company Limited
- Director, Biomonde (Thailand) Company Limited
- Director, Merck Limited
- Director, Chubb (Thailand) Company Limited
- Director, Siemens Company Limited
- Director, Pimalai Resort & Spa Company Limited
- Director, Metalwork Services Company Limited
- Director, Carrier (Thailand) Company Limited
- Director, B.Grimm Babcock Power Company Limited
- Director, B.Grimm Energy Investments Corporation
- Director, B.Grimm Power (Singapore) Pte. Ltd.
- Director, B.Grimm Industrial Investments Corporation
- Director, B.Grimm Investments Pte. Ltd.

- Director, Amata Power (Bien Hoa) Limited
- Director, Viet Thai Solar Joint Stock Company
- Director, B.Grimm Power (Malaysia) Sdn. Bhd.
- Director, Glow SPP 1 Company Limited

#### **Other Organisations that may Compete with or have any Conflict of Interest against the Company**

-None-

#### **Work Experience in the Past 5 Years**

1993 - Present      Chairman,  
B.Grimm Power Public Company Limited

*Please refer to Current Positions in Other Entities*

#### **Shareholdings (Including Spouse and Dependent Children)**

|                    |             |                 |
|--------------------|-------------|-----------------|
| Incumbent          | 635,399,700 | shares (24.37%) |
| Spouse             | -           | share           |
| Dependent children | -           | share           |
| Total              | 635,399,700 | shares          |

#### **Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board**

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

#### **Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries**

Father of Miss Caroline Monique Marie Christine Link

## Mrs. Preeyanart Soontornwata

Director / President / Chairperson of Management Committee / Chairperson of Risk Management Committee / Authorised Director

**Date of Appointment** 3 August 1996

**Age** 62 years

### Education

- Master's Degree in Business Administration, Faculty of Commerce and Accountancy, Chulalongkorn University
- Bachelor's Degree in Banking and Finance, Faculty of Commerce and Accountancy, Chulalongkorn University

### Training Program of Thai Institute of Directors Association

- Director Accreditation Program, 2016 (DAP)

### Other Training Program

- Course, Advanced Master of Management Program, National Institute of Development Administration (AMM Class 1)
- Course, Intermediate Certificate Courses - Good Governance for Medical Executives, King Prajadhipok's Institute-The Medical Council of Thailand (Class 6)
- Certificate, The Rule of Law and Democracy, Institute of Constitutional Studies, The Constitutional Court of the Kingdom of Thailand (Class 3)
- Certificate, The Program of Senior Executives on Justice Administration, Judicial Training Institute, (Class 18)
- Certificate, Energy Literacy for Sustainable Future, Thailand Energy Academy (TEA Class 3)
- Certificate, The Fourth Training Course on Administrative Justice for Executives, The Office of the Administrative Courts of Thailand (Class 4)
- Certificate, Top Executive Program in Commerce and Trade, University of the Thai Chamber of Commerce (TEPCoT Class 5)
- Certificate, Top Executives Program, The Capital Market Academy (CMA Class 9)
- Diploma, National Defence College, The Joint State-Private Sector Course, 2007 (NDC)
- Advance Management Harvard School Business, Boston, USA
- Strategic Finance IMD, Lausanne- Switzerland
- International Financial Reporting Conference Conducted by ROCHE Group in Singapore
- Advance Management Course conducted by Thammasat University

### Current Positions in Other Entities

#### Other Listed Companies in Thailand

-None-

#### Organisation/ Agency/ Other Business

##### (Non-Listed Companies)

##### 93 Companies

- Director, B.Grimm BIP Power 1 Limited
- Director, B.Grimm BIP Power 2 Limited
- Director, B.Grimm Power (Chonburi) 1 Limited
- Director, B.Grimm Power (Chonburi) 2 Limited
- Director, B.Grimm Power Service Limited
- Director, B.Grimm Power (WHA) 1 Limited
- Director, B.Grimm Power (Bowin) 2 Limited
- Director, B.Grimm Power (Ratchaburi) 1 Limited
- Director, B.Grimm Power (Ratchaburi) 2 Limited
- Director, Amata B.Grimm Power Limited
- Director, Amata B.Grimm Power 1 Limited
- Director, Amata B.Grimm Power 2 Limited
- Director, Amata B.Grimm Power 3 Limited
- Director, Amata B.Grimm Power 4 Limited
- Director, Amata B.Grimm Power 5 Limited
- Director, Amata B.Grimm Power Service Limited
- Director, Amata B.Grimm Power (Rayong) 1 Limited
- Director, Amata B.Grimm Power (Rayong) 2 Limited
- Director, Amata B.Grimm Power (Rayong) 3 Limited
- Director, Amata B.Grimm Power (Rayong) 4 Limited
- Director, Amata B.Grimm Power (Rayong) 5 Limited
- Director, Amata B.Grimm Power SPV 1 Limited
- Director, Amata B.Grimm Power Holding Limited
- Director, Amata Power (Rayong) Limited
- Director, Grimm Installation Services Company Limited
- Director, Solarwa Limited
- Director, TPS Commercial Limited
- Director, Newco Marketing Limited
- Director, Bo Thong Wind Farm Limited
- Director, B.Grimm Joint Venture Holding Company Limited
- Director, B.Grimm Solar Power 1 Limited
- Director, B.Grimm Solar Power (Chon Daen) Limited
- Director, B.Grimm Solar Power (Cha Am) Limited
- Director, B.Grimm Solar Power (Chai Badan) Limited
- Director, B.Grimm Solar Power (Sap Yai) Limited



- Director, B.Grimm Solar Power (Bamnet Narong) Limited
  - Director, B.Grimm Solar Power (Yang Talat) Limited
  - Director, B.Grimm Solar Power Rooftop Limited
  - Director, B.Grimm Solar Power (Wanon Niwat) Limited
  - Director, B.Grimm Solar Power (Sriboonruang) Limited
  - Director, B.Grimm Solar Power (Sakaeo) 1 Limited
  - Director, B.Grimm Dr. Gerhard Link Building Company Limited
  - Director, B.Grimm Trading Corporation Company Limited
  - Director, B.Grimm Power Service (Laem Chabang) Limited
  - Director, B.Grimm Power (Laem Chabang) 1 Limited
  - Director, B.Grimm Power (Laem Chabang) 2 Limited
  - Director, B.Grimm Power Holding (Laem Chabang) Limited
  - Director, B.Grimm Multi Products Company Limited
  - Director, B.Grimm Maritime Limited
  - Director, B.Grimm Yanhee Solar Power Limited
  - Director, B.Grimm Renewable Power 1 Limited
  - Director, B.Grimm Renewable Power 2 Limited
  - Director, B.Grimm Power Smart Solution Limited
  - Director, B.Grimm LNG Limited
  - Director, B.Grimm S.Napa Solar Power Limited
  - Director, B.Grimm Spectrum Solar Power Limited
  - Director, B.Grimm Sena Solar Power Limited
  - Director, B.Grimm Alma Link Building Company Limited
  - Director, B.Grimm Alma Link Building Services Company Limited
  - Director, B.Grimm International Company Limited
  - Director, B.Grimm International Service Company Limited
  - Director, B.Grimm & Co Limited
  - Director, B.Grimm Air Conditioning Holding Limited
  - Director, B.Grimm Healthcare Company Limited
  - Director, Biomonde (Thailand) Company Limited
  - Director, PCM Transport and Industrial Supplies Limited
  - Director, Phud Nam Limited
  - Director, Link Manufacturing 1999 Limited
  - Director, Anacot Company Limited
  - Director, MBM Metalworks Limited
  - Director, Ueang Naang Limited
  - Director, Ueang Saai Limited
  - Director, Thai Wind Power (Mukdahan) Company Limited
  - Director, British Fashion Company Limited
  - Director, Progress Interchem (Thailand) Company Limited
  - Director, M & E Installation Company Limited
  - Director, B.Grimm Energy Investments Corporation
  - Director, B.Grimm Power (Singapore) Pte. Ltd
  - Director, Amata Power (Bien Hoa) Limited
  - Director, B.Grimm Power (Lao) Company Limited
  - Director, Nam Che 1 Hydropower Company Limited
  - Director, Nam Khao Hydropower Company Limited
  - Director, Xenamnoy and Xekatom Hydro Power Company Limited
  - Director, Viet Thai Solar Joint Stock Company
  - Director, Dau Tieng Tay Ninh Energy Joint Stock Company
  - Director, Phu Yen TTP Joint Stock Company
  - Director, B.Grimm Power (Malaysia) Sdn. Bhd.
  - Director, B.Grimm Investments Pte. Ltd.
  - Director, B.Grimm Power Korea Limited
  - Director, Glow SPP 1 Company Limited
  - Director, B.Grimm Solar Power Inc.
  - Director, Sisophon Clean Power Company Limited
  - Director, Ray Power Supply Company Limited
- Other Organisations that may Compete with or have any Conflict of Interest against the Company**  
-None-
- Work Experience in the Past 5 Years**  
1996 - Present      President,  
B.Grimm Power Public Company Limited
- Please refer to Current Positions in Other Entities*
- Shareholdings (Including Spouse and Dependent Children)**
- |                    |                            |
|--------------------|----------------------------|
| Incumbent          | 6,762,150 shares (0.2539%) |
| Spouse             | - share                    |
| Dependent children | - share                    |
| Total              | 6,762,150 shares           |
- Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board**  
Qualified and never be punished by committing an offence against Securities law and Derivatives law.
- Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries**  
-None-

## Miss Caroline Monique Marie Christine Link

Director / Member of Nomination and Compensation Committee / Authorised Director

**Date of Appointment** 1 January 2009

**Age** 37 years

### Education

- Bachelor's Degree in Finance, European Business School Madrid (EPS)

### Training Program of Thai Institute of Directors Association

- Director Accreditation Program, 2016 (DAP)

### Other Training Program

-None-

### Current Positions in Other Entities

#### Other Listed Companies in Thailand

-None-

#### Organisation/ Agency/ Other Business (Non-Listed Companies)

##### 30 Companies

- Director, B.Grimm Power (Singapore) Pte. Ltd
- Director, B.Grimm Investments Pte. Ltd
- Director, B.Grimm Industrial Investments Corporation
- Director, B.Grimm Energy Investments Corporation
- Director, Anacot Company Limited
- Director, B.Grimm Dr. Gerhard Link Building Company Limited
- Director, B.Grimm Alma Link Building Company Limited
- Director, B.Grimm Alma Link Building Services Company Limited
- Director, B.Grimm International Service Company Limited
- Director, B.Grimm Joint Venture Holding Company Limited
- Director, B.Grimm Maritime Limited
- Director, B.Grimm & Co Limited
- Director, B.Grimm Cooling Company Limited
- Director, B.Grimm BIP Power 1 Limited
- Director, B.Grimm BIP Power 2 Limited
- Director, Amata B.Grimm Power Limited

- Director, Amata B.Grimm Power 1 Limited
- Director, Amata B.Grimm Power 2 Limited
- Director, Amata B.Grimm Power 3 Limited
- Director, Amata B.Grimm Power Service Limited
- Director, Amata B.Grimm Power (Rayong) 2 Limited
- Director, Amata B.Grimm Power (Rayong) 3 Limited
- Director, Amata B.Grimm Power (Rayong) 4 Limited
- Director, Amata B.Grimm Power (Rayong) 5 Limited
- Director, Amata B.Grimm Power SPV 1 Limited
- Director, Amata Power (Rayong) Limited
- Director, Carrier (Thailand) Limited
- Director, Merck Limited
- Director, Omroom Company Limited
- Director, B.Grimm Air Conditioning Limited

#### Other Organisations that may Compete with or have any Conflict of Interest against the Company

-None-

### Work Experience in the Past 5 Years

2009 - Present Director,  
B.Grimm Power Public Company Limited

*Please refer to Current Positions in Other Entities*

### Shareholdings (Including Spouse and Dependent Children)

|                    |            |                  |
|--------------------|------------|------------------|
| Incumbent          | 28,350,000 | shares (1.0875%) |
| Spouse             | -          | share            |
| Dependent children | -          | share            |
| Total              | 28,350,000 | shares           |

### Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

### Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries

Daughter of Mr. Harald Link

**Mr. Somkiat Sirichatchai**

Independent Director / Chairman of Nomination and Compensation Committee / Member of Corporate Governance Committee

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                                                                                                                                                       |                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Date of Appointment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              | 8 June 2016 | <b>Work Experience in the Past 5 Years</b>                                                                                                            |                                                                                                                                                            |
| <b>Age</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 55 years    | 2016 - Present                                                                                                                                        | Independent Director, Chairman of Nomination and Compensation Committee and Member of Corporate Governance Committee, B.Grimm Power Public Company Limited |
| <b>Education</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 2015 - 2019                                                                                                                                           | Advisor to the Executive Committee, King Chulalongkorn Memorial Hospital and Queen Savang Vadhana Memorial Hospital (Si Racha)                             |
| <ul style="list-style-type: none"> <li>Master of Business Administration (Finance), University of Pennsylvania (Wharton), USA</li> <li>Bachelor of Engineering (Honours), Chulalongkorn University</li> </ul>                                                                                                                                                                                                                                                           |             | 2014 - 2019                                                                                                                                           | Director, Thai Airways Public Company Limited                                                                                                              |
| <b>Training Program of Thai Institute of Directors Association</b>                                                                                                                                                                                                                                                                                                                                                                                                      |             | 2017 - 2018                                                                                                                                           | Member of Manpower Preparation for Government Sector Subcommittee, Office of the Civil Service Commission                                                  |
| <ul style="list-style-type: none"> <li>Advanced Audit Committee Program, 2018 (AACP)</li> <li>IT Governance and Cyber Resilience Program, 2017 (ITG)</li> <li>Role of Chairman Program, 2016 (RCP)</li> <li>Director Certification Program, 2013 (DCP)</li> <li>Director Accreditation Program, 2010 (DAP)</li> <li>Role of Compensation Committee, 2010 (RCC)</li> </ul>                                                                                               |             | 2013 - 2018                                                                                                                                           | Risk Management Sub Committee, The Stock Exchange of Thailand                                                                                              |
| <b>Other Training Program</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           |             | 2008 - 2018                                                                                                                                           | Member of the Workforce Management in Public Sector Subcommittee, Office of the Civil Service Commission                                                   |
| <ul style="list-style-type: none"> <li>Advanced Management Program, Harvard Business School, USA, 2015</li> <li>Certificate, The Capital Market Academy, 2014</li> <li>Diploma, National Defence College, The Joint State-Private Sector Course, 2010 (NDC)</li> <li>High Performance Leadership, IMD, Lausanne Switzerland, 2008</li> <li>Advanced HR Executive, Michigan Ross School of Business, USA, 2007</li> </ul>                                                |             | 2013 - 2015                                                                                                                                           | Director and Chairman of the Risk Management Committee, Kasikornbank Public Company Limited                                                                |
| <b>Current Positions in Other Entities</b>                                                                                                                                                                                                                                                                                                                                                                                                                              |             | 2011 - 2012                                                                                                                                           | Chairman, Kasikorn Asset Management Company Limited                                                                                                        |
| <b>Other Listed Companies in Thailand</b>                                                                                                                                                                                                                                                                                                                                                                                                                               |             | 2011 - 2012                                                                                                                                           | Chairman, Kasikorn Research Center Company Limited                                                                                                         |
| <b>1 company</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 2010 - 2013                                                                                                                                           | Senior Executive Vice President, Kasikornbank Public Company Limited                                                                                       |
| <ul style="list-style-type: none"> <li>Director, Member of the Executive Committee and Chairman of the Risk Management Committee, Muang Thai Insurance Public Company Limited</li> </ul>                                                                                                                                                                                                                                                                                |             |                                                                                                                                                       |                                                                                                                                                            |
| <b>Organisation/ Agency/ Other Business (Non-Listed Companies)</b>                                                                                                                                                                                                                                                                                                                                                                                                      |             | <b>Shareholdings (Including Spouse and Dependent Children)</b>                                                                                        |                                                                                                                                                            |
| <b>3 companies</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             | Incumbent                                                                                                                                             | 121,200 shares (0.0046%)                                                                                                                                   |
| <ul style="list-style-type: none"> <li>Director and Chairman of the Risk Management Committee, Muang Thai Life Assurance Public Company Limited</li> <li>Director, Muang Thai Group Holding Company Limited</li> <li>Board Member of Medical Service Cluster (King Chulalongkorn Memorial Hospital and Queen Savang Vadhana Memorial Hospital (Si Racha)) and Chief of the Advisory Panel of the Human Resource Management Committee, Thai Red Cross Society</li> </ul> |             | Spouse                                                                                                                                                | - share                                                                                                                                                    |
| <b>Other Organisations that may Compete with or have any Conflict of Interest against the Company</b>                                                                                                                                                                                                                                                                                                                                                                   |             | Dependent children                                                                                                                                    | - share                                                                                                                                                    |
| -None-                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             | Total                                                                                                                                                 | 121,200 shares                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             | <b>Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board</b> |                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             | Qualified and never be punished by committing an offence against Securities law and Derivatives law.                                                  |                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             | <b>Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries</b>                                      |                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             | -None-                                                                                                                                                |                                                                                                                                                            |

## Mrs. Katevalee Napasab

Independent Director / Member of Nomination and Compensation Committee

**Date of Appointment** 8 June 2016

**Age** 64 years

### Education

- Master of Business Administration (MBA), Fairleigh Dickinson University
- Bachelor of Laws, Thammasat University

### Training Program of Thai Institute of Directors Association

- Director Certification Program, 2003 (DCP)

### Other Training Program

- Diploma, National Defence College, The Joint State-Private Sector Course, 2004 (NDC Class 17)
- Certificate, Top Executives Program, The Capital Market Academy (CMA Class 14)
- Bhumipalung Phandin for National Leader Course, Chulalongkorn University (Class 1)
- Thammasat Leadership Program, Foundation of Thammasat Leadership Program, Thammasat University, (Class 2)
- Certificate, Energy Literacy for Sustainable Future, Thailand Energy Academy (TEA Class 5)

### Current Positions in Other Entities

#### Other Listed Companies in Thailand

-None-

#### Organisation/ Agency/ Other Business (Non-Listed Companies)

##### 26 companies

- Chairman and Chief Executive Officer, S.Napa (Thailand) Company Limited
- Chairman, Global Utilities Services Company Limited
- Chairman, GEM Environmental Management Company Limited
- Chairman, True ICONSIAM Company Limited
- Director, S.Napa Property Company Limited
- Director and Member of the Executive Committee, Siam Piwat Company Limited
- Director, Siam Paragon Development Company Limited
- Director, Siam Paragon Retail Company Limited
- Director, ICONSIAM Company Limited
- Director, The ICONSIAM Residence Corporation Limited
- Director, The ICONSIAM Superlux Residence Corporation Limited

- Director, Gusco Water Company Limited
- Director, KSPKH Holding Company Limited
- Director, The ICONSIAM Chaopraya River Holdings Company Limited
- Director, Royal Paragon Enterprise Company Limited
- Director, Siam Piwat Holding Company Limited
- Director, SNC (2015) Company Limited
- Director, SNV Company Limited
- Phufa Shop Operation Committee
- Director, C&K Holding Company Limited
- Director, TP Land (2017) Company Limited
- Director, Siam River Holdings Company Limited
- Director, HH Land Development Company Limited
- Director, MPP Holding Company Limited
- Director, SNG Solutions Company Limited
- Director, Pra Artid Land Company Limited

#### Other Organisations that may Compete with or have any Conflict of Interest against the Company

-None-

### Work Experience in the Past 5 Years

|                |                                                                                                                |
|----------------|----------------------------------------------------------------------------------------------------------------|
| 2016 - Present | Independent Director and Member of Nomination and Compensation Committee, B.Grimm Power Public Company Limited |
| Present        | Chairman and Chief Executive Officer, S.Napa (Thailand) Company Limited                                        |
| Present        | Chairman, Global Utilities Services Company Limited                                                            |
| Present        | Chairman, GEM Environmental Management Company Limited                                                         |

*Please refer to Current Positions in Other Entities*

### Shareholdings (Including Spouse and Dependent Children)

|                    |         |                  |
|--------------------|---------|------------------|
| Incumbent          | 424,200 | shares (0.0163%) |
| Spouse             | -       | share            |
| Dependent children | -       | share            |
| Total              | 424,200 | shares           |

### Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

### Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries

-None-



**Mrs. Anchalee Chavanich**

Independent Director / Chairperson of Audit Committee / Member of Corporate Governance Committee

**Date of Appointment** 8 June 2016**Age** 69 years**Education**

- Master of Science (Engineering Management), University of Missouri-Rolla, USA
- Bachelor of Engineering (Industrial), Chulalongkorn University

**Training Program of Thai Institute of Directors Association**

- Audit Committee Program, Class 1/2004 (ACP)
- Director Certification Program, Class 45/2004 (DCP)
- Finance for Non-Finance Directors, Class 10/2004 (FND)
- Role of the Chairman Program, Class 13/2006 (RCP)

**Other Training Program**

- Diploma, National Defence College, The Joint State-Private Sector Course, 1998 (NDC Class 11)
- Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives, King Prajadhipok's Institute (Class 6/2002)
- Certificate, Top Executives Program, The Capital Market Academy (CMA Class 7/2008)
- Certificate, Advanced Security Management Program, National Defence College (ASMP Class 3/2012)
- Certificate, The Fourth Training Course on Administrative Justice for Executives, The Office of the Administrative Courts of Thailand (Class 4/2012)
- Certificate, Energy Literacy for Sustainable Future, Thailand Energy Academy (TEA Class 3/2014)
- Certificate, The Rule of Law and Democracy, Institute of Constitutional Studies, The Constitutional Court of the Kingdom of Thailand (Class 2/2014)

**Current Positions in Other Entities****Other Listed Companies in Thailand****1 company**

- Independent Director and Chairperson of the Audit Committee, Inoue Rubber (Thailand) Public Company Limited

**Organisation/ Agency/ Other Business****(Non-Listed Companies)****5 companies**

- Director, WHA Industrial Development Public Company Limited
- President, Thai Industrial Estate and Strategic Partner Association
- Chairman, Coral and Coastal Conservation Foundation
- Honorary Advisor, Eastern Economic Corridor Office of Thailand (EEC)
- Honorary Member of the University Council, Dhurakij Pundit University

**Other Organisations that may Compete with or have any Conflict of Interest against the Company**

-None-

**Work Experience in the Past 5 Years**

- |                |                                                                                                                                         |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 2016 - Present | Independent Director, Chairperson of Audit Committee and Member of Corporate Governance Committee, B.Grimm Power Public Company Limited |
| 2018 - Present | Honorary Member of the University Council, Dhurakij Pundit University                                                                   |
| 2017 - Present | Independent Director and Chairman of the Audit Committee, Inoue Rubber (Thailand) Public Company Limited                                |

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|                |                                                                                                                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|
| 2017- Present  | Director, WHA Industrial Development Public Company Limited                                                                    |
| 2017 - Present | Honorary Advisor, Eastern Economic Corridor Office of Thailand (EEC)                                                           |
| 2011 - Present | President, Thai Industrial Estate and Strategic Partner Association                                                            |
| 2000 - Present | Chairman, Coral and Coastal Conservation Foundation                                                                            |
| 2016 - 2017    | Member, Economic Reform Steering Commission (Industrial and Service)                                                           |
| 2016 - 2017    | Advisor, National Reform Steering Commission (Energy)                                                                          |
| 2015 - 2016    | Member, National Reform Council                                                                                                |
| 2013 - 2014    | Chairman, Electricity Generating Authority of Thailand (EGAT)                                                                  |
| 2011 - 2013    | Chairman, Siam Solar Company Limited                                                                                           |
| 2011 - 2013    | Director, Engineering Institute of Thailand under H.M. The King's Patronage (Chairman of the Thai Women Engineers Association) |
| 2000 - 2015    | Chairman, Thai Industrial Estate Foundation                                                                                    |

#### Shareholdings (Including Spouse and Dependent Children)

|                    |                          |
|--------------------|--------------------------|
| Incumbent          | 121,200 shares (0.0046%) |
| Spouse             | - share                  |
| Dependent children | - share                  |
| Total              | 121,200 shares           |

#### Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

#### Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries

-None-

**Mr. Anusorn Sangnimnuan**

Independent Director / Chairman of Corporate Governance Committee / Member of Audit Committee

**Date of Appointment** 8 June 2016**Age** 65 years**Education**

- Ph.D. (Chemical Engineering), Monash University, Australia
- M.Eng. (Environmental Engineering), Asian Institute of Technology
- B.Sc. (Chemical Engineering), Chulalongkorn University

**Training Program of Thai Institute of Directors Association**

- Director Certification Program, 2005 (DCP)
- Director Accreditation Program, 2005 (DAP)
- Finance for Non-Finance Director, 2005 (FN)
- DCP Refresher, 2008 (DCPRE)

**Other Training Program**

-None-

**Current Positions in Other Entities****Other Listed Companies in Thailand****2 companies**

- Director, IRPC Public Company Limited
- Director, Pruksa Holding Public Company Limited

**Organisation/ Agency/ Other Business  
(Non-Listed Companies)**

-None-

**Other Organisations that may Compete with or have any  
Conflict of Interest against the Company**

-None-

**Work Experience in the Past 5 Years**

- 2016 - Present Independent Director, Chairman of Corporate Governance Committee and Member of Audit Committee, B.Grimm Power Public Company Limited
- 2016 - Present Director, IRPC Public Company Limited
- 2016 - Present Director, Pruksa Holding Public Company Limited
- 2014 - 2018 Director, Pruksa Real Estate Public Company Limited
- 2014 - 2015 Director, Loxley Public Company Limited
- 2014 - 2015 Chairman, Hydrotek Public Company Limited
- 2013 - 2015 Senior Consultant, Bangchak Petroleum Public Company Limited
- 2005 - 2012 President, Bangchak Petroleum Public Company Limited

**Shareholdings (Including Spouse and Dependent Children)**

|                    |         |                  |
|--------------------|---------|------------------|
| Incumbent          | 321,200 | shares (0.0123%) |
| Spouse             | -       | share            |
| Dependent children | -       | share            |
| Total              | 321,200 | shares           |

**Having Qualifications according to Laws and No Prohibited  
Qualifications according to the Notification of the Capital  
Market Supervisory Board**

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

**Family Relationship with Other Directors, Executives or  
Major Shareholders of the Company or Subsidiaries**

-None-

## Mrs. Sunee Sornchaitanasuk

Independent Director / Member of Audit Committee

**Date of Appointment** 26 April 2018

**Age** 57 years

### Education

- Doctor of Philosophy (Communication Management), Dissertation of Suan Dusit University
- Master of Industrial Business, King Mongkut's Institute of Technology
- Higher Diploma in Auditing, Thammasat University
- Certified Public Accountant, Institute of Certified Accountants and Auditors of Thailand, CPA No. 3733
- Bachelor of Accounting, Thammasat University

### Training Program of Thai Institute of Directors Association

- Ethical Leadership Program, 16/2019 (ELP)
- Strategic Board Master, 1/2017 (SBM)
- Successful Formulation and Execution of Strategy, 17/2013 (SFE)
- Role of the Chairman Program, 18/2008 (RCP)
- Monitoring the Internal Audit Function, 2/2008 (MIA)
- Monitoring the System of Internal Control and Risk Management, 3/2008 (MIR)
- Chartered Director Program, 3/2008 (CDP)
- Quality of Financial Reporting, 5/2007 (QFR)
- Director Diploma Examination, 18/2005 (Fellow member)
- Audit Committee Program, 5/2005 (ACP)
- Director Certification Program, 53/2005 (DCP)
- Director Accreditation Program, 28/2004 (DAP)

### Other Training Program

- Intermediate Certificate Courses, Good Governance for Medical Executives Program, King Prajadhipok's Institute-The Medical Council of Thailand (Class 3)
- Certificate, Top Executive Program in Commerce and Trade, University of the Thai Chamber of Commerce (TEPCoT Class 7)
- Certificate, Energy Literacy for Sustainable Future, Thailand Energy Academy (TEA Class 4)

- Certificate, Bangkok Metropolitan Administration Program, Institute of Metropolitan Development (Class 2)
- Diploma, National Defence College, The Joint State-Private Sector Course, 2011 (NDA)
- Certificate, Top Executives Program, The Capital Market Academy (CMA Class 11)
- Certificate, Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives, King Prajadhipok's Institute (Class 10)

### Current Positions in Other Entities

#### Other Listed Companies in Thailand

##### 4 companies

- Independent Director and Chairman of Audit Committee, Siam City Cement Public Company Limited
- Independent Director and Chairman of Audit Committee, Namyong Terminal Public Company Limited
- Director, NFC Public Company Limited
- Independent Director and Chairman of Audit Committee, Applacad Public Company Limited

#### Organisation/ Agency/ Other Business

##### (Non-Listed Companies)

##### 2 companies

- Chief Executive Officer, AMC Medicalcenter (Thailand) Company Limited
- Director, CPA Associate (Thailand) Company Limited

#### Other Organisations that may Compete with or have any Conflict of Interest against the Company

-None-

### Work Experience in the Past 5 Years

- 2018 - Present Independent Director and Member of Audit Committee, B.Grimm Power Public Company Limited
- 2018 - Present Independent Director and Chairman of Audit Committee, Applacad Public Company Limited



|                |                                                                                               |                                                                                                                                                       |                                                                                                                             |
|----------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 2016 - Present | Independent Director and Chairman of Audit Committee, Namyong Terminal Public Company Limited | 2013 - 2015                                                                                                                                           | The Standing Committee on Tourism and Sport of the House of Representatives                                                 |
| 2015 - Present | Independent Director and Chairman of Audit Committee, Siam City Cement Public Company Limited | 2007 - 2015                                                                                                                                           | Chairman of the Nomination and Remuneration Committee, Audit Committee and Independent Director, EMC Public Limited Company |
| 2015 - Present | Director, CPA Associates (Thailand) Company Limited                                           | <b>Shareholdings (Including Spouse and Dependent Children)</b>                                                                                        |                                                                                                                             |
| 2003 - Present | Director, NFC Public Company Limited                                                          | Incumbent                                                                                                                                             | - share                                                                                                                     |
| 2015 - 2017    | Advisor to the Extraordinary and Plenipotentiary on Space and National Legislative Assembly   | Spouse                                                                                                                                                | - share                                                                                                                     |
| 2013 - 2015    | Honorary Director of Accounting of Commission of Financing of Education, Ministry of Finance  | Dependent children                                                                                                                                    | - share                                                                                                                     |
| 2013 - 2015    | Chairman of Audit Sub-Committee for Financing of Education, Ministry of Finance               | Total                                                                                                                                                 | - share                                                                                                                     |
| 2013 - 2015    | Advisor to the Deputy Minister of Education Ministry of Education                             | <b>Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board</b> |                                                                                                                             |
|                |                                                                                               | Qualified and never be punished by committing an offence against Securities law and Derivatives law.                                                  |                                                                                                                             |
|                |                                                                                               | <b>Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries</b>                                      |                                                                                                                             |
|                |                                                                                               | -None-                                                                                                                                                |                                                                                                                             |

#### Remarks

- All above directors have not committed any offence against the Securities and Exchange Act, B.E.2535 or the Derivatives Act, B.E.2546 during the past 5 years, especially in connection with the following cases:
  - Act in bad faith or with gross negligence.
  - Disclosure or providing the information or a false statement which may be misled, or concealing facts which should have been stated in materiality that may affect on the decision-making to shareholders, investors, or related persons.
  - Unfair practices or taking advantage of investors in the trading of securities or derivatives, or being or having been participated in or supported such act.
- Number of the directors who are authorised to sign on behalf of the Company as stated in the Company's Affidavit is as follow;  
Mr. Harald Link or Ms. Caroline Monique Marie Christine Link or Mrs. Preeyanart Soontornwata, any two of these three directors jointly sign and affix the Company's seal.

## Management Team



**Mr. Surasak Towanich**

Senior Executive Vice President - Sales,  
Marketing and Electricity Transmission and Distribution /  
Member of Management Committee /  
Member of Risk Management Committee



**Mr. Chote Chusuwan**

Chief Operations Officer - Thailand /  
Senior Executive Vice President - Operations /  
Member of Management Committee /  
Member of Risk Management Committee



**Mr. Arunphun Pootong**

Executive Vice President - Business and Project Development (Conventional) /  
Commercial and Procurement /  
Member of Management Committee /  
Member of Risk Management Committee



**Mr. Peradach Patanachan**

Senior Executive Vice President - Legal Counsellor /  
Business & Project Development (Renewable & Hybrid Projects) /  
B.Grimm Power Solar Power Rooftop /  
Member of Management Committee / Member of Risk Management Committee

**Mr. Nopadej Karnasuta**

Chief Financial Officer /  
Senior Executive Vice President - Finance and Accounting /  
Member of Management Committee /  
Member of Risk Management Committee



**Miss Siriwong Borvornboonrutai**

Deputy Chief Financial Officer /  
Executive Vice President - Finance



**Miss Porntip Tangpongbundit**

Executive Vice President - Accounting



## Mr. Surasak Towanich

Senior Executive Vice President - Sales, Marketing and Electricity Transmission and Distribution /  
Member of Management Committee / Member of Risk Management Committee

**Date of Appointment** 1 January 1996

**Age** 59 years

### Education

- Bachelor of Engineering (Electrical),  
King's Mongkut Institute of Technology Thonburi

### Training Program of Thai Institute of Directors Association

- Director Certification Program, 2015 (DCP)

### Other Training Program

-None-

### Current Positions in Other Entities

#### Other Listed Companies in Thailand

-None-

#### Organisation/ Agency/ Other Business (Non-Listed Companies)

##### 20 companies

- Director, Amata B.Grimm Power 1 Limited
- Director, Amata B.Grimm Power 2 Limited
- Director, Amata B.Grimm Power 3 Limited
- Director, B.Grimm BIP Power 1 Limited
- Director, B.Grimm Power (Laem Chabang) 1 Limited
- Director, B.Grimm Power (Laem Chabang) 2 Limited
- Director, B.Grimm Power Service (Laem Chabang) Limited
- Director, Amata Power (Bien Hoa) Limited
- Director, B.Grimm Solar Power Rooftop Limited
- Director, B.Grimm Power (WHA) 1 Limited
- Director, Thai Wind Power (Mukdahan) Limited
- Director, Bo Thong Wind Farm Limited
- Director, B.Grimm S.Napa Solar Power Limited
- Director, B.Grimm Spectrum Solar Power Limited
- Director, Phu Yen TTP Joint Stock Company

- Director, B.Grimm Power Korea Limited
- Director, B.Grimm Solar Power Inc.
- Director, B.Grimm Power Smart Solution Limited
- Director, Sisophon Clean Power Company Limited
- Director, Ray Power Supply Company Limited

#### Other Organisations that may Compete with or have any Conflict of Interest against the Company

-None-

### Work Experience in the Past 5 Years

2016 - Present Senior Executive Vice President - Sales,  
Marketing and Electricity Transmission and  
Distribution, B.Grimm Power Public  
Company Limited

1996 - 2015 Executive Vice President, Amata B.Grimm  
Power Limited

*Please refer to Current Positions in Other Entities*

### Shareholdings (Including Spouse and Dependent Children)

|                    |                         |
|--------------------|-------------------------|
| Incumbent          | 90,950 shares (0.0035%) |
| Spouse             | - share                 |
| Dependent children | - share                 |
| Total              | 90,950 shares           |

### Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board

Qualified and never be punished by committing an offence  
against Securities law and Derivatives law.

### Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries

-None-



**Mr. Chote Chusuwan**

Chief Operations Officer - Thailand / Senior Executive Vice President - Operations /

Member of Management Committee / Member of Risk Management Committee

**Date of Appointment** 17 February 2014**Age** 57 years**Education**

- Master of Business Administration (Finance and Banking), Sripatum University
- Bachelor of Engineering (Electrical), Prince of Songkla University

**Training Program of Thai Institute of Directors Association**

- Director Certification Program, 2015 (DCP)

**Other Training Program**

- Diploma, National Defence College, The National Defence Course (Class 60)

**Current Positions in Other Entities****Other Listed Companies in Thailand**

-None-

**Organisation/ Agency/ Other Business (Non-Listed Companies)****41 companies**

- Director, Amata B.Grimm Power 1 Limited
- Director, Amata B.Grimm Power 2 Limited
- Director, Amata B.Grimm Power 3 Limited
- Director, Amata B.Grimm Power 4 Limited
- Director, Amata B.Grimm Power 5 Limited
- Director, B.Grimm Power (Laem Chabang) 1 Limited
- Director, B.Grimm Power (Laem Chabang) 2 Limited
- Director, B.Grimm Power Holding (Laem Chabang) Limited
- Director, Amata B.Grimm Power Holding Limited
- Director, B.Grimm Power Service (Laem Chabang) Limited
- Director, B.Grimm Power Service Limited
- Director, Amata B.Grimm Power Service Limited
- Director, Thai Wind Power (Mukdahan) Limited
- Director, Bo Thong Wind Farm Limited
- Director, Amata Power (Bien Hoa) Limited
- Director, B.Grimm Solar Power (Chon Daen) Limited
- Director, B.Grimm Solar Power (Cha Am) Limited
- Director, B.Grimm Solar Power (Chai Badan) Limited
- Director, B.Grimm Solar Power (Sap Yai) Limited
- Director, B.Grimm Solar Power (Bamnet Narong) Limited
- Director, B.Grimm Solar Power (Yang Talat) Limited
- Director, B.Grimm Solar Power (Wanon Niwat) Limited
- Director, B.Grimm Solar Power (Sriboonruang) Limited

- Director, Amata Power (Rayong) Limited
- Director, Amata B.Grimm Power (Rayong) 1 Limited
- Director, Amata B.Grimm Power (Rayong) 2 Limited
- Director, Amata B.Grimm Power (Rayong) 3 Limited
- Director, Amata B.Grimm Power (Rayong) 4 Limited
- Director, Amata B.Grimm Power (Rayong) 5 Limited
- Director, B.Grimm Solar Power 1 Limited
- Director, B.Grimm Power (WHA) 1 Limited
- Director, B.Grimm Renewable Power 1 Limited
- Director, B.Grimm Renewable Power 2 Limited
- Director, B.Grimm Power Smart Solution Limited
- Director, B.Grimm LNG Limited
- Director, B.Grimm BIP Power 1 Limited
- Director, B.Grimm BIP Power 2 Limited
- Director, B.Grimm Solar Power Rooftop Limited
- Director, B.Grimm Yanhee Solar Power Limited
- Director, Glow SPP 1 Company Limited
- Director, Amata B.Grimm Power Limited

**Other Organisations that may Compete with or have any Conflict of Interest against the Company**

-None-

**Work Experience in the Past 5 Years**

- 2016 - Present Chief Operations Officer - Thailand and Senior Executive Vice President - Operations, B.Grimm Power Public Company Limited
- 1996 - 2015 Executive Vice President, Amata B.Grimm Power Limited

*Please refer to Current Positions in Other Entities***Shareholdings (Including Spouse and Dependent Children)**

|                    |        |                  |
|--------------------|--------|------------------|
| Incumbent          | 90,950 | shares (0.0035%) |
| Spouse             | -      | share            |
| Dependent children | -      | share            |
| Total              | 90,950 | shares           |

**Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board**

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

**Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries**

-None-

**Mr. Arunphun Pootong**

Executive Vice President - Business and Project Development (Conventional) / Commercial and Procurement /  
Member of Management Committee / Member of Risk Management Committee

**Date of Appointment** 25 April 2019

**Age** 56 years

**Education**

- Master of Business Administration (Executive Program),  
Thammasat University
- Bachelor of Engineering (Mechanical),  
Chiang Mai University

**Training Program of Thai Institute of Directors Association**

-None-

**Other Training Program**

-None-

**Current Positions in Other Entities****Other Listed Companies in Thailand**

-None-

**Organisation/ Agency/ Other Business  
(Non-Listed Companies)****1 company**

- Director, B.Grimm LNG Limited

**Other Organisations that may Compete with or have any  
Conflict of Interest against the Company**

-None-

**Work Experience in the Past 5 Years**

2019 - Present Executive Vice President - Business and  
Project Development (Conventional) and  
Commercial and Procurement,  
B.Grimm Power Public Company Limited

2015 - 2019 Managing Director, Jera Power Engineering  
(Thailand) Company Limited

2006 - 2019 Deputy Managing Director,  
Jera Power (Thailand) Company Limited

*Please refer to Current Positions in Other Entities*

**Shareholdings (Including Spouse and Dependent Children)**

|                    |                         |
|--------------------|-------------------------|
| Incumbent          | 35,000 shares (0.0013%) |
| Spouse             | - share                 |
| Dependent children | - share                 |
| Total              | 35,000 shares           |

**Having Qualifications according to Laws and No Prohibited  
Qualifications according to the Notification of the Capital  
Market Supervisory Board**

Qualified and never be punished by committing an offence  
against Securities law and Derivatives law.

**Family Relationship with Other Directors, Executives or  
Major Shareholders of the Company or Subsidiaries**

-None-

**Mr. Peradach Patanachan**

Senior Executive Vice President - Legal Counsellor / Business and Project Development (Renewable & Hybrid Projects)  
/ B.Grimm Power Solar Power Rooftop / Member of Management Committee / Member of Risk Management Committee

**Date of Appointment** 1 March 2007

**Age** 47 years

**Education**

- Master of Laws, Chulalongkorn University
- Bachelor of Laws, Thammasat University

**Training Program of Thai Institute of Directors Association**

- Director Certification Program, 2015 (DCP)

**Other Training Program**

- Certificate, Thammasat Leadership Program, Foundation of Thammasat Leadership Program, Thammasat University (Class 5, Year 2015)
- Certificate, Energy Literacy for Sustainable Future, Thailand Energy Academy (TEA Class 11)

**Current Positions in Other Entities****Other Listed Companies in Thailand**

-None-

**Organisation/ Agency/ Other Business  
(Non-Listed Companies)****42 companies**

- Director, Amata B.Grimm Power 3 Limited
- Director, Amata B.Grimm Power 5 Limited
- Director, Amata B.Grimm Power (Rayong) 1 Limited
- Director, Amata B.Grimm Power (Rayong) 2 Limited
- Director, B.Grimm BIP Power 1 Limited
- Director, B.Grimm BIP Power 2 Limited
- Director, B.Grimm Power (Laem Chabang) 1 Limited
- Director, B.Grimm Power (Laem Chabang) 2 Limited
- Director, Amata Power (Rayong) Limited
- Director, B.Grimm Power Holding (Laem Chabang) Limited
- Director, Amata B.Grimm Power Holding Limited
- Director, B.Grimm Power Service (Laem Chabang) Limited
- Director, Thai Wind Power (Mukdahan) Limited
- Director, B.Grimm Solar Power 1 Limited
- Director, B.Grimm Solar Power (Chon Daen) Limited
- Director, B.Grimm Solar Power (Cha Am) Limited
- Director, B.Grimm Solar Power (Chai Badan) Limited
- Director, B.Grimm Solar Power (Sap Yai) Limited
- Director, B.Grimm Solar Power Rooftop Limited
- Director, B.Grimm Solar Power (Bamnet Narong) Limited
- Director, B.Grimm Solar Power (Yang Talat) Limited
- Director, B.Grimm Solar Power (Wanon Niwat) Limited
- Director, B.Grimm Solar Power (Sriboonruang) Limited
- Director, B.Grimm Renewable Power 1 Limited
- Director, B.Grimm Renewable Power 2 Limited
- Director, B.Grimm Power Smart Solution Limited
- Director, B.Grimm LNG Limited
- Director, B.Grimm Solar Power (Sakaeo) 1 Limited
- Director, Amata B.Grimm Power SPV 1 Limited
- Director, Progress Interchem (Thailand) Company Limited
- Director, B.Grimm S.Napa Solar Power Limited
- Director, B.Grimm Spectrum Solar Power Limited
- Director, 22 KN Company Limited
- Director, Viet Thai Solar Joint Stock Company
- Director, Dau Tieng Tay Ninh Energy Joint Stock Company
- Director, Phu Yen TTP Joint Stock Company
- Director, B.Grimm Power (Malaysia) Sdn. Bhd.
- Director, B.Grimm Power Korea Limited
- Director, Glow SPP 1 Company Limited
- Director, B.Grimm Solar Power Inc.
- Director, Sisophon Clean Power Company Limited
- Director, Ray Power Supply Company Limited

**Other Organisations that may Compete with or have any Conflict of Interest against the Company**

-None-

**Work Experience in the Past 5 Years**

2007 - Present Senior Executive Vice President - Legal Counsellor, Business and Project Development (Renewable & Hybrid Projects) and B.Grimm Power Solar Power Rooftop, B.Grimm Power Public Company Limited

*Please refer to Current Positions in Other Entities*

**Shareholdings (Including Spouse and Dependent Children)**

|                    |        |                  |
|--------------------|--------|------------------|
| Incumbent          | 90,950 | shares (0.0035%) |
| Spouse             | -      | share            |
| Dependent children | -      | share            |
| Total              | 90,950 | shares           |

**Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board**

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

**Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries**

-None-



**Mr. Nopadej Karnasuta**

Chief Financial Officer / Senior Executive Vice President - Finance and Accounting /

Member of Management Committee / Member of Risk Management Committee

**Date of Appointment** 30 March 2015**Age** 44 years**Education**

- Master of Arts of Economics, University of Texas, Arlington, USA
- Bachelor of Arts of Economics, University of Maryland at College Park, USA

**Training Program of Thai Institute of Directors Association**

- Director Certification Program (DCP) (Class 191)

**Other Training Program**

- Course, Thai Intelligent Investors Program (TIIP), Thai Investors Association (Class 4)
- Certificate, Executive Management with Business Development and Investment, Institute of Business and Industrial Development (IBID Class 2)
- Course, Strategic CFO in Capital Markets, Thailand Securities Institute, Stock Exchange of Thailand (Class 3)
- Certificate, Top Executives Program, The Capital Market Academy (CMA Class 25)
- Certificate, Thammasat Leadership Program, Foundation of Thammasat Leadership Program, Thammasat University (Class 8)
- Course, Advanced Master of Management Program, National Institute of Development Administration (AMM Class 2)

**CFO Professional Development Program (CPD) 2019 by Thai Listed Companies Association (TLCA), total 7.00 hrs.**

- TLCA CFO CPD No. 1/2019 : The Securities and Exchange Commission's policy to develop capital market and to support listed companies' activities (2 hrs.)
- TLCA CFO CPD No. 2/2019 : Automation & RPA (Robot Process Automation) for Accounting (2 hrs.)
- TLCA CFO CPD No. 4/2019 : How important are intangible assets impairments? and How important of Employee Benefit Actuarial Valuation (3 hrs.)

**Current Positions in Other Entities****Other Listed Companies in Thailand**

-None-

**Organisation/ Agency/ Other Business (Non-Listed Companies)****39 companies**

- Director, Amata B.Grimm Power (Rayong) 1 Limited
- Director, B.Grimm Power Holding Limited
- Director, Amata B.Grimm Power 4 Limited
- Director, B.Grimm Power Holding (Laem Chabang) Limited
- Director, B.Grimm Power Service (Laem Chabang) Limited
- Director, B.Grimm BIP Power 2 Limited
- Director, B.Grimm Power (Laem Chabang) 1 Limited
- Director, B.Grimm Power (Laem Chabang) 2 Limited
- Director, Thai Wind Power (Mukdahan) Limited
- Director, B.Grimm Power (Lao) Company Limited
- Director, Nam Che 1 Hydropower Company Limited
- Director, Nam Khao Hydropower Company Limited
- Director, Xenamnoy and Xekatom Hydro Power Company Limited
- Director, B.Grimm Power (Cambodia) Company Limited
- Director, B.Grimm Power (Poipet) Company Limited
- Director, Viet Thai Solar Joint Stock Company
- Director, B.Grimm Power (Malaysia) Sdn. Bhd.
- Director, Progress Interchem (Thailand) Company Limited
- Director, B.Grimm Solar Power 1 Limited
- Director, B.Grimm Solar Power (Chon Daen) Limited
- Director, B.Grimm Solar Power (Cha Am) Limited
- Director, B.Grimm Solar Power (Chai Badan) Limited
- Director, B.Grimm Solar Power (Sap Yai) Limited
- Director, B.Grimm Solar Power (Bamnet Narong) Limited
- Director, B.Grimm Solar Power (Yang Talat) Limited
- Director, B.Grimm Solar Power (Wanon Niwat) Limited
- Director, B.Grimm Solar Power (Sriboonruang) Limited
- Director, B.Grimm Solar Power Rooftop Limited
- Director, B.Grimm Power (Chonburi) 1 Limited
- Director, B.Grimm Power (Chonburi) 2 Limited

- Director, B.Grimm Power Service Limited
- Director, Amata B.Grimm Power Service Limited
- Director, Amata B.Grimm Power SPV 1 Limited
- Director, B.Grimm Yanhee Solar Power Limited
- Director, B.Grimm Solar Power (Sakaeo) 1 Limited
- Director, Meesookland Company Limited
- Director, Meesookland 1 Company Limited
- Director, Glow SPP 1 Company Limited
- Director, B.Grimm LNG Limited

**Other Organisations that may Compete with or have any Conflict of Interest against the Company**

-None-

**Work Experience in the Past 5 Years**

2013 - Present Chief Financial Officer and Senior Executive  
Vice President - Finance and Accounting,  
B.Grimm Power Public Company Limited

2002 - 2013 First Senior Vice President, Multi-Business  
Division, Kasikornbank Public Company  
Limited

2000 - 2002 Treasury and Project Finance Specialist,  
Electricity Generating Public Company  
Limited

1999 - 2000 Business Promotion Department,  
Industrial Finance Corporation of Thailand

*Please refer to Current Positions in Other Entities*

**Shareholdings (Including Spouse and Dependent Children)**

|                    |        |                  |
|--------------------|--------|------------------|
| Incumbent          | 90,950 | shares (0.0035%) |
| Spouse             | -      | share            |
| Dependent children | -      | share            |
| Total              | 90,950 | shares           |

**Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board**

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

**Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries**

-None-

**Miss Siriwong Borvornboonrutai**

Deputy Chief Financial Officer / Executive Vice President - Finance

**Date of Appointment** 24 April 2017**Age** 44 years**Education**

- Master of Science in Finance (Academic Excellent), University of Illinois at Urbana-Champaign, USA
- Master of Accounting Science, University of Illinois at Urbana-Champaign, USA
- Bachelor of Business Administration in Accounting (Honors), Thammasat Business School (International Program), Thammasat University

**Training Program of Thai Institute of Directors Association**

-None-

**Other Training Program**

- Chartered Financial Analyst (CFA)
- Certified Public Accountant, Institute of Certified Accountants and Auditors of Thailand (CPA)
- Course, Strategic CFO in Capital Markets, Thailand Securities Institute, Stock Exchange of Thailand (Class 5)
- Course, Thai Intelligent Investors Program (TIIP) Thai Investors Association (Class 5)

**Current Positions in Other Entities****Other Listed Companies in Thailand**

-None-

**Organisation/ Agency/ Other Business (Non-Listed Companies)****3 companies**

- Director, Viet Thai Solar Joint Stock Company
- Director, Dau Tieng Tay Ninh Energy Joint Stock Company
- Director, Glow SPP 1 Company Limited

**Other Organisations that may Compete with or have any Conflict of Interest against the Company**

-None-

**Work Experience in the Past 5 Years**

- 2016 - Present Deputy Chief Financial Officer and Executive Vice President - Finance, B.Grimm Power Public Company Limited
- 2016 - Present Deputy Chief Financial Officer, Amata B.Grimm Power Limited
- 2013 - 2016 Senior Assistant Vice President-Finance, Amata B.Grimm Power Limited
- 2011 - 2013 First Senior Vice President, Credit Product Origination Department, Siam Commercial Bank Public Company Limited

**Shareholdings (Including Spouse and Dependent Children)**

|                    |         |                  |
|--------------------|---------|------------------|
| Incumbent          | 192,200 | shares (0.0074%) |
| Spouse             | -       | share            |
| Dependent children | -       | share            |
| Total              | 192,200 | shares           |

**Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board**

Qualified and never be punished by committing an offence against Securities law and Derivatives law.

**Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries**

-None-

## Miss Porntip Tangpongbundit

Executive Vice President - Accounting

**Date of Appointment** 1 January 2014

**Age** 55 years

### Education

- Master of Accounting, Thammasat University
- Bachelor of Accounting, Thammasat University

### Training Program of Thai Institute of Directors Association

-None-

### Other Training Program

- Modern Manager Program (MMP Class 66), Chulalongkorn Business School, Chulalongkorn University

### Continuing Professional Development (CPD) for Accountants Training Program in 2019, total 40.30 hrs.

- Accounting
- PwC Thailand's 2019 Symposium : Connecting the dots: Managing corporate challenges in 2020 and beyond (6.30 hrs.)
  - TFRS9 for Non-financial Institution (14 hrs.)
- Others
- PwC Thailand's 2019 Symposium : A close look at recent legal and tax developments - it's time to act (6 hrs.)
  - How to save taxes from outbound payments to overseas (7 hrs.)
  - 2019 Transfer Pricing between related companies (7 hrs.)

### Other Organisations that may Compete with or have any Conflict of Interest against the Company

-None-

### Work Experience in the Past 5 Years

- 2016 - Present Executive Vice President - Accounting,  
B.Grimm Power Public Company Limited
- 1994 - 2016 Senior Vice President,  
Amata B.Grimm Power Limited

### Shareholdings (Including Spouse and Dependent Children)

|                    |         |                  |
|--------------------|---------|------------------|
| Incumbent          | 269,800 | shares (0.0103%) |
| Spouse             | -       | share            |
| Dependent children | -       | share            |
| Total              | 269,800 | shares           |

### Having Qualifications according to Laws and No Prohibited Qualifications according to the Notification of the Capital Market Supervisory Board

- Qualified and never be punished by committing an offence against Securities law and Derivatives law.
- Qualified accountant pursuant to the Notification of Department of Business Development.

### Family Relationship with Other Directors, Executives or Major Shareholders of the Company or Subsidiaries

-None-

### Current Positions in Other Entities

#### Other Listed Companies in Thailand

-None-

#### Organisation/ Agency/ Other Business (Non-Listed Companies)

##### 1 company

- Director, Glow SPP 1 Company Limited

#### Remark

1. All above executives have not committed any offence against the Securities and Exchange Act, B.E.2535 or the Derivatives Act, B.E.2546 during the past 5 years, especially in connection with the following cases:

- (1) Act in bad faith or with gross negligence.
- (2) Disclosure or providing the information or a false statement which may be misled, or concealing facts which should have been stated in materiality that may affect on the decision-making to shareholders, investors, or related persons.
- (3) Unfair practices or taking advantage of investors in the trading of securities or derivatives, or being or having been participated in or supported such act.



## Corporate Governance

### Corporate Governance Policy

B.Grimm Power Public Limited Company is committed to operating business under the principles of good corporate governance with transparency, fairness and accountability as well as economic, social and environmental responsibilities. The Company is assured that the operation underlying the principles of good corporate governance is important for sustainable business growth along with value creation and confidence of all shareholders and stakeholders. In 2019, the Company's compliance with the principles of good corporate governance can be concluded as follows:

#### 1. Rights of Shareholders

The shareholders, as the Company's owner, are entitled to attend the shareholders' meeting to determine the Company's operational directions conveyed by the Board of Directors who is appointed by the shareholders to perform duties or make decisions on matters significantly affecting the Company. The shareholders' meeting serves as a platform for shareholders to express opinions, raise questions and pass resolutions to proceed or not proceed. Therefore, the shareholders are duly entitled to attend the meeting, have sufficient time for considering the information and acknowledge meeting resolutions. The basic shareholder rights are as below:

1.1 The Company shall avoid any action that restricts access to its information. For example, shareholders shall be fully and sufficiently informed of procedures, agendas and supporting documents for the shareholders' meeting, which shall be delivered to the shareholders in advance at least 7 days prior

to the meeting date. The Company shall also provide a wide range of channels for shareholders to inquire about the shareholders' meeting.

1.2 The Board of Directors shall facilitate shareholders in attending the shareholders' meeting. The meeting venue shall be large enough to accommodate the number of attending shareholders and located in Bangkok or its vicinity which shall not be too far and cause inconvenience for shareholders. The meeting venue shall also be equipped with facilities for the disabled and security controls in preparedness for possible emergency situations.

1.3 The Company shall avoid any action that restricts shareholders' right to attend the shareholders' meeting. All shareholders shall be entitled to attend the meeting, raise questions and doubts, express opinions to the meeting according to the meeting agendas and proposed matters and exercise their votes on agenda items.

1.4 The Chairman of the meeting shall allocate appropriate time for the shareholders to express opinions and raise questions to the meeting on matters related to the Company. Shareholders shall be given an opportunity to submit questions in advance prior to the meeting date where the criteria governing such submission shall be clearly stated in advance and made available on the Company's website.

1.5 The shareholders shall be entitled to appoint other persons as their proxies to attend the meeting and exercise votes on their behalves. They shall also be entitled to receive documents and recommendations regarding proxy appointment. The proxies shall have the same right to attend the meeting and exercise votes as the shareholders. Alternatively, the shareholders may appoint an independent director to attend the meeting and vote on their behalves. In this regard, they shall receive complete and sufficient profiles and work experiences of each independent director for proxy appointment.

1.6 The shareholders shall be entitled to vote on each proposed agenda where the voting methods and equipment shall be fast, convenient, transparent and effective. The voting results shall quickly be displayed so that the shareholders can acknowledge voting results promptly.

1.7 The Board of Directors, Sub-committees and Company Secretary shall attend every shareholders' meeting to answer questions and listen to opinions of the

shareholders. The senior executives shall attend the shareholders' meeting to answer questions as well.

1.8 The Company shall disclose voting results of each agenda of the Annual General Meeting of Shareholders and the Extraordinary General Meeting of Shareholders within the next working day on the Company's website.

## **2. Equitable Treatment of Shareholders**

The Company shall treat all shareholders equally, regardless of their gender, age, race, nationality, religion, faith, political stance or disability. Moreover, although the shareholders may not be able to attend the meeting due to some reasons, they shall have the right to appoint other persons as their proxies to attend the meeting on their behalves on the basis of the following practices:

2.1 The Board of Directors shall protect all shareholder rights and treat the shareholders equally. All shareholders shall be entitled to receive information in Thai or English for foreign shareholders.

2.2 In voting on agenda items, one share is equal to one vote.

The Board of Directors encourages minority shareholders to exercise their rights by proposing additional agenda items or by nominating a candidate as a director. Such proposal or nomination, however, shall be in compliance with the laws and the Company's Articles of Association. The Investor Relations (IR) Department is ready to provide assistance and suggestions through the following channels:

By Post: Investor Relations Department  
B.Grimm Power Public Company Limited  
5 Krungthepkreetha Road, Huamark Sub-district,  
Bangkapi District, Bangkok 10240

Tel: +66 (0) 2710 3528

Fax : +66 (0) 2379 4258

Email: [ir@bgrimmpower.com](mailto:ir@bgrimmpower.com)

Website : [www.bgrimmpower.com](http://www.bgrimmpower.com)

2.3 The Board of Directors shall report any changes in the Company's securities holding according to the criteria of SEC and SET and prepare a report on such change to the Board of Directors' meeting for acknowledgement.

### 3. Role of Stakeholders

The Company prioritises the rights of all stakeholders by establishing practice guidelines on treatment of stakeholders in the Corporate Governance Policy and Code of Conduct as well as developing the Anti-Corruption Policy and providing communication channels for stakeholders.:

3.1 The Company has established practice guidelines on treatment of stakeholders as follows:

#### 3.1.1 Responsibility towards employees and staff

Ensure compliance with relevant laws and standards and treat employees and staff fairly and with respect for human rights, for example, determine fair remuneration and other benefits; provide welfare pursuant to the laws or more as deemed appropriate; supervise health and sanitation and occupational safety; educate, enhance knowledge and capacity and promote advancement; and offer employees an opportunity to develop work skills in other aspects.

#### 3.1.2 Responsibility towards customers

Treat customers in accordance with relevant laws and standards and with consideration on health, safety, fairness, confidentiality of customer information, after-sales service throughout the life cycle of the products and services, monitoring of customer satisfaction results for improvements of products and services as well as advertising, public relations and sales promotion, which shall be executed with responsibility and without causing misunderstanding or exploiting customers' misunderstanding.

#### 3.1.3 Responsibility towards suppliers

Put in place a fair procurement process and terms and conditions of contracts or agreements; educate, enhance potential and uplift productivity and service delivery to meet the standards; explain and supervise suppliers to respect human rights and treat their labours with fairness and social and environmental responsibilities; and monitor, check and assess suppliers to develop sustainable mutual business operations.

#### 3.1.4 Responsibility towards creditors

Ensure strict compliance with the contracts or terms and conditions as agreed as well as possible obligations and liabilities. In case of non-compliance with any of the terms and conditions or default, the creditors shall be informed without concealment of facts to jointly consider solutions based on reasonableness. In this

regard, the Company shall operate business efficiently and effectively to achieve sustainable growth and financial stability and enhance creditors' confidence.

#### 3.1.5 Responsibility towards the community and society

Apply knowledge and business experience to the development of projects that can benefit the community in a concrete manner, and monitor and evaluate progress and success in the long run.

#### 3.1.6 Responsibility towards the environment

Prevent, reduce, manage and ensure that the Company will not create negative impacts on the environment, covering the use of materials, energy (for production, transport or in office), water and renewable resources, employee awareness raising and trainings on environmental conservation, maintenance and restoration of biodiversity affected by business operations, discharge and management of waste arising from business operations and greenhouse gas emissions.

#### 3.1.7 Government agencies and regulatory agencies

Strictly comply with the laws, rules, regulations and orders of relevant government agencies and regulatory agencies.

#### 3.1.8 Fair competition

Operate business with transparency and without creating unfair competitive advantage.

#### 3.1.9 Anti-Corruption

Comply with relevant laws and standards, develop the Anti-Corruption Policy and announce such policy to the public by joining the anti-corruption networks as well as encourage other organisations and suppliers to emphasise and support anti-corruption operation.

The Company has provided various communication channels for stakeholders as follows:

Head office: 5, Dr. Gerhard Link Building,  
Krungthepkreetha Road,  
Huamark Sub-district, Bangkok District,  
Bangkok 10240

Tel: +66 (0) 2710 3400

Fax: +66 (0) 2379 4245

Website: [www.bgrimmpower.com](http://www.bgrimmpower.com)



3.2 The Company have obligations to customers to continuously develop better products and services and determine product prices that are suitable for the situation by avoiding any action that takes advantage of customers pursuant to the law on consumer protection and the law on anti-trust. The Company shall treat suppliers of the Company and its subsidiaries fairly and shall not take advantage of suppliers mainly focusing on the benefits of the Company and its subsidiaries.

3.3 The Company considers employees as its valuable resources. The Company ensures employee welfare and non-exploitation of employment contracts; determines remuneration and welfare that are suitable for their potential to inspire and motivate employees at work; respects human rights in treating personnel equally, regardless of similarities or differences in race, religion, gender, age, education, status and respect for individual rights; develops a knowledge and competence development policy to increase potential and career growth of employees; establishes safety and occupational health standards to ensure good work environment; and thoroughly takes care of employees. Moreover, the Company has set up a provident fund for long-term treatment of employees.

3.4 The Company has a department responsible for overseeing its social and environmental responsibilities to assist, support and create benefits for the community and society. The Company has in place a standardised environmental and safety management along with continuous management to reduce environmental impacts arising from the operations and plans for supervising, protecting and preventing possible impacts in both environmental and safety aspects.

3.5 The Company has a whistleblowing and grievance policy as guidelines for whistleblowing and grievance procedures. The Company has already established guidelines and measures for protecting the rights of whistleblowers.

## Anti-Corruption

The Board of Directors underlines the importance of anti-corruption practices. The Company have declared the intention to join the Thailand's Private Sector Collective Action Against Corruption (CAC) whereby the Board of Directors has issued an anti-corruption policy and other related policies, conducted fraud and corruption risk assessment and management to supervise, prevent and monitor the operation as well as communicated such



policies to the employees and related parties for acknowledgement and compliance. In 2018, the Company was certified as a CAC member.

## Whistleblowing and Grievance

The Board of Directors has established a whistleblowing and grievance policy and measures to protect the rights of whistleblowers. The Board encourages employees and stakeholders to take part in monitoring the Company's operation to ensure its compliance with relevant laws and regulations and the Code of Conduct as well as prepare a report on grievances in case of wrongdoing or misconduct. In 2019, there were no grievances related to corrupt acts and violations of Code of Conduct both internally and externally.

The Company has provided whistleblowing and grievance channels where stakeholders can contact the Whistleblowing Unit as follows:

Whistleblowing Unit

B.Grimm Power Public Company Limited

5 Krungthepkreetha Road, Huamark Sub-district, Bangkok District, Bangkok 10240

Tel. +66 (0) 2710 3510

Email: whistle-blowing@bgrimmpower.com

## 4. Disclosure and Transparency

The Company places importance on disclosing material information in a complete, accurate and timely manner and providing facts that reflect the Company's actual financial status for shareholders' decision making. Information disclosure as an indicator of transparency in the operation is a critical factor behind investors' confidence in the Company's integrity and a mechanism for operational auditing. The Company has therefore emphasises disclosure of information and development of communication channels for stakeholders to have access to the information.



4.1 The Board of Directors will proceed to disclose financial and non-financial information in an adequate, reliable and timely manner for shareholders and stakeholders to equally receive information in accordance with applicable legal and regulatory requirements and the Company's Articles of Association. The Company has regularly prepared and updated information on its website to ensure that the contents are always complete and up-to-date that shareholders could access information to support their consideration with speedy, convenient and efficient manner.

4.2 The Company has an Investor Relations Department to coordinate communication and disclose material information to shareholders, institutional and minority investors, securities and relevant regulatory agencies as well as supervise material information that affects the Company's stock prices and public information to ensure that stakeholders can have access to information equally and fairly. The Company also has a Corporate Communications Department which is responsible for publicising the Company's news and information in different aspects.

In 2019, the Company's management had opportunities to meet shareholders, institutional and minority investors, analysts and interested persons to present the Company's operating results and exchange viewpoints and opinions as well as foster good relationships with stakeholders. The activities included domestic and overseas roadshows, the SET Opportunity Day, analyst meetings and minority investor meetings. Details are as follows:

| Investor Meetings                                 |          |
|---------------------------------------------------|----------|
| Overseas roadshows / conferences                  | 7 times  |
| Domestic roadshows / conferences                  | 9 times  |
| SET Opportunity Day                               | 4 times  |
| Analyst meetings                                  | 4 times  |
| Company visits                                    | 20 times |
| Conference Calls                                  | 4 times  |
| Site visits                                       | 1 time   |
| Knowledge sharing session for securities analysts | 2 times  |

Investors or interested persons can inquire about news and information by contacting the Investor Relations Department through the following channels:

By post : Investor Relations Department  
B.Grimm Power Public Company Limited  
5 Krunthepkreetha Road, Huamark Sub-district, Bangkapi District, Bangkok 10240

Tel : +66 (0) 2710 3528

Fax : +66 (0) 2379 4258

Email : [ir@bgrimmpower.com](mailto:ir@bgrimmpower.com)

Website : [www.bgrimmpower.com](http://www.bgrimmpower.com)

In addition, interested persons may subscribe to emails for information posted under the "Investor Relations" topic on the Company's website for speedier communication.

4.3 The Board of Directors ensures that the balance sheet, the income statement, the auditor's audit report and the Board of Directors' annual report are prepared for submitting to the Annual General Meeting of Shareholders (AGM) for approval.

4.4 The disclosure of remuneration payment scheme and forms of remuneration for directors and senior executives that reflects their duties and responsibilities.

## **5. Board Responsibility**

The Board of Directors consist of directors whose knowledge, expertise and experience are of benefit to the Company and can fully dedicate their efforts and time to perform their duties and responsibilities. The Board of Directors is appointed by shareholders to supervise the Company's operations and appoint the management team to operate business, the sub-committees to handle designated tasks and the Company Secretary to organise meetings and ensure legal compliance. The duties and responsibilities between the Board of Directors and the management team are clearly segregated.

### **5.1 Composition of the Board of Directors**

The Board of Directors shall consist of at least 5 and no more than 12 directors. The Board tenure shall be three years. At least one-third of the total number of directors shall be independent directors, of which the number must not be fewer than three. Directors' qualifications must meet applicable eligibility criteria and shall not possess prohibited characteristics specified by the laws. The Board of Directors should represent the diversity of knowledge, expertise and experience that are beneficial to the Company.

### **5.2 Independence of the Board of Directors**

Directors shall make decisions, express opinions and vote on matters that are entitled to make a decision. If such decision of the Board of Directors falls under the pressure of either director's work burden, his/her family or the fact that he/she has an interest in the subject matter, he/she may ultimately make a decision that is favorable to himself/herself, his/her close ones or for his/her own interest. As a result, director's independence is extremely important to protect the interests of both shareholders and the Company. Therefore, directors lacking independence shall not be delegated to make decisions.

5.2.1 To ensure that the Board of Directors under the leadership of Chairman to effectively lead and supervise the management team, the Company clearly separates duties and responsibilities between the Chairman and the President.

5.2.2 The independent directors shall have adequate access to financial and business information so that they can freely express their opinions and regularly attend meetings to safeguard the interests of related parties. Also, the independent directors' meeting shall convene at least once a year.

5.2.3 The independent directors shall possess independence as defined by the Notifications of the Capital Market Supervisory Board, the SEC and the SET with regard to qualifications and scope of work of the independent directors. They shall also protect the interests of all shareholders equally, prevent conflicts of interest between the Company management and executives or majority shareholders or other companies sharing the same executives/majority shareholders, and render independent opinions at the meetings.

### **5.3 Roles and Responsibilities of the Board of Directors**

The Board of Directors' roles, duties responsibilities include to supervise the Company operations for the purpose of strict compliance with the laws, the objectives, the Articles of Association and resolutions of the shareholders' meeting in accordance with the principles of good corporate governance and the SET's best practices for directors of listed companies.

### **5.4 Roles and duties of the Chairman and the President**

The Chairman and the President have different duties and responsibilities which have been clearly determined by the Board of Directors.

#### **5.4.1 Main roles and responsibilities of the Chairman**

(1) Lead the Board of Directors, supervise, monitor and ensure the Board of Directors' effective performance of duties and the achievement of the Company's main objectives and goals.

(2) Encourage all directors' participation to promote an ethical corporate culture and good corporate governance.

(3) Set the Board of Directors' meeting agendas by consulting with the President and establish measures for including significant matters in the agenda.

(4) Allocate sufficient time for the management team to propose matters and much time for directors to carefully discuss on significant matters in a thorough manner and encourage directors' discretion and independent opinions.

(5) Enhance good relationships between executive directors and non-executive directors and between the Board of Directors and the management team.

#### 5.4.2 Main roles and responsibilities of the President

(1) Lead the management team.

(2) Consider and develop policies, strategies, missions, financial goals, business plans and annual budget to be proposed to the Board of Directors for approval.

(3) Manage, supervise and perform routine tasks and/or day-to-day tasks for the Company's interests and in accordance with the main objectives and goals, vision, mission, strategies, business plans and budget as delegated and/or approved by the Board of Directors and/or the shareholders' meetings.

(4) Monitor, inspect, control and develop the operations of the Company, subsidiaries and/or associated companies to ensure good operating results according to the goals and improve better operating results.

(5) Issue criteria, notifications and orders regarding business operations in alignment with the Company's policies and for effective management.

(6) Establish rules, procedures and work methods as deemed appropriate, supervise personnel in different departments to work in line with each department's strategic plan and goals in an efficient and effective manner as well as ensure continuous personnel development.

(7) Consider and approve the Company's normal business transactions as well as normal business under general trade terms which shall be in compliance with

the criteria for connected transactions and acquisition and disposal of assets of the SEC Office and the SET

(8) Grant authority and/or assign individuals or other individual groups to perform duties on the behalf of the President. Such authorisation and/or assignment shall fall within the scope of authority specified in the letter of authority, rules, criteria or resolutions of the Board of Directors' meeting. However, such authorisation shall not enable the President or any grantees having conflicts of interests with the Company to approve such transaction. In this regard, the transaction shall be proposed to the Board of Directors and/or the shareholders' meeting (as the case may be) for consideration and approval, except that such transaction is on an arm's length basis which shall be in accordance with the principles approved by the Board of Directors.

(9) Perform any other tasks assigned and authorised by the Board of Directors

#### 5.5 Appointment of the Sub-committees

To ensure that the material matters are thoroughly and effectively considered and reviewed, the Board of Directors has appointed sub-committees, namely Audit Committee, Corporate Governance Committee, Nomination and Compensation Committee, Management Committee and Risk Management Committee, of which their roles and responsibilities can be found under the topic of Management Structure.

#### 5.6 The Board of Directors' Meeting and Receiving of Information Documents

When organising the Board of Directors' meeting, the Company Secretary is responsible for preparing documents and meeting venue and coordinating a meeting. Each director will be informed of the meeting date, meeting agenda and meeting information in advance to have enough time to study.

5.6.1 The Board of Directors has fully dedicated time and efforts to the Company's operations. The Board of Directors requires that a meeting be held at least once every three months or as necessary. The Company Secretary shall coordinate the meeting and ensure readiness in different aspects as in compliance of relevant laws. At every meeting, at least half of the total number of directors shall attend the meeting to form a quorum.

5.6.2 Directors absent from the meeting due to necessity shall notify the Chairman for acknowledgement.

5.6.3 The Chairman shall approve the meeting agendas by consulting with the President who may consider a request from other directors to propose important subject matters to be included in the meeting agendas for a subsequent meeting.

5.6.4 The Chairman shall allocate sufficient time for the management team to present information for the Board of Directors to discuss on significant issues.

5.6.5 The Chairman shall establish clear measures to ensure that directors receive information in advance and have sufficient time to study, consider and make the right decisions on various matters by delivering an invitation letter and supporting documents to directors at least 7 days in advance of each meeting, except for urgent meetings.

5.6.6 The Board of Directors may request additional documents, information, consultation and services relating to the Company's operations from senior executives through the Company Secretary's coordination to support each meeting. It may seek additional opinions from external consultants where all costs incurred are absorbed by the Company.

5.6.7 Directors having connected interest or conflict of interest in any agenda items shall not vote on or render opinions on such matter or shall leave the meeting room.

5.6.8 The Board of Directors shall arrange a non-executive director meeting at least once a year to allow non-executive directors to meet and discuss problems relating to the management underlying their attention without presence of the management team and shall also notify the meeting results to the President.

5.6.9 The minutes of the Board of Directors' meeting shall be correctly and completely prepared by including clear information, opinions, recommendations and meeting resolutions.

## 5.7 Company Secretary

The Company Secretary is in charge of facilitating smooth and transparent meetings of the Board of Directors and the shareholders in compliance with the laws and regulations.

5.7.1 The Board of Directors shall appoint the Company Secretary in accordance with the Securities and Exchange law to keep the directors' register, invitation letters and minutes of the Board of Directors' meetings and the shareholders' meetings, supporting documents, annual reports and reports on interest of directors and executives as well as perform other duties stipulated by the Capital Market Supervisory Board in accordance with the Securities and Exchange law. Upon the appointment of the Company Secretary, the Chairman shall notify the name of the Company Secretary to the SEC Office within 14 days.

5.7.2 The Company Secretary has the duty to coordinate the Board of Directors' meetings and the shareholders' Meeting and provide legal advice to the Board of Directors as necessary.

## 5.8 Remuneration of the Board of Directors and the President

The shareholders' meeting shall have authority to consider and approve remuneration of the Board of Directors. The Board of Directors shall consider remuneration structure and rates that are suitable for duties and responsibilities and motivate the achievement of both short-term and long-term goals.

The Nomination and Compensation Committee shall consider guidelines for determining remuneration rates for directors and sub-committees and seeking approvals from the Board of Directors and the shareholders' meetings such as monthly fixed fee and attendance fee and bonus payment.

The Nomination and Compensation Committee shall consider remuneration of the President and seek approval from the Board of Directors by taking into account the factors behind operating performance in different aspects such as goals, operating results, management and remuneration that is comparable to the business of the same nature.

## 5.9 Succession Plan

The Company has in place an appropriate succession for the positions of the President in accordance with the nomination process for both internal and external candidates.

## 5.10 Performance Evaluation of the Board of Directors and Sub-committees



Both Board of Directors and sub-committees shall conduct collective and individual self-assessments at least once a year. Members of each committee shall jointly consider their performance and improvements for effective performance of duties. The assessment form covers the assessment of the structure's efficiency and qualifications of Board members and sub-committees, their roles and responsibilities, their meetings and their performance, their relationship with the management team, their self-development initiatives and other matters. The assessment criteria is on a percentage ratio out of 100%. To elaborate, more than 85% is considered excellent; more than 75% is very good; more than 65% is good; more than 50% is fair; and lower than/equal to 50% is subject to improvement. In 2019, the Board of Directors' performance assessment results on average were excellent.

#### 5.11 Orientation of New Directors

The Company shall organise an orientation session for new directors to acknowledge its business overview, shareholders' structure, organisational structure, sub-committees, financial status and operating results as well as practice guidelines for directors of SET-listed companies and relevant laws such as the corporate information, the Corporate Governance policy, the Code of Conduct, the PLC Act and the SEC Act.

#### 5.12 Director Development

The Board of Directors has a policy to promote and encourage directors, members of the Audit Committee, executives and Company Secretary to regularly attend both domestic and overseas trainings to enhance their knowledge, experience and necessary skills benefiting the performance of duties of the Board of Directors and sub-committees, in terms of business operations and related businesses, good corporate governance, risk management, sustainable development and study visits to related businesses. Moreover, the Board of Directors has been invited by government and private agencies to give lecture and attend seminars for an exchange of experience in different functions and continuously informed of relevant news and information. Details are as follows:

| Name of Directors                                                                                                                                                                         | Trainings and Seminars in 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mr. Harald Link<br>Mrs. Preeyanart Soontornwata<br>Mr. Somkiat Sirichatchai<br>Mrs. Katevalee Napasab<br>Mr. Anusorn Sangnimnuan<br>Mrs. Anchalee Chavanich<br>Mrs. Sunee Sornchaitanasuk | <ul style="list-style-type: none"> <li>• Training and study visit to the in-building power generation system project with "Sello Concept", the cutting-edge and energy-efficient technology and innovation, in Helsinki, Finland, which has been applied to the power generation system to respond to the ways of life, society and environment, and a lecture on "Smarts Buildings connected to Smart Grids", conducted by Siemens AG.</li> </ul>                                                                                                                                                                   |
| Mrs. Anchalee Chavanich<br>Mr. Anusorn Sangnimnuan                                                                                                                                        | <ul style="list-style-type: none"> <li>• Training and study visit to the World's 1<sup>st</sup> Large-Scale Underground LNG Combined Cycle Power Plant, developed by Korea Midland Power Co., Ltd. (KOMIPO) in Seoul, South Korea</li> </ul>                                                                                                                                                                                                                                                                                                                                                                         |
| Mrs. Preeyanart Soontornwata                                                                                                                                                              | <ul style="list-style-type: none"> <li>• Seminar on "International Unlocked Investment Opportunities in Renewable Energy for The Asian Region", organised by the Department of Alternative Energy Development and Efficiency, the Ministry of Energy</li> <li>• Seminar on "Innovate Canada-Asian", organised by cabc : Canada-Asian Business Council</li> <li>• Seminar on "Asian Energy Business Forum 2019 : Advancing Partnership for Sustainability", organised by ASEAN Energy Business Forum</li> <li>• Seminar on "Buangluang Fund Investment Forum", organised by BBL Asset Management Co., Ltd.</li> </ul> |

### 5.13 Directorships in other Companies

The Board of Directors recognises the importance of the performance of duties of directors and of senior executives. After thoroughly considering the efficiency of directors holding directorships in various companies to ensure that they can dedicate sufficient time to perform their duties for the Company, the Company has then established a policy that determines the number of companies in which directors and senior executives can hold directorships in a way that reflects the best practices. Each director shall hold directorships in no more than five listed companies.

### 5.14 Report on Interests

The Company requires that directors, executive directors and the management report their own and other related persons' interests upon holding their positions or when any change is made to the information, and review information annually in accordance with the criteria and methods for reporting the interests of directors and executives.

## **Nomination and Appointment of Directors, Sub-committees and the President**

### **1. Board of Directors**

The composition and qualifications of directors are stipulated in the Board of Directors' Charter of which the essence is as follows.

#### 1.1 Composition of the Board of Directors

1.1.1 The Board of Directors shall consist of at least five (5) directors but not exceeding twelve (12) directors and at least one-half of the total number of directors shall have residence in the Kingdom of Thailand.

1.1.2 No less than one-third of the total number of directors shall be independent directors, but the number shall not be less than three (3). The Audit Committee shall also consist of no less than three (3) independent directors.

1.1.3 The Board of Directors shall appoint the Company Secretary to serve as the secretary to the Board of Directors, except that the Board of Directors shall assign otherwise.

#### 1.2 Qualifications of Directors

Besides the qualifications without any prohibited characteristics pursuant to the Public Limited Companies law and the Securities and Exchange law, they shall possess qualifications as stated in the Company's Articles of Association as follows:

1.2.1 Possessing knowledge, competence and experience that are beneficial to the Company's business operations and dedicating sufficient time and exerting full efforts for the interests of the Company

1.2.2 Being honest and highly ethical in conducting business

1.2.3 Not engaging in any business, partnership or directorship in other legal entities of the same nature or in competition with the Company's business, whether for their own or others' interests

1.2.4 Besides the above-mentioned qualifications, the Company's independent directors and members of the Audit Committee shall also possess qualifications stipulated in the Notifications of the SET and the SEC Office as well as additional amendments in the future.

## **2. Independent Directors**

The Board of Directors shall jointly consider qualifications of independent directors based on the qualifications and prohibited characteristics of directors pursuant to the PLC Act, the SEC Act, Notifications of the Capital Market Supervisory Board as well as relevant notifications, regulations and/or orders. Moreover, the Board of Directors shall consider and select independent directors from experts with appropriate work experience and other aspects to be further proposed to the shareholders' meeting for consideration and appointment. The Company has a policy to appoint independent directors for at least one-third of the total number of directors, of which the number shall not be less than three. The Board of Directors has set out the qualifications of independent directors as below:

2.1 Holding no more than 1% of the total number of shares with voting rights of the Company, the parent company, subsidiaries, associated companies, majority shareholders or persons with controlling power of the Company. Shares held by anyone relating to the independent director shall also be included.

2.2 Not being or never be a director who is involved in the management of employees or a consultant with a fixed salary or a person with controlling power of the Company, the parent company, subsidiaries, associated companies or subsidiaries in the same level, majority shareholders or those with controlling power of the Company unless otherwise no longer being in such position for no fewer than two years prior to the application date to the SEC Office.

2.3 Not having blood relationship or through legal registration as parents, spouses, siblings and children as well as spouses of children of other directors, executives,

majority shareholders and those with controlling power over candidates nominated to become a director, an executive or a person with controlling power of the Company or subsidiaries.

2.4 Not having or never have a business relationship with the Company, the parent company, subsidiaries, associated companies, majority shareholders or those having controlling power over the Company in a way that may obstruct independent exercise of his/her discretion; not being or never be a shareholder with material implication or a person with controlling power of persons who have business relationship with the Company, the parent company, subsidiaries, associated companies, majority shareholders or those having controlling power over the Company unless otherwise no longer being in such position for no fewer than two years prior to the application date to the SEC Office.

The business relationship in paragraph one includes normal commercial transactions to rent or lease real estate property, transactions relating to assets or services or grant of or receiving of financial assistance by receiving or extending loans, guarantee, offering assets as collateral and other similar behaviours which will subject the company or contractual parties to dues to be paid to the other party starting from 3% of the company's net tangible assets or from Baht 20 million, whichever is lower. The calculation of this debt will be in accordance with the methods to calculate related transactions as announced by the Capital Market Supervisory Board on rules for related transactions mutatis mutandis. However, when considering such debt obligations, any debt incurred during a one-year period prior to the day the business relationship takes place with the same person shall also be included.

2.5 Not being or never be the auditor of the Company, the parent company, subsidiaries, associated companies, majority shareholders or persons with controlling power over the Company; not being a shareholder with material implications with persons having controlling power or not being a partner of an auditing office where auditors of the Company, the parent company, subsidiaries, associates, majority shareholders or persons with controlling power over the Company work unless being out of the position for no fewer than two years prior to the application date to the SEC Office.

2.6 Not being or never be any professional service provider, which includes being a legal advisor or a financial advisor who receives more than Baht 2 million a year from the Company, the parent company, subsidiaries, associates, majority shareholders or persons with controlling power

over the Company; not being a shareholder with material implication, a person with controlling power or a partner of such professional service provider unless otherwise being out of that office for no fewer than two years prior to the application date to the SEC Office.

2.7 Not being a director appointed to represent the director of the Company, the parent company or a shareholder relating to the majority shareholders.

2.8 Not conducting business with the same nature and which competes in a material sense with the business of the Company or subsidiaries; not being a material partner in a partnership or a director involving in managing employees or a consultant who receives a fixed salary or holds more than 1% shares of the total number of shares with voting rights of other companies with the same business that materially competes with the Company or subsidiaries.

2.9 Not possessing other characteristics that may prevent the person from exercising his/her independent opinions on the Company's operations.

The Board of Directors has a policy that an independent director shall hold his/her position for no more than 9 consecutive years from the first appointment date. However, the Board of Directors may appoint such independent director to resume his/her position after reasonably considering his/her qualifications, knowledge, competence, experience and other necessities and for the interests of the Company's business operation.

### 3. Audit Committee

The composition and qualifications of the Audit Committee as stated in its Charter can be summarised as follows:

#### 3.1 Composition of the Audit Committee

3.1.1 The Board of Directors shall appoint the Audit Committee which consists of one Chairman and no fewer than two members but not exceeding four, all of whom must be independent directors.

3.1.2 At least one member of the Audit Committee in paragraph one shall have knowledge and understanding and experience in accounting or finance and be able to review the reliability of the financial statements.

3.1.3 Head of the Internal Audit shall serve as the secretary to the Audit Committee

#### 3.2 Qualifications of the Audit Committee

3.2.1 The Audit Committee members must be independent directors.

3.2.2 The Audit Committee members shall be able to dedicate time to perform duties and express opinions or report performance results based on the designated duties with independence and fairness.

3.2.3 The Audit Committee members shall have qualifications according to relevant Notifications of the Capital Market Supervisory Board.

#### **4. Corporate Governance Committee**

The composition and qualifications of members of the Corporate Governance Committee as stated in its Charter can be summarised as follows:

4.1 Composition of the Corporate Governance Committee

4.1.1 The Corporate Governance Committee shall consist of at least three (3) directors, of which more than half shall be independent. The Chairman of the Corporate Governance Committee should be independent director.

4.1.2 The Corporate Governance Committee shall appoint one person to serve as the secretary to the Corporate Governance Committee, except that the Committee shall assign otherwise.

4.2 Qualifications of the Corporate Governance Committee

4.2.1 Possessing qualifications without any prohibited characteristics pursuant to the Public Limited Companies law and the Securities and Exchange law.

4.2.2 Having knowledge, competence and experience benefiting the Company's business operations and dedicating sufficient time and exerting full efforts for the interests of the Company.

4.2.3 Being honest and highly ethical in conducting business.

4.2.4 Not engaging in any business partnership or directorship in other legal entities of the same nature or in competition with the Company's business, whether for their own or others' interests.

#### **5. Nomination and Compensation Committee**

The composition and qualifications of the Nomination and Compensation Committee as stated in its Charter can be summarised as follows:

5.1 Composition of the Nomination and Compensation Committee

5.1.1 The Nomination and Compensation Committee shall consist of three (3) directors with at least one (1) director shall be independent director. The Chairman

of the Nomination and Compensation Committee should be the best-qualified independent director.

5.1.2 The Nomination and Compensation Committee shall appoint one person to serve as the secretary to the Nomination and Compensation Committee, except that the Nomination and Compensation Committee shall assign otherwise.

5.2 Qualifications of the Nomination and Compensation Committee

5.2.1 Possessing qualifications without prohibited characteristics pursuant to the Public Limited Companies law and the Securities and Exchange law.

5.2.2 Having knowledge and experience benefiting the Company's business operations and dedicating sufficient time and exerting full efforts to perform duties for the interests of the Company.

5.2.3 Being honest and highly ethical in conducting business.

5.2.4 Not engaging in any business, partnership or directorship in other legal entities of the same nature or in competition with the Company's business, whether for their own or others' interests.

#### **6. Management Committee**

The composition and qualifications of the Management Committee as stated in its Charter can be summarised as follows:

6.1 Composition of the Management Committee

6.1.1 The Management Committee shall consist of directors and/or executives. The President shall be the Chairperson of the Management Committee and chair all meetings.

6.1.2 The Management Committee shall appoint a person to serve as the secretary to the Management Committee, except that the Board of Directors shall assign otherwise.

6.2 Qualifications of the Management Committee

6.2.1 Possessing qualifications without any prohibited characteristics pursuant to the Public Limited Companies law and the Securities and Exchange law.

6.2.2 Having knowledge and experience benefiting the Company's business operations and dedicating sufficient time and exerting full efforts for the interests of Company

6.2.3 Being honest and highly ethical in conducting business.



6.2.4 Not engaging in any business, partnership or directorship in other legal entities of the same nature or in competition with the Company's business, whether for their own or others' interests.

## 7. Risk Management Committee

The composition and qualifications of the Risk Management Committee as stated in its Charter and can be summarised as follows:

7.1 The Risk Management Committee shall consist of the Management Committee and managing directors of power plants.

7.2 The Management Committee shall appoint one member as the Chairman of the Risk Management Committee.

7.3 The Risk Management Committee shall appoint the secretary to the Risk Management Committee.

## Supervision of Subsidiaries and Associated Companies

The Company conducts business as a holding company where it holds shares in other companies without any material business of its own. The Company therefore has a mechanism where it supervises the operations of subsidiaries and associated companies that conduct core businesses through the supervision and management policy of subsidiaries and associated companies. The directors of subsidiaries and associated companies appointed by the Company shall sign a certification letter for compliance with such policy and relevant criteria of the SEC Office.

The objective of the supervision and management policy of subsidiary and associated companies that conduct core businesses is to put in place direct and indirect measures and mechanisms for the Company to supervise and manage its subsidiaries and associated companies as well as to monitor their compliance with various measures and mechanisms and with the Company's policies as if they are the Company's own unit. This includes the Public Limited Companies law, the Civil and Commercial Code, the Securities and Exchange law, other relevant laws, notifications, rules and regulations of the Capital Market Supervisory Board, the SEC, the SEC Office and the SET. The purpose is to safeguard the interests and investments of the Company in subsidiaries and associated companies.

The policy requires that transactions or actions with material implications or effects on financial status and operation results of subsidiaries and associated companies be approved by the Board of Directors or the shareholders' meeting (as the case may be). Directors shall have duties to organise the Board of Directors' meeting and/or the shareholders' meeting to approve the matter before

subsidiaries and associated companies organise their own Board of Directors and/or shareholders' meeting to approve the same matter. In this regard, the Company shall disclose information and comply with criteria, conditions, procedures and methods relating to the matter seeking approval as specified in the Public Limited Companies law, the Civil and Commercial Code, the Securities and Exchange law, other relevant laws as well as notifications and regulations of the Capital Market Supervisory Board, the SEC, the SEC Office and the SET mutatis mutandis and in a complete and correct manner.

In this regard, the "subsidiary" and "associated company" shall mean a subsidiary or an associated company (as the case may be) which operates core businesses and possesses qualifications as stipulated in Notification of the Capital Market Supervisory Board No. Tor Jor 28/2551 Re: Seeking Permission and Permission for the Initial Public Offering (IPO) (as amended) in conjunction with Notification of the SEC No. Kor Jor 17/2551 Re: Definitions in Notifications on Issuance and Offering of Securities (as amended).

## Supervision of the Use of Inside Information

The Company and subsidiaries have established a policy to prevent the use of inside information which shall be strictly complied by directors, executives and employees of the Company and its subsidiaries and signed for their acknowledgement and commitment to the policy as principles and guidelines for the operation. In addition, the Company has determined disciplinary actions for violations.

The Company and its subsidiaries have policies to prevent and supervise their directors, executives and employees to strictly comply with Inside Information Usage Policy and Code of Conduct which can be summarised as follows:

1. The Company shall inform directors, executives and management positions in accounting and finance who are department managers or equivalent (based on the definition of the Capital Market Supervisory Board and the SET) of their duties to prepare and report their holding of the Company's securities pursuant to Section 59 and its punitive provisions pursuant to Section 275 of the SEC Act, and to report their acquisition or disposal of the Company's securities pursuant to Section 246 and its punitive provisions pursuant to Section 298 of the SEC Act.

2. Directors, executives and auditors including management positions in accounting and finance who are department managers or equivalent are required to prepare and disclose their holding of the Company's securities as well as that of their spouses and minor children pursuant to Section 59 the first time they are appointed as directors or executives and whenever changes are made. The report

shall be submitted to the Company Secretary for further submission to the SEC Office within a specified timeframe. The Company Secretary shall prepare a summary report of securities holding and changes in securities holding to the Board of Directors' meeting for acknowledgement every six months.

3. Directors and executives as well as management positions in accounting and finance who are department managers or equivalent as well as operators who get access to material inside information that affects the change of securities prices shall be prohibited to directly or indirectly buy, sell, offer to buy or sell or persuade anyone to buy, sell, offer to buy or sell shares or other securities (if any) of the Company within a period before financial statements are published or before its financial status and operation results are disseminated until the Company discloses such information to the public. The Company shall inform directors, executives and the management positions in accounting and finance who are department managers or equivalent to refrain from doing such transaction in writing at least 30 days before the disclosure of the information to the public. They are recommended to wait at least 24 hours after the disclosure of the information to the public to conduct such transaction.

4. Directors, executives and employees of the Company and subsidiaries shall be prohibited to use inside information which has or may have effects on the change in the Company's securities price that has not yet been disclosed to the public but to which they get access as a result of their position to directly or indirectly buy, sell, offer to buy or sell or persuade someone else to buy, sell, offer to buy or sell the Company's shares or other securities whether or not such transaction is for the person's own interest or others', or whether the disclosure of such fact for others to act will mean that they themselves will benefit or enjoy the return or otherwise.

5. Directors, executives and employees of the Company and its subsidiaries or former directors, executives and resigning employees shall be prohibited to disclose inside or confidential information of the Company and its subsidiaries as well as trade secrets of suppliers of the Company and its subsidiaries that they may have access to while performing duties to the third party although the disclosure of such information may not damage the Company, subsidiaries or suppliers.

6. Directors, executives and employees of the Company and its subsidiaries shall not disclose inside information. Neither will they, directly or indirectly, use their positions in the Company or subsidiaries or illegally exploit inside information or material information learnt or acknowledged during their work within the Company and/or subsidiaries not yet disclosed to the public for an unlawful exploitation or disclosing it to the third party for their interest or others regardless whether the persons will benefit from such action or not.

7. Directors, executives and employees of the Company and its subsidiaries or former directors, former executives and resigning employees shall keep secrets and/or inside information of the Company and its subsidiaries confidential. Directors, executives and employees of the Company and its subsidiaries shall be prohibited to exploit secrets and/or the Company's inside information and that of the subsidiaries for the benefit of other companies.

8. Directors, executives and employees of the Company and its subsidiaries shall be obliged to comply with the guidelines on the use of inside information pursuant to the SEC Act and the PLC Act as well as other relevant rules.

**Report on Securities Holding of Directors and Senior Executives as of 31 December 2019**  
(including spouses and minor children)

| Name                                      | Number of<br>Shares As of<br>31 December 2018 | Number of<br>Shares As of<br>31 December 2019 | Change Increase /<br>(Decrease) |
|-------------------------------------------|-----------------------------------------------|-----------------------------------------------|---------------------------------|
| <b>Directors</b>                          |                                               |                                               |                                 |
| Mr. Harald Link                           | 635,399,700                                   | 635,399,700                                   | -                               |
| Ms. Caroline Monique Marie Christine Link | 28,350,000                                    | 28,350,000                                    | -                               |
| Mrs. Preeyanart Soontornwata              | 6,762,150                                     | 6,762,150                                     | -                               |

| Name                                                                                          | Number of Shares As of 31 December 2018 | Number of Shares As of 31 December 2019 | Change Increase / (Decrease) |
|-----------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------|
| Mr. Surachai Saibua <sup>1</sup>                                                              | 212,150                                 | 212,150                                 | -                            |
| Mr. Somkiat Sirichatchai                                                                      | 121,200                                 | 121,200                                 | -                            |
| Mrs. Katevalee Napasab                                                                        | 424,200                                 | 424,200                                 | -                            |
| Mr. Anusorn Sangnimnuan                                                                       | 321,200                                 | 321,200                                 | -                            |
| Mrs. Anchalee Chavanich                                                                       | 121,200                                 | 121,200                                 | -                            |
| Mrs. Sunee Sornchaitanasuk                                                                    | -                                       | -                                       | -                            |
| <b>Executives (pursuant to the definition of the SEC's Notification No. Kor Jor. 17/2551)</b> |                                         |                                         |                              |
| Mr. Surasak Towanich                                                                          | 90,950                                  | 90,950                                  | -                            |
| Mr. Chote Chusuwan                                                                            | 90,950                                  | 90,950                                  | -                            |
| Mr. Arunphun Pootong <sup>2</sup>                                                             | 35,000                                  | 35,000                                  | -                            |
| Mr. Peradach Patanachan                                                                       | 90,950                                  | 90,950                                  | -                            |
| Mr. Nopadej Karnasuta                                                                         | 90,950                                  | 90,950                                  | -                            |
| Miss Siriwong Borvornboonrutai                                                                | 192,200                                 | 192,200                                 | -                            |
| Miss Pornthip Tungpongbandit                                                                  | 269,800                                 | 269,800                                 | -                            |

## Remark

<sup>1</sup> Mr. Surachai Saibua resigned from directorship, effective from 1 June 2019.

<sup>2</sup> Mr. Arunphun Pootong was appointed by the Board of Directors, in its Meeting No. 5/2019 held on 25 April 2019, to be a member of the Management Committee falling within the above-mentioned definition of the SET's Notification.

## Compliance with the Principles of Good Corporate Governance in other Matters

### Compliance with the Corporate Governance Code for Listed Companies 2017

Having reviewed the Corporate Governance Code for Listed Companies 2017, the Board of Directors considered adjusting practices for implementation on the basis of the Company's business context. Yet, there remained certain practices the Board of Directors was of the opinion, following its consideration, that they were not yet corresponding to the Company's context and decided to not yet implement them. However, the Company would consider ways and means to implement the practices in the corporate governance supervision in the future.

### Audit Fee

For the accounting period ended 31 December 2019, the Company and its subsidiaries paid a total of Baht 16.65 million audit fee to PricewaterhouseCoopers ABAS Ltd. (PwC), the Company's auditor, divided into Baht 4.09 million of the audit fee for the Company and Baht 12.56 million of the audit fee for the subsidiaries. The non-audit fee accounted for Baht 1.93 million.

Persons or businesses relating to the auditors and the auditing office for which the auditors work are not related to the Company and its subsidiaries in accordance with the Code of Conduct of accounting professions with regard to the auditing of consolidated financial statements and separate financial statements as stipulated by the Federation of Accounting Professions Under the Royal Patronage.

# Report of the Audit Committee

## Dear shareholders,

The Board of Directors of B.Grimm Power Public Company Limited (the “Company”), appointed the Audit Committee consisting of 3 independent directors who were knowledgeable and experienced in the energy and engineering business, and finance and accounting. They were Mrs. Anchalee Chavanich, as the Chairperson of Audit Committee, and Mr. Anusorn Sangnimnuanand and Mrs. Sunee Sornchaitanasuk as committee members, with Mr. Suchol Watanasukchai, Senior Vice President, Internal Audit, being the secretary to the committee.

The Audit Committee performed its duties with independence in accordance with its scopes of work and responsibilities entrusted by the Board of Directors and written in the Audit Committee’s charter, which was in compliance with the best practices of the Audit Committee as well as requirements of the SEC and the SET. Results of the Audit Committee’s meetings were reported to the Board of Directors’ Meetings as a regular agenda.

In 2019, the Audit Committee convened 12 times and visited the Group’s power plants and projects both domestically and internationally. In addition, there were 2 joint meetings held with the auditors and the Company’s Internal Audit Department without the management’s presence to ensure that both auditors and Internal Audit Department could work independently.

In 2019, the Audit Committee’s performance of duties can be summarized as follows:

## Review of Financial Report

The Audit Committee reviewed the interim financial information and the Group’s 2019 consolidated and separate financial statements with auditors and the management in key issues, adjustment of key accounting entries and accounting estimates with effect to financial information and financial statements, and key audit matters (KAM) in the auditor’s report. The Audit Committee concluded that the financial statements and information disclosed in the Group’s Notes to the Financial Statements were accurate, complete, timely and reliable in accordance with the Thai Financial Reporting Standards for the benefits of users of financial statements. The auditors unconditionally expressed their opinions. No material observation was made. Assessment result of the control was appropriate. No information was concealed and one could perform one’s duties independently.

The Audit Committee also reviewed the Management Discussion and Analysis (MD&A) to ensure accuracy, completeness and adequacy of information and benefits to shareholders and general investors for use in their investment decisions.



### **Review of Connected Transactions or Transactions that may Cause Conflicts of Interest**

The Audit Committee reviewed the Group's connected transactions or transactions that may cause conflicts of interest according to the Notifications of the SEC and the SET. The review showed that the Group's connected transactions were executed at arm's length, reasonable, for the best interest of the Group and were not favorable to any party.

### **Review of Legal Compliance**

The Audit Committee reviewed and strictly supervised the performance of the Group for compliance with the laws on securities and exchange, the SEC's requirements and other relevant laws, including related policies and regulations on anti - corruption. In addition, the Audit Committee urged the Company to follow up the draft law which was under consideration and might affect the Company before its promulgation.

### **Review of Risk Management and Assessment of Internal Control**

The Audit Committee regularly acknowledged risk management supervision carried out by the Risk Management Committee on a quarterly basis. It also supported risk management and internal control procedures of the Committee of Sponsoring Organization of the Treadway Commission (COSO) Framework as guidelines to manage risks and keep them at an acceptable level. Review and monitoring was performed on a regular basis to accommodate unexpected situations and to effectively adapt to changes.

Having reviewed the Group's internal control system with the auditors and the Internal Audit Department based on the SEC's guidelines, the Audit Committee found no issues or weaknesses that may materially affect the Group's performance and its financial statements. Moreover, the Group's internal control system was transparent, adequate and appropriate for the business.

### **Supervision of Internal Audit**

The Audit Committee supervised the independence of the Internal Audit Department by requiring it to directly report to the Audit Committee as stated in the Internal Audit Charter. In addition, the Audit Committee reviewed its own charter and that of the Internal Audit Department for proper performance that was in compliance with criteria and requirements of the SEC, the Corporate Governance Policy and the International Standards for the Professional Practices of Internal Auditing.

The Audit Committee also reviewed the suitability of the annual and long - term internal audit plans by focusing on the risk - based approach, plan - based performance and auditing results of the Internal Audit Department where it provided advice on significant issues, annual performance of the Internal Audit Department, personnel development, and adequacy and suitability assessment of resources within the Department to ensure performance efficiency and effectiveness.


## **Review of Corporate Governance**

The Audit Committee reviewed the policy and the Code of Conduct to encourage systematic corporate governance practices. It also reviewed the whistleblowing policy and process to allow complaints of actions against the laws or the Company's regulations to be made, while the whistleblower's rights to report was protected at the same time by keeping his / her personal information and evidences confidential. In addition, the Audit Committee gave advice on the process improvement in order to enhance efficiency and effectiveness in accordance with the corporate governance principles.

## **Nomination of Auditors and Proposal of the 2020 Audit Fee**

The Audit Committee considered the nomination of auditors by taking into consideration their independence, skills, competency, auditing experiences in the energy business and the audit fee. It recommended through the Board of Directors for proposing to the 2020 AGM the appointment of auditors from Pricewaterhouse Coopers ABAS Ltd., namely Mr. Kajornkiet Aroonpirodkul, CPA License No. 3445, Mr. Paiboon Tunkoon, CPA License No. 4298 and Mr. Boonrueng Lerdwiseswit, CPA License No. 6552, as the auditors for the year ended 31 December 2020. The 3 nominated auditors were approved by the SEC.

In conclusion, the Audit Committee performed its duties in 2019 based on its responsibilities through diverse skills and competency, adequate independence and compliance with its own charter. The Audit Committee also expressed opinions and provided business - related advices for equal benefits of all stakeholders. The Audit Committee was of the opinion that the Group underlined effective and efficient performances, that the financial statements with material and reliable information in compliance with financial reporting standards were prepared, that the connected transactions or transactions that may cause conflicts of interest were adequately disclosed, that the corporate governance, risk management, and internal control and internal audit systems were put in place properly and effectively, and that laws, rules and regulations relating to the business were fully complied.



**Mrs. Anchalee Chavanich**  
Chairperson of Audit Committee

## Report of the Corporate Governance Committee

### Dear Shareholders,

The Board of Directors of B.Grimm Power Public Company Limited has appointed the Corporate Governance Committee to establish guidelines and oversee corporate governance, Code of Conduct and business ethics, sustainability management and anti-corruption. The Corporate Governance Committee consisted of 3 independent directors:

- |                             |                                            |
|-----------------------------|--------------------------------------------|
| 1. Mr. Anusorn Sangnimnuan  | Chairman of Corporate Governance Committee |
| 2. Mrs. Anchalee Chavanich  | Member of Corporate Governance Committee   |
| 3. Mr. Somkiat Sirichatchai | Member of Corporate Governance Committee   |

Mr. Niton Chaiyanate, Senior Vice President, Office of the President, acted as Secretary to the Corporate Governance Committee.

In 2019, the Corporate Governance Committee convened 6 times, with 100% meeting attendance of all members. Its performance can be summarised as follows:

### Policy formulation and promotion of compliance with the Corporate Governance Policy

- Consideration and revision of the Corporate Governance Policy, the Code of Conduct and the Charter of the Corporate Governance Committee to be in accordance with the Corporate Governance Code for Listed Companies 2017 and the business context
- Consideration of plans and supervision of operations to ensure compliance with the principles of corporate governance, and continuous promotion of knowledge and understanding of corporate governance and Code of Conduct for employees throughout the organisation
- Consideration and acknowledgement of results of Corporate Governance Report of Thai Listed Companies (CGR) and recommendations for developments and improvements in different aspects as in accordance with the criteria of CGR
- Supervision and provision of suggestions on the development of anti-corruption operations and whistleblowing and grievance channels, organisation of awareness-raising activities for employees at all levels, and promotion of participation in anti-fraud and corruption activities with external agencies to create a workplace culture and norms in a continuous manner. The Company was already certified as a Collective Action Coalition against Corruption (CAC) member

### **Supervision of compliance with laws, rules, regulations and best practices**

- Supervision and provision of advice on the determination of work practices in accordance with the laws, rules and regulations relating to business operations to prevent and reduce risks derived from related operations
- Consideration and provision of suggestions on the criteria for shareholders to propose an agenda and nominate candidates for directorship at the shareholder's meeting.
- Supervision of the arrangement of the 2019 Annual General Meeting of Shareholders to be in accordance with the corporate governance principles and the criteria for the Annual General Meeting Checklist (AGM Checklist) assessed by the Thai Investors Association, and consideration and acknowledgement of AGM Checklist's results to provide suggestions for better improvements in the arrangement of the annual general meeting of shareholders

### **Supervision of sustainability management**

- Consideration of plans, determination of goals, and provision of suggestions on the Company's sustainability management and improvement in economic, social and environmental aspects to ensure alignment with the United Nations Sustainable Development Goals (UN SDGs) and improve operations that meet the international sustainability standards
- Consideration on the participation in the 2019 Thailand Sustainability Investment (THSI) held by the Stock Exchange of Thailand and acknowledgement of THSI results, and provision of suggestions on the development of sustainability management in different aspects to be in accordance with the international standards
- Promotion and provision of suggestions on Environmental Social and Governance (ESG) issues to develop and uplift work performance, and reporting of ESG results based on international standards
- Consideration and provision of suggestions on the participation in the 2019 Environmental Social and Governance (ESG) assessment with the external agencies

With strong commitment to conducting its business under the corporate governance principles, sustainability management and responsibility towards the society and stakeholders in a continuous manner, the Company was therefore well-recognized for its performance in corporate governance and sustainability management as follows:

- "Excellent" for AGM Checklist, arranged by the Thai Investors Association
- "Very Good" for the Corporate Governance Report of Thai Listed Companies (CGR), arranged by the Thai Institute of Directors
- Selected as 1 of 100 SET-listed companies with outstanding performance in Environmental, Social and Governance (ESG 100), arranged by the Thaipat Institute



- Selected in Thailand Sustainable Investment (THSI) list 2019, arranged by the Stock Exchange of Thailand, where listed companies in the list passed sustainability assessment in environmental, social, economic and governance dimensions as in accordance with the international standards
- “Recognition” for the Sustainability Report Awards 2019 arranged by the Thaipat Institute, based on the preparation of the sustainability report and information disclosure on sustainability performance to the stakeholders
- Platinum Awards Excellence in ESG and Best Environment Responsibility, arranged by the Asset Publishing and Research Company Limited (Hong Kong)

The Corporate Governance Committee underlines its commitment to good corporate governance and strict compliance with the laws, rules, regulations and Code of Conduct, which serve as crucial foundations for management excellence based on fairness, transparency and accountability. The Committee also continues to enhance its sustainability management in economic, social and environmental while taking into account its responsibility towards the stakeholders and gaining trust and acceptance from the stakeholders, thereby leading to stable and sustainable business growth.



**Mr. Anusorn Sangnimnuan**  
Chairman of Corporate Governance Committee

## Report of the Nomination and Compensation Committee


### Dear shareholders,

The Board of Directors of B.Grimm Power Public Company Limited appointed the Nomination and Compensation Committee in accordance with corporate governance best practices for listed companies. It also considered knowledge, skills and experiences of committee members to enable the Committee to achieve its goals. In 2019, the Nomination and Compensation Committee consisted of 4 members, namely Mr. Somkiat Sirichatchai, Chairman of the Committee, together with Mr. Harald Link, Ms. Caroline Monique Marie Christine Link and Mrs. Katevalee Napasab.

The Nomination and Compensation Committee's roles and responsibilities are defined in its charter, which include, among a few, recruiting qualified candidates as directors and determining compensation packages and criteria for board members, subcommittee members and the President in accordance with the good corporate governance guidelines.

In 2019, the Committee convened 3 times to consider significant agendas, namely (1) Committee's Charter; (2) Board Skills Matrix and totality of Board composition; (3) Board's nomination process; (4) Nomination and appointment of directors in replacement of those who retire by rotation; (5) Compensation packages and criteria for directors and the President and (6) Succession plan for key senior management positions.

All committee members gave priority to meeting attendance and contribution of opinions and information proven beneficial for fair and appropriate compensation to relevant parties where they adequately exercised knowledge, prudence and independence when expressing opinions and giving recommendations for the best interest of B.Grimm Power in accordance with the good corporate governance guidelines.



**Mr. Somkiat Sirichatchai**

Chairman of Nomination and Compensation Committee

## Internal Control and Risk Management

B.Grimm Power Public Company Limited (the “Company”) and its subsidiaries (the “Group”) continue to underline the importance of internal control and risk management. The Risk Management Committee has been established to manage the Group’s overall risks in accordance with international standards by making reference to the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Framework. To create awareness among employees of the significance of internal control and risk management and to assure stakeholders that the Group has established an internal control system that adequately and properly extends to all activities for an effective operation, the Company takes into consideration the following five components of the internal control framework:

### 1. Control Environment

The Company has clearly set goals, vision, objectives, policies and practices through its compassionate business approach. Sound, appropriate and adequate internal control environment has been established. In addition, the business is carried out under the principles of corporate governance and the Code of Conduct that are aligned with the written corporate governance policy, which determines roles, duties and responsibilities of the Board of Directors and where the organization structure is regularly reviewed to truly reflect the business’s strategy, operation plan and growth. Besides, the corporate governance policy and the Corporate Governance Committee’s charter are reviewed and amended to correspond to the Securities and Exchange Commission (SEC)’s corporate governance principles. The Company formulates a work policy and an employee manual, sets up an organization structure and various committees that facilitate effective operation and underline the understanding among employees of fraud risks and conflicts of interest. Grievance or whistleblowing measures are made available to report unlawful or unethical activities or behaviours that may reflect corrupted or inappropriate practices within the Group from employees and other stakeholders and to notify inaccurate financial reporting or defective internal control system to enable stakeholders to help monitoring.

The Company has reviewed significant policies and relevant operation processes so that they are in line with the anti-corruption policy before it is communicated to personnel at all levels for strict compliance. Since 2018, the Company has been certified as a member of Thailand’s Private Sector Collective Action Coalition Against Corruption (CAC). The Company also received awards from external agencies e.g. Sustainability Disclosure Award 2019, ESG Platinum Award-Excellence in Environmental Social and Governance and Best Initiative Environmental Responsibility. This reflects the Company’s enthusiasm to extend its sustainability performance to encompass environment, social and corporate governance aspects as well as the drive to align its goals with the Sustainable Development Goal (SDG) at the international platform.

## **2. Risk Assessment**

Putting a priority on risk management, the Company has established the Risk Management Committee (RMC) to formulate and review the risk management policy, set strategies to reflect and cover operating risks, and continuously supervise risk management for efficiency and effectiveness. The RMC reports results of the Company's risk management supervision to the Management Committee and the Board of Directors, respectively. The Company's risk management is in accordance with the COSO Enterprise Risk Management Framework (COSO ERM) by assessing corporate risk profiles based on internal and external factors, and Environmental, Social and Governance (ESG) risks which may affect the achievement of its goals and objectives. The Company also assesses and manages corporate risks, business unit risks, and functional risks in all operations processes that may affect its business conduct, fraud and corruption risks especially from the activities with government agencies as well as other factors in terms of business disruption and compliance with relevant laws and regulations. Key Risk Indicators (KRIs) are formulated to help monitoring performance reports of each department to meet its goal. A mitigation plan is appropriately and adequately formulated to reduce operation risks. Besides, directions are given to help retaining risks at an acceptable level with a regular review and monitoring process. The Company also underlines the importance of Business Continuity Management (BCM) where a system is established to keep it ready to run business during the crisis and when exposed to other possible threats. The operation plan is monitored and reviewed on a regular basis to ensure the perfect and effective business continuity management.

## **3. Control Activities**

The Company supervises the Group's activities through planning and control. This includes the use of Key Performance Indicators (KPIs), segregation of duties, responsibilities and scopes of authorization including Line of Authority (LOA) considered appropriate to the business, all of which are thoroughly communicated to employees. The Company also sets up practices in relation to transactions that cause or may cause conflicts of interest by taking into consideration the best interests of shareholders and stakeholders. The operation of subsidiaries /associated companies is monitored by the executives who are appointed as their directors to help them drafting policies, acknowledging information and monitoring performance. Corporate assets are taken care of preventing from loss or inappropriate use. Balance of power is achieved through a specific department and an exclusively appointed committee such as the Internal Audit Department and the Risk Management Committee. Effective and appropriate internal control and risk management systems are constantly put in place to prevent corruption. The Company Secretary has a duty to ensure that the performance of the Group and the Board of Directors and disclosure of information are in compliance with the law on securities and exchange, the Securities and Exchange Commission's (SEC) requirements and other relevant laws. The Company also sets up a monitoring system to oversee the operation of subsidiaries while formulating the Group's corporate governance policy included the policies on security, safety, occupational health, environment and energy.

## **4. Information and Communication**

The Company manages its information and communication systems to ensure security covering people, technology and process aspects under the information security management policy designed to meet international standards. In 2019, the Company conducted cyber crime drills both at its centre and with power plants. The ISO / IEC 27001:2013 certificate for information security management was



renewed. Such management framework was extended to its affiliates and combined cycle power plants. The Company also enhanced employees' security awareness through the Learning Management System (LMS). In addition, the threat monitoring capacity was increased by installing an internal security operation centre working closely with a security operation centre from overseas. To ensure the increased efficiency and availability of the IT system, an internal network operation centre was established by working closely with a network operation centre from the outside. Various management systems were executed according to international standards and continuously improved, starting from a study to develop long-term plans relating to technology changes which has been identified as one of the risks that may affect business operations.

Moreover, the Company has effective internal communication channels in place, including a daily meeting where operation reports from power plants are made and a weekly meeting with executives of related departments to summarize outcomes, monitor results and resolve problems (if any). The goal is to enable all executives and staff to have enough information for operation and decision-making. The intranet is used for the internal communication through a stable and secure network, thereby enabling staff to access information on policies, regulations/orders and announcements. The Company also has several channels to communicate with the outsiders. The website, [www.bgrimmpower.com](http://www.bgrimmpower.com), gives shareholders and investors an access to the Group's information at all times where safety and accuracy of the system is safeguarded through the Web Deface system. In addition, a communication channel is made available for personnel to file grievances, complaints and suggestions while whistleblower protection measures are put in place.

## 5. Monitoring Activities

The Company monitors the results of operations, assesses the internal control system, regularly compares the results of operations with the plans to see whether the goals are met, and analyses causes that lead to the unachieved results of operations according to the designated plans or standards. All of which are regularly reported to the management, the Audit Committee and the Board of Directors.

The Company's Internal Audit Department conducts an annual audit by taking into consideration significant risks, increase of the number of projects, processes or work systems and requests from executives and/or the Audit Committee (if any). This is to review the adequacy and suitability of the internal control system governing each activity as well as to provide suggestions to enhance efficiency and effectiveness of internal control, which will be communicated to the management for further improvements. The Internal Audit Department periodically reported its audit outcomes based on its internal audit plan to the Management Committee and the Audit Committee throughout 2019.

The Company's auditor is PricewaterhouseCoopers ABAS Ltd., which audited the quarterly financial information and the 2019 financial statements. The auditor reviewed the internal control system from the accounting perspective to determine direction, timeframe and auditing scope and procedures. The auditor found no significant deficiencies in the internal control system.

In 2019, the Board of Directors and the Audit Committee's opinion given to the Group's internal control system was that the Group had a sound, proper, adequate internal control system that suited its business and conformed to the SEC's evaluation form on the internal control adequacy, thereby enabling the fulfillment of the Company's objectives.

## Profile of Head of Internal Audit Department

Details of Head of the Internal Audit Department are as follows:

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>                    | Mr. Suchol Watanasukchai                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Current Position</b>        | Senior Vice President, Internal Audit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Age</b>                     | 59 years                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Date of appointment</b>     | 8 June 2016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Education</b>               | <ul style="list-style-type: none"><li>• Master of Applied Statistics (Major: Computer Science), National Institute of Development Administration (NIDA)</li><li>• Bachelor of Information Systems, Faculty of Business Administration and Information Technology, Rajamangala University of Technology Tawan-ok</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Trainings</b>               | <ul style="list-style-type: none"><li>• Internal Control System for IPO Companies from the Association of Thai Securities Companies</li><li>• Beginning Auditor Tools and Techniques from the Institute of Internal Auditors of Thailand</li><li>• Fundamentals for New Auditor from the Institute of Internal Auditors of Thailand</li><li>• Clinic IA "Raise the Red Flag: IA Guide to Prevent &amp; Detect Fraud"</li><li>• Clinic IA "Sustainable Development"</li><li>• Enterprise Risk Management Training for Management - COSO Framework</li><li>• Anti-Corruption: The Practical Guide</li><li>• The Habits of Highly Effective (7 Habits)</li><li>• Taking Action (Taking the BEST Action for Professional Leader)</li><li>• IA Day: Innovative Internal Audit</li><li>• Internal Audit Report Writing Techniques for Added Values to Corporations</li><li>• TFRS15: Income from Agreements Signed with Clients (Accounting Principles and Standards)</li><li>• Financial Statement Analysis</li></ul> |
| <b>Other current positions</b> | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Professional experience during the past five years

|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| June 2016 - Present | Senior Vice President, Internal Audit                                        |
| 1996 - 2016         | Vice President, Management Information System, Amata B.Grimm Power Co., Ltd. |
| 1993 - 1996         | Manager, Management Information System, B.Grimm Holding Co., Ltd.            |

## Shareholding in the Company (including spouse and minor child)

|         |                |
|---------|----------------|
| Himself | 141,200 shares |
|---------|----------------|

## Family relationship with directors, other executives or major shareholders of the Company or its subsidiaries

None

## Related Party Transactions

### Related Parties and Nature of Relationship

| Related parties                                                                    | Nature of Relationship as of 31 December 2019                                                                                                                                                                                                                                                                                                                                                                                                 | Business                                                                       |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Hamon B.Grimm Company Limited<br>("Hamon B.Grimm")                                 | <ul style="list-style-type: none"> <li>• Has a common director with B.Grimm Power, namely Mr. Harald Link</li> <li>• Has an executive director of B.Grimm Power, namely Ms. Caroline Monique Marie Christine Link, as an executive of Hamon B.Grimm</li> <li>• Has a common majority shareholder with B.Grimm Power, namely Mr. Harald Link</li> </ul>                                                                                        | Construction and distribution of parts and equipment for power plant machinery |
| B. Grimm Dr. Gerhard Link Building Company Limited<br>("B.Grimm Gerhard Building") | <ul style="list-style-type: none"> <li>• Has common directors with B.Grimm Power, namely Mr. Harald Link, Ms. Caroline Monique Marie Christine Link and Mrs. Preeyanart Soontornwata</li> <li>• Has an executive director of B.Grimm Power, namely Ms. Caroline Monique Marie Christine Link, as an executive of B.Grimm Gerhard Building</li> <li>• Has a common majority shareholder, with B.Grimm Power, namely Mr. Harald Link</li> </ul> | Space for rent and services                                                    |
| B.Grimm Trading Corporation Company Limited ("B.Grimm Trading")                    | <ul style="list-style-type: none"> <li>• Has common directors with B.Grimm Power, namely Mr. Harald Link and Mrs. Preeyanart Soontornwata</li> <li>• Has an executive director of B.Grimm Power, namely Ms. Caroline Monique Marie Christine Link, as an executive of B.Grimm Trading</li> <li>• Has a common majority shareholder, with B.Grimm Power, namely Mr. Harald Link</li> </ul>                                                     | Distribution of parts, electric equipment, water pumps and fire hydrants       |
| B.Grimm Alma Link Building Company Limited<br>("B.Grimm Alma Building")            | <ul style="list-style-type: none"> <li>• Has common directors with B.Grimm Power, namely Mr. Harald Link, Ms. Caroline Monique Marie Christine Link and Mrs. Preeyanart Soontornwata</li> <li>• Has a common majority shareholder with B.Grimm Power, namely Mr. Harald Link</li> </ul>                                                                                                                                                       | Property and parking space for rent                                            |

| Related parties                                                                        | Nature of Relationship as of 31 December 2019                                                                                                                                                                                                                                           | Business                                                                          |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| B.Grimm Alma Link Building Services Company Limited ("B.Grimm Alma Building Services") | <ul style="list-style-type: none"> <li>• Has common directors with B.Grimm Power, namely Mr. Harald Link, Ms. Caroline Monique Marie Christine Link and Mrs. Preeyanart Soontornwata</li> <li>• Has a common majority shareholder with B.Grimm Power, namely Mr. Harald Link</li> </ul> | Utility services and land lease                                                   |
| B.Grimm International Company Limited ("B.Grimm Inter")                                | <ul style="list-style-type: none"> <li>• Has common directors with B.Grimm Power, namely Mr. Harald Link and Mrs. Preeyanart Soontornwata</li> <li>• Has a common majority shareholder with B.Grimm Power, namely Mr. Harald Link</li> </ul>                                            | Construction                                                                      |
| KSB Pumps Company Limited ("KSB Pumps")                                                | <ul style="list-style-type: none"> <li>• Has a common majority shareholder with B.Grimm Power, namely Mr. Harald Link</li> </ul>                                                                                                                                                        | Import and distribution of water pumps, valves, equipment and parts.              |
| B.Grimm International Service Company Limited ("B.Grimm Inter Service")                | <ul style="list-style-type: none"> <li>• Has common directors with B.Grimm Power, namely Mr. Harald Link, Ms. Caroline Monique Marie Christine Link and Mrs. Preeyanart Soontornwata</li> <li>• Has a common majority shareholder with B.Grimm Power, namely Mr. Harald Link</li> </ul> | Property for rent and consulting services                                         |
| Carrier (Thailand) Company Limited "Carrier (Thailand)"                                | <ul style="list-style-type: none"> <li>• Has common directors with B.Grimm Power, namely Mr. Harald Link and Ms. Caroline Monique Marie Christine Link</li> </ul>                                                                                                                       | Wholesale air conditioners, domestic air conditioner repair, export and bulk sale |
| Mr. Harald Link                                                                        | <ul style="list-style-type: none"> <li>• Director and shareholder of B.Grimm Power</li> </ul>                                                                                                                                                                                           |                                                                                   |



## Types and Nature of Related Party Transactions between the Company/Subsidiaries and Related Parties

B.Grimm Power and its subsidiaries ("The Group") entered into transactions with related parties for the year ended 31 December 2017, 2018 and 2019, respectively. The types and nature of related party transactions are as follows:

### 1. Transactions to be continued in the future:

#### 1.1 Maintenance, repairment, procurement and purchase of machinery

| Related Parties   | Transaction size (Baht)     |                             |                             | Rationale and Reasonableness of Transaction                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Opinions of the Audit Committee                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | Year ended 31 December 2017 | Year ended 31 December 2018 | Year ended 31 December 2019 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.1.1 KSB Pumps   |                             |                             |                             | In 2019, the Group's power plants purchased equipment and spare parts such as submersible pump and condensate extraction pump for power plants' operations and offered maintenance and repair services for feed boiler pump. The Company then purchased spare parts and received such services from KSB Pumps. The prices and payment terms were in accordance with general commercial terms of spare parts and material distribution business. Such transaction was therefore deemed necessary and reasonable. | The Audit Committee was of the opinion that such transaction was necessary and reasonable since it was the purchase of spare parts for power plant maintenance to maintain stability and increase efficiency in power plant operations. The rates and payment terms were in accordance with general commercial terms and were comparable to the rates that KSB Pumps charged on external parties. |
| - Expense         | 418,281                     | 1,291,378                   | 136,492                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                   |
| - Inventory       | 81,100                      | 4,025,923                   | 3,241,500                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                   |
| - Account payable | 76,730                      | 371,566                     | 447,342                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                   |

## 1.2 Purchase, rental and services in relation to property

| Related Parties                | Size of Transaction (Baht)  |                 |           |                             |                 |           |                             |                 |           | Rationale and Reasonableness of Transaction                                                                                                                                                                                                                                                                                             | Opinions of the Audit Committee                                                                                                                                                                                                                                                                                          |
|--------------------------------|-----------------------------|-----------------|-----------|-----------------------------|-----------------|-----------|-----------------------------|-----------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | Year ended 31 December 2017 |                 |           | Year ended 31 December 2018 |                 |           | Year ended 31 December 2019 |                 |           |                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                          |
|                                | Expense                     | Account Payable | Deposit   | Expense                     | Account Payable | Deposit   | Expense                     | Account Payable | Deposit   |                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                          |
|                                |                             |                 |           |                             |                 |           |                             |                 |           |                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                          |
| 1.2.1 B.Grimm Gerhard Building | 32,461,284                  | 538,637         | 6,969,714 | 39,329,263                  | 682,760         | 8,109,006 | 40,057,217                  | 805,141         | 9,023,696 | The Group entered into a space rental and service contract with B.Grimm Gerhard Building for office space, car park and spare parts and equipment warehouse. The prices and payment terms were in accordance with general commercial terms of property rental business. Such transaction was therefore deemed necessary and reasonable. | The Audit Committee was of the opinion that the Group's office space rental was necessary and reasonable. The rental fee was market rental rate comparable to the rate that B. Grimm Gerhard Building charged on external parties; and the payment terms were in accordance with general terms of office space business. |

| Related Parties             | Size of Transaction (Baht)  |                 |           |                             |                 |           |                             |                 |         | Rationale and Reasonableness of Transaction                                                                                                                                                                                                                                | Opinions of the Audit Committee                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|-----------------------------|-----------------|-----------|-----------------------------|-----------------|-----------|-----------------------------|-----------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | Year ended 31 December 2017 |                 |           | Year ended 31 December 2018 |                 |           | Year ended 31 December 2019 |                 |         |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                      |
|                             | Expense                     | Account Payable | Deposit   | Expense                     | Account Payable | Deposit   | Expense                     | Account Payable | Deposit |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                      |
|                             |                             |                 |           |                             |                 |           |                             |                 |         |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                      |
| 1.2.2 B.Grimm Inter Service | -None-                      | -None-          | 1,421,550 | 2,362,178                   | 14,642          | 1,426,410 | 3,170,815                   | 18,267          | 743,310 | The Group entered into a space rental contract with B.Grimm Inter Service for office space. The prices and payment terms were in accordance with the general commercial terms of property rental business. Such transaction was therefore deemed necessary and reasonable. | The Audit Committee was of the opinion that such space rental office was deemed necessary and reasonable since the space was in the vicinity of the Company's office. The rental fee was the market rate comparable to the rate that B.Grimm Inter Service charged on external parties; and payment terms were in accordance with general commercial terms of space rental business. |

### 1.3 Purchase of air conditioners

| Related Parties       | Size of Transaction (Baht)  |         |                 |                             |         |                 |                             |         |                 | Rationale and Reasonableness of Transaction                                                                                                                                                                                                                                                                                                                                                                                      | Opinions of the Audit Committee                                                                                                                                                                                                                                                         |
|-----------------------|-----------------------------|---------|-----------------|-----------------------------|---------|-----------------|-----------------------------|---------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | Year ended 31 December 2017 |         |                 | Year ended 31 December 2018 |         |                 | Year ended 31 December 2019 |         |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                         |
|                       | Asset                       | Expense | Account Payable | Asset                       | Expense | Account Payable | Asset                       | Expense | Account Payable |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                         |
| 1.3.1 B.Grimm Trading | 376,608                     | -None-  | 69,229          | 680,421                     | -None-  | 29,239          | 749,424                     | -None-  | -None-          | B.Grimm Trading is a distributor of Carrier air conditioners. In 2019, the Group purchased the Group purchased air conditioners to accommodate an expansion of office space and improve the air conditioning systems. The Group then purchased those products from B.Grimm Trading. The prices and payment terms were in accordance with normal business and comparable to those charged on external parties by B.Grimm Trading. | The Audit Committee was of the opinion that such transaction was deemed reasonable since the Group needed to purchase air conditioners and the prices and payment terms were in accordance with normal business and comparable to those charged on external parties by B.Grimm Trading. |



## 2. Transactions likely to cease in the future

### 2.1 Loan from company director

| Related Parties                     | Size of Transaction (Baht)  |                             |                             | Rationale and Reasonableness of Transaction                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Opinions of the Audit Committee                                                                                                                                                                                                                                                     |
|-------------------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | Year ended 31 December 2017 | Year ended 31 December 2018 | Year ended 31 December 2019 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                     |
| 2.1.1 Mr. Harald Link               |                             |                             |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                     |
| - Loan - Opening net book value     | 1,360,000,000               | -None-                      | -None-                      | The Company entered into a short-term loan agreement with Mr. Harald Link, its director and major shareholder, in the amount of Baht 1,360 million with an interest of MLR minus a fixed margin per annum. The interest rate was within the range of the Company's finance costs. The purpose was to inject liquidity to the Company while the interest payment and the principal repayment will be made upon demand.<br><br>The Company intends to no longer seek loans from its related parties in the future. | The Audit Committee was of the opinion that such transaction was deemed necessary and reasonable since the financial assistance from such director was to inject liquidity into the Company. The interest rate was within the range of the Company's and the Group's finance costs. |
| Increase (decrease) during the year | (1,360,000,000)             |                             |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                     |
| - Loan - Closing net book value     | -None-                      |                             |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                     |
| - Finance costs                     | 41,952,055                  |                             |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                     |
| - Accrued interest                  | -None-                      |                             |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                     |

## Measures and Processes for Approval of Related Party Transactions

By the resolution of the Board of Directors Meeting No. 4/2016 held on 8 June 2016, the measures and processes for approval of related-party transactions between the Company / its subsidiaries and parties who may have conflicts of interest and connected interest or may have future conflicts of interest with the Company were established. The Company abides by the law on securities and exchange, regulations, notifications and directives of the Capital Market Supervisory Board and the Stock Exchange of Thailand. In this regard, related parties having connected interest shall not be involved in the consideration and approval of such transactions to ensure that such transactions do not fall within the transfer of interest between companies or its shareholders but are executed in the best interest of all shareholders. The Company also complies with the requirements governing the disclosure of related-party transactions in the Notes to the Financial Statements audited by the Company's auditor and the Annual Registration Form (Form 56-1).

For related-transactions that are by law subject to approval from the Board of Directors' meetings or the shareholders' meetings, the Company engages the Audit Committee in the meetings to consider and render opinions on the necessity and rationale of such transactions to ensure that the transactions are in the best interest of the Company. Execution of transactions with general commercial terms and transactions deviating from general commercial terms shall be governed by the following principles.

### Transactions with general commercial terms

The Board of Directors granted approval in principle for the management team's authority to approve transactions with general commercial terms between the Company / its subsidiaries and their directors, executives, and related parties, provided that the transactions have commercial terms that a person of ordinary prudence would agree to with any unrelated counterparty under similar circumstances where independent bargaining power is exercised without any influence from his / her status as a director, an executive or a related party (as applicable).

A summary report of such transactions shall be presented to the next Board of Directors' meetings.

### Transactions deviating from general commercial terms

Transactions deviating from general commercial terms shall be subject to review and opinions of the Audit Committee concerning their necessity and the reasonableness of their prices. As such, the Audit Committee ensures that the terms of such transactions are in line with the business norms of a particular industry and / or compares the prices with those quoted by external parties and / or market prices and / or ensures that the prices or terms of such transactions are on an arm's length basis and / or demonstrates that the prices and terms of such transactions are reasonable or fair before proposing the transactions to the Board of Directors' or shareholders' meetings (as applicable) for approval.

In this connection, there shall be compliance with the law on securities and exchange, regulations, notifications and directives of the Capital Market Supervisory Board and the Stock Exchange of Thailand, and the requirements for related-party transaction disclosure.

If the related-party transactions that may arise are beyond the Audit Committee's areas of expertise, the Company will engage independent experts or the Company's auditors in rendering opinions on such transactions in support of decision-making of the Audit Committee, the Board of Directors or shareholders (as applicable) to ensure that such transactions are in the best interest of the Company. The Company discloses information about related-party transactions in the Annual Registration Statement (Form 56-1) and the Notes to the Financial Statements audited by the Company's auditor.

After being listed on the Stock Exchange of Thailand, the Company will comply with rules, regulations and procedures of the Securities and Exchange Commission, the Capital Market Supervisory Board and the Stock Exchange of Thailand relating to entering into related party transactions, connected transactions, and acquisition or disposal of assets under relevant regulations of listed companies in a strictly manner.

### **Policy for future related party transactions**

For any future related party transaction, the Company will adhere to the law on securities and exchange, regulations, notifications, directives or requirements of the Capital Market Supervisory Board, the Securities and Exchange Commission, and the Stock Exchange of Thailand, including the requirements for the disclosure

of related-party transactions of the Company or its subsidiaries according to the accounting standards determined by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King.

Such transactions shall not fall within the transfer of interest between companies or its shareholders but must be in the best interest of the Company and all shareholders.

### **Future trends for related party transactions**

The Company expects that future transactions involving the maintenance and repair services of machinery, purchase of spare parts, materials and accessories relating to the operation of power plants, and power plant insurance will continue to exist for maintenance purpose, to safeguard the power plant's stability and efficiency as well as to manage risks arising from the power plant projects. The Company will comply with the procurement procedures endorsed by the Board of Directors on 8 June 2016.

The Company forecasts that general commercial transactions such as the purchase of products, payroll services to employees of affiliates, meeting room rental service, office space rental service, catering service, and life insurance will continue in the future. The Company will ensure that the prices and payment terms are in line with general commercial terms.

In addition, the Group may undergo a restructuring in the future for alignment with the Group's business plan. The Group will ensure that the pricing and payment terms of investments and divestments are appropriate and in accordance with the relevant criteria and laws. However, the transactions relating to financial support for its affiliates will not continue in the future.



## Management's Discussion and Analysis

The management's discussion and analysis (MD&A) as described below is based on the audited consolidated financial statements for the year ended 31 December 2018 and the year ended 31 December 2019 and should be read in conjunction with the consolidated financial statements and the notes to the consolidated financial statements. The Group's financial statements have been prepared in accordance with the Thai Financial Reporting Standards (TFRSs) unless otherwise specified.

### 1. Significant Events in 2019

#### 2019: A remarkable year with 40% capacity growth

2019 was a remarkable year for the Company with a 40% growth in operating capacity by 820 MW to 2,896 MW from 2,076 MW in 2018 while the Company still have a number of under development projects to drive total installed capacity to 3,424 MW by 2025. Growths come from both greenfield and M&A projects, domestically and internationally as follow;



- **A strategic move to enter Map Ta Phut area** by acquiring SPP1 in March 2019, partnering with Asia Industrial Estate and planning to substitute the 124 MW SPP1 PPAs expiring with a larger SPP with installed capacity 280 MW in order to serve high demands in the area,



- **Achieving commercial operation of 677 MW solar projects in Vietnam** in June 2019 which is the largest solar project in Southeast Asia with smooth operation continually,





- **Achieving commercial operation of Namche 1 and PIC in June and December 2019** with installed capacity of 15 MW and 4.8 MW, respectively.

Although most of new projects started in the middle of the year, The Company's 2019 net profit rose by 33.6% to Baht 3,977 million while owner of the parent rose by 25.1% to Baht 2,331 million. Normalised net profit (NNP) and owner of the parent were Baht 3,658 million and Baht 2,161 million, respectively. These new projects will contribute full-year earnings from 2020 onwards.



### **Expansion in Cambodia, the Philippines and Oman**

The Company has expanded renewable power business to the Philippines through the 6 MW solar rooftop project, to Oman through private PPA for solar rooftop framework approximately 30 MW with Al Madina Group and to Cambodia by securing new solar project with 39 MW installed capacity which scheduled for commercial operation in Q4'2020.



### Collaboration with strategic partners

The Company entered Long Term Service Agreement (LTSA) with Siemens to improve performance of gas turbine. There are 2 projects has completed the upgrades in 2019 while 4 more projects are in the pipeline and expect to be completed within 3 years.

The Company signed MOU with LG Chem to develop the energy storage system and with PetroVietnam Power Corporation-JSC to jointly study and develop power plants with LNG as fuel, including import and distribution of LNG to fuel the power plants in Vietnam.



### EGAT's Floating Solar Power Plant

B.Grimm Power - Energy China Consortium was awarded as EPC contractor for Floating Solar Power Plant for Sirindhorn Dam, also known as the Hydro-Floating Solar Hybrid Project with installed capacity of 45 MW and is considered as the world's largest hybrid hydro-floating solar power plant, which target to complete construction in December 2020.

### Solid measures for water management

The Company has always put in place guidelines and measures for water management to ensure maximum benefits by means of consuming and preserving water resource in a sustainable way. Most of used water in combined cycle power plants comes from recycle process or treated waste water from factories while the Company's plan to manage electricity production efficiently also enables effective water management.

The Company has worked closely with industrial estate operators for managing water usage prudently. It has been confirmed that water reserves in reservoir in industrial estates are sufficient for operation until the rainy season. The Company is confident to continuously produce high-quality electricity and steam to meet strong demand from existing industrial users and potential clients.

### New IU with 31 MW PPA scheduled for synchronisation in 2020

With a number of world-class customers in portfolio, overall sales to IU remain strong in January and February 2020 with y-on-y stable volume. Furthermore, there are new IU who already signed PPAs with total size of 31 MW scheduled for synchronisation in 2020.

Meanwhile, there are demands from more than 1,500 potential clients in industrial estates at sites which are already in operation and under development.

### Well-planned FX strategies

The FX fluctuation normally has no material impact on overall performance of the company. The Company always has well-planned strategies to manage the FX risk as follows; 1) Natural hedging where the portion of loans taken by a project company in USD is aligned with incomes earned in the same currency, which naturally limits the exchange rate risk of commercially operational projects; and 2) Use of derivatives such as forward contract to hedge against the exchange rate risk associated with the import of machinery for power plant projects under construction.

### Solar Projects Refinancing

In May 2019, Solarwa Project and TPS Commercial Project successfully completed Baht 2,200 million debt refinancing with interest saving rate approximately 2.0% p.a. or Baht 119 million throughout the project life.



### Issuance of Perpetual Debentures

In November 2019, The Company issued subordinated perpetual debentures of Baht 8,000 million through the public offering with overdemand by institutional and retail investors. The proceeds will be used for business expansion, capital restructuring and working capital. The issuance of the subordinated perpetual debentures also reduced the consolidated net interest-bearing debt to equity ratio from 1.6x to 1.0x as of 31 December 2019.

### Awards and Recognitions

In 2019, the Company received total 15 national and international awards in a number of categories including Best Renewable Projects, Green Bond Financing, Best CEO and Best IR Team together with 9 ESG recognitions and sustainability awards demonstrating a solid commitment and responsibility of ESG aspects for the sustainability. Furthermore, the Company has listed for 2 consecutive years for the Thailand Sustainability Investment (THSI), reflecting an effort in good governance, social development and sustainable growth.

## 2. Financial Performance Analysis

### 2.1 Key Financial Highlight

|                                          | 2018<br>Million Baht | 2019<br>Million Baht | % Change<br>y-on-y |
|------------------------------------------|----------------------|----------------------|--------------------|
| Sales and service income                 | 36,585               | 44,132               | 20.6               |
| EBITDA                                   | 9,199                | 11,485               | 24.9               |
| Net profit                               | 2,976                | 3,977                | 33.6               |
| Net profit - Owner of the parent         | 1,863                | 2,331                | 25.1               |
| Normalised net profit (NNP) <sup>1</sup> | 3,027                | 3,658                | 20.8               |
| <b>NNP - Owner of the parent</b>         | <b>1,842</b>         | <b>2,161</b>         | <b>17.3</b>        |
| <b>EBITDA margin (%)</b>                 | <b>25.1%</b>         | <b>26.0%</b>         |                    |
| <b>NNP margin (%)</b>                    | <b>8.3%</b>          | <b>8.3%</b>          |                    |
| <b>% NNP - Owner of the parent (%)</b>   | <b>60.9%</b>         | <b>59.1%</b>         |                    |

<sup>1</sup> Normalised net profit = Net profit - Unrealised gain (loss) on exchange rate - Non-recurring income (expense)

#### Sales and Service Income

- Sales and service income increased 20.6% y-on-y in 2019 to Baht 44,132 million primarily due to 1) the additions of 692 MW operating capacity over the past 12 months from the commercial operations of 3 projects (Nam Che 1 in Laos and DT 1&2 and Phu Yen TTP in Vietnam), 2) the acquisitions of 124 MW SPP1 in March 2019, 3) full year operation of 3 SPP projects (ABPR3, ABPR4 and ABPR5 which started commercial operation in 2018) and 4) the electricity tariff increase during 2019.

#### EBITDA

- EBITDA increased 24.9% y-on-y in 2019 to Baht 11,485 million due to portfolio expansion through project COD and the acquisition as mentioned.
- EBITDA margin increased to 26.0% in 2019 from the contributions of 1) additional IUs with total PPA of 25 MW, 2) ABP3 and ABP5 improving heat rate after gas turbine upgrade in December 2018 - January 2019 and July 2019, respectively and 3) solar projects in Vietnam which give relatively higher EBITDA margin.

#### Normalised Net Profit (NNP)

- NNP / NNP - owner of the parent increased 20.8% / 17.3% y-on-y in 2019 to Baht 3,658 million / Baht 2,161 million due to 1) full year operation of 3 SPP projects, 2) the contributions from SPP1, Nam Che 1 and 2 solar projects in Vietnam, 3) ABP3 and ABP5 improving heat rate after gas turbine upgrade and 4) interest cost saving. Even though there was a 5.3% y-on-y increasing gas cost per unit in 2019.

#### Net profit

- In 2019, net profit / net profit to owner of the parents grew 33.6% / 25.1% y-on-y to Baht 3,977 million and Baht 2,331 million, respectively from the reasons described previously.

## 2.2 Income Structure

|                                                    | 2018<br>Million Baht | 2019<br>Million Baht | % Change<br>y-on-y |
|----------------------------------------------------|----------------------|----------------------|--------------------|
| <b>Electricity sales</b>                           |                      |                      |                    |
| Sales to EGAT                                      | 23,664               | 28,726               | 21.4               |
| Sales to industrial users - Thailand               | 10,040               | 10,174               | 1.3                |
| Sales to industrial users - Vietnam                | 1,183                | 1,238                | 4.6                |
| Sales to PEA / MEA                                 | 300                  | 773                  | 157.7              |
| Sales to EDL                                       | 107                  | 268                  | 150.5              |
| Sales to EVN                                       | 0                    | 1,623                | n/a                |
| <b>Total electricity sales</b>                     | <b>35,294</b>        | <b>42,802</b>        | <b>21.3</b>        |
| Steam sales                                        | 554                  | 927                  | 67.3               |
| Demineralised Water                                | 0                    | 36                   | n/a                |
| Other sales and services income <sup>1</sup>       | 737                  | 366                  | -50.3              |
| <b>Total sales and services income<sup>2</sup></b> | <b>36,585</b>        | <b>44,132</b>        | <b>20.6</b>        |

<sup>1</sup> Primarily include the construction revenue recognises based on the percentage of completion of hydropower projects in Lao PDR which offset with the construction cost recognises based on actual incurred construction cost according to TFRIC 12 - Concession Agreement

<sup>2</sup> This figure might be different from the summary of all sales above due to rounded figures.

**Table 1: Electricity and Steam Sales Volume**

|                                                                | 2018<br>GWh  | 2019<br>GWh  | % Change<br>y-on-y <sup>1</sup> |
|----------------------------------------------------------------|--------------|--------------|---------------------------------|
| <b>Electricity sales volume to EGAT</b>                        | 7,702        | 9,100        | 18.2                            |
| <b>Electricity sales volume to industrial users - Thailand</b> |              |              |                                 |
| Amata City Chonburi Industrial Estate                          | 1,610        | 1,530        | -5.0                            |
| Amata City Rayong Industrial Estate                            | 372          | 484          | 30.2                            |
| Laem Chabang Industrial Estate                                 | 697          | 680          | -2.4                            |
| WHA Chonburi 1 Industrial Estate                               | 236          | 227          | -4.0                            |
| Bangkadi Industrial Park                                       | 143          | 148          | 3.3                             |
| WHA Eastern Industrial Estate (Map Ta Phut)                    | -            | 16           | n/a                             |
| <b>Sales volume to industrial users - Thailand</b>             | <b>3,057</b> | <b>3,084</b> | <b>0.9</b>                      |
| <b>Sales volume to industrial users - Vietnam</b>              | <b>500</b>   | <b>519</b>   | <b>3.9</b>                      |

<sup>1</sup> The % change figures might be different from the % change from the presented GWh as these GWh figures are rounded.



|                                             | 2018<br>Ton    | 2019<br>Ton    | % Change<br>y-on-y |
|---------------------------------------------|----------------|----------------|--------------------|
| <u>Steam sales volume</u>                   |                |                |                    |
| Amata Nakorn Industrial Estate              | 144,118        | 142,696        | -1.0               |
| Amata City Industrial Estate                | 141,770        | 136,621        | -3.6               |
| Laem Chabang Industrial Estate              | 215,092        | 219,056        | 1.8                |
| WHA Eastern Industrial Estate (Map Ta Phut) | -              | 357,004        | n/a                |
| <b>Steam sales volume</b>                   | <b>500,980</b> | <b>855,377</b> | <b>70.7</b>        |

**Table 2: Price Per Unit**

|                                                          | Unit       | 2018     | 2019     | % Change |
|----------------------------------------------------------|------------|----------|----------|----------|
| Electricity price - EGAT                                 | Baht/kWh   | 3.07     | 3.16     | 2.9      |
| Electricity selling price - Industrial users in Thailand | Baht/kWh   | 3.28     | 3.30     | 0.6      |
| Electricity selling price - Industrial users in Vietnam  | Baht/kWh   | 2.37     | 2.38     | 0.4      |
| Steam selling price - Industrial users in Thailand       | Baht/Ton   | 1,105.73 | 1,083.93 | -2.0     |
| Effective natural gas cost                               | Baht/mmBTU | 259.00   | 272.84   | 5.3      |

#### **Electricity Sales to EGAT**

- Electricity sales to EGAT in 2019 increased 21.4% y-on-y to Baht 28,726 million
  - The volume of electricity sold to EGAT in 2019 increased 18.2% y-on-y to 9,100 GWh, primarily due to the full year operation of ABPR3, ABPR4 and ABPR5 which commenced commercial operation in 2018 and additional contributions from SPP1 acquisition in March 2019.
  - The tariff of electricity sold to EGAT in 2019 increased 2.9% y-on-y to 3.16 Baht/kWh because the energy payment is generally adjusted to reflect changes in natural gas price which increased 5.3% during the period.

#### **Electricity Sales to Industrial Users (IUs) in Thailand**

- Electricity sales to IUs in Thailand in 2019 rose 1.3% y-on-y to Baht 10,174 million
  - The volume of electricity sold to IUs in Thailand increased 0.9% y-on-y in 2019 to 3,084 GWh primarily due to 1) the inclusion of new IUs in Amata City Rayong Industrial Estate especially from new operation plants in 2018, 2) the inclusion of SPP1's IUs in WHA Eastern (Map Ta Phut), and 3) an increase in demand load from existing IUs in Bangkadi Industrial Park.
  - The tariff of electricity sold to IUs in Thailand in 2019 increased 0.6% y-on-y to 3.30 Baht/kWh which is in line with the changes in Ft charge announced by the ERC.

#### **Electricity Sales to Industrial Users (IUs) in Vietnam**

- Electricity sales to IUs in Vietnam increased 4.6% y-on-y in 2019 to Baht 1,238 million
  - The volume of electricity sold to IUs in Vietnam increased 3.9% y-on-y in 2019 to 519 GWh, primarily due to the increase in demand load from existing customers.
  - Electricity price sales to IUs in Vietnam increased 0.4% y-on-y in 2019 to 2.38 Baht/kWh, primarily due to the change of retail tariff by the subsidiary of EVN which our power selling prices are set at a cost-plus.

#### **Steam Sales to Industrial Users (IUs) in Thailand**

- Steam sales to IUs in Thailand increased 67.3% y-on-y in 2019 to Baht 927 million
  - The volume of steam sold to IUs in Thailand increased 70.7% y-on-y in 2019 to 855,377 tons, primarily due to the inclusion of SPP1's steam IUs in WHA Eastern (Map Ta Phut) and an increase in demand of existing IUs in Laemchabang Industrial Estate.
  - Steam selling price decreased 2.0% y-on-y in 2019 to 1,083.93 Baht/ton from the inclusive of steam revenue from SPP1 since March 2019 which the tariff is relatively lower than other projects.

#### **Electricity Sales to PEA / MEA**

- Electricity sales to PEA / MEA increased 157.7% y-on-y in 2019 to Baht 773 million, primarily due to 1) the consolidation of BGYSP after raising stake from 49.0% to 100.0% in Q3'2018 and 2) the revenue from the 30.8 MW Solar WVO - COOP projects which started commercial operation in December 2018.

#### **Electricity Sales to EDL**

- Electricity sales to EDL increased 150.5% y-on-y in 2019 to Baht 268 million due to 1) contribution from Nam Che 1 project which commenced operation on 1 June 2019 and 2) an increase of water inflow.

#### **Electricity Sales to EVN**

- Electricity sales to EVN in 2019 was Baht 1,623 million from the operation solar projects in Vietnam namely DT 1&2 with installed capacity of 420 MW, the largest solar power plant in Southeast Asia which commenced COD on 3, 13 June 2019 and Phu Yen TTP with installed capacity of 257 MW which commenced COD on 10 June 2019.

## 2.3 Cost Structure

|                                                                                 | 2018<br>Million Baht | 2019<br>Million Baht | % Change<br>y-on-y |
|---------------------------------------------------------------------------------|----------------------|----------------------|--------------------|
| <u>Cost of sales and services</u>                                               |                      |                      |                    |
| Natural gas                                                                     | 22,139               | 26,618               | 20.2               |
| Cost of electricity - Vietnam                                                   | 1,061                | 1,120                | 5.6                |
| O&M                                                                             | 2,127                | 2,693                | 26.6               |
| Other cost of sales and services <sup>1</sup>                                   | 1,195                | 952                  | -20.3              |
| <b>Total cost of sales and services</b><br>(exc. Depreciation and amortisation) | <b>26,522</b>        | <b>31,384</b>        | <b>18.3</b>        |
| SG&A                                                                            | 1,278                | 1,774                | 38.8               |
| Depreciation - COGS                                                             | 3,210                | 4,569                | 42.3               |
| Depreciation - SG&A                                                             | 131                  | 91                   | -30.5              |
| <b>Total expenses</b>                                                           | <b>31,141</b>        | <b>37,818</b>        | <b>21.4</b>        |

<sup>1</sup> Primarily include the construction cost recognises based on actual incurred construction cost of hydropower projects in Lao PDR which was offset with the construction revenue recognises based on the percentage of completion according to TFRIC 12 - Concession Agreement

### Natural Gas

- Natural gas cost increased 20.2% y-on-y in 2019 to Baht 26,618 million, primarily due to an increase in gas consumption arising from an increased electricity generation and a 5.3% y-on-y increase in the effective price of natural gas in 2019 compared to 2018. Note that the natural gas price is computed by weighted average price from PTT's pool gas.

### Cost of Electricity in Vietnam

- Cost of electricity purchased from subsidiaries of EVN increased 5.6% y-on-y in 2019 to Baht 1,120 million in line with changes in electricity sales to IUs in Vietnam.

### O&M

- Operation and maintenance costs increased 26.6% y-on-y in 2019 to Baht 2,693 million, primarily due to full year commercial operations of ABPR3, ABPR4, ABPR5 and Solar WVO-COOP in 2018, also COD of DT 1&2, Phu Yen TTP and Nam Che 1 in mid-2019

### Selling, General & Administrative Expense

- SG&A increased 38.8% y-on-y in 2019 to Baht 1,774 million, primarily due to commercial operations of new power plants described previously.

## 2.4 Non-Operating Items

|                                                           | 2018<br>Million Baht | 2019<br>Million Baht | % Change<br>y-on-y |
|-----------------------------------------------------------|----------------------|----------------------|--------------------|
| Other revenues                                            | 460                  | 289                  | -37.2              |
| Share of profit (loss) from associates and joint ventures | 182                  | 101                  | -44.5              |
| Gain (loss) on exchange rate                              | (6)                  | 138                  | n/a                |

### Other revenues

- Other revenues decreased 37.2% y-on-y in 2019 to Baht 289 million primarily attributable to gain from business combination (BGYSP) amount of Baht 276 million in Q3'2018 which would be amortised by Baht 12 million per annum along the PPA life.

### Share of Profit (Loss) of Associates and Joint Ventures

- Share of profit from associates and joint ventures decreased 44.5% y-on-y in 2019 to Baht 101 million, primarily due to 1) change in accounting method for BGYSP earnings contribution from equity method to consolidation method after raising stake from 49% to 100% in Q3'2018, 2) lower profits at our associate named BGSENA as there was a deferred financing fee write-off from refinancing in the amount of Baht 9 million in May 2019, and 3) lower profits at our associate named ABPIF as ABP1's cash flow to ABPIF approached the maturity since 17 September 2019.

### Gain (Loss) on Exchange Rate

- The company recognise gain on exchange rate at Baht 138 million in 2019 is primarily attributable from an unrealised gain from VND was appreciated against US dollar from the US dollar portion of EPC construction liabilities of solar projects in Vietnam.

## 2.5 Finance Cost and Tax

|                                                      | 2018<br>Million Baht | 2019<br>Million Baht | % Change<br>y-on-y |
|------------------------------------------------------|----------------------|----------------------|--------------------|
| <b>Finance cost</b>                                  |                      |                      |                    |
| Interest expense from borrowing                      | 2,424                | 2,705                | 11.6               |
| Interest expense from ABPIF                          | 343                  | 199                  | -42.0              |
| Interest expenses on long-term construction payables | 0                    | 221                  | n/a                |
| Unrealized loss / (gain) from FX                     | 81                   | (605)                | n/a                |
| Other financing costs                                | 79                   | 111                  | 40.5               |
| <b>Finance cost</b>                                  | <b>2,927</b>         | <b>2,631</b>         | <b>-10.1</b>       |
| <b>Tax expense (income)</b>                          |                      |                      |                    |
| Tax on profits for the period                        | 225                  | 244                  | 8.4                |
| Deferred tax expense (income)                        | (47)                 | (8)                  | -83.0              |
| <b>Tax expense (income)</b>                          | <b>178</b>           | <b>236</b>           | <b>32.6</b>        |

## Finance Cost

- Finance costs decreased 10.1% y-on-y in 2019 to Baht 2,631 million, primarily attributable to:
  - Interest expenses from borrowings y-on-y: A 11.6% increase in 2019 to Baht 2,705 million, primarily due to the record of interest expense of ABPR3, ABPR4, ABPR5 after their COD achievements during 2018, Nam Che 1 after COD achievement in June 2019 and SPP1 after an acquisition in March 2019;
  - Interest expense from ABPIF y-on-y: A 42.0% decrease in 2019 to Baht 199 million based on changes in benefits transferred from the business operation of ABP1 and ABP2 and maturity of ABP1's cash flow to ABPIF since 17 September 2019;
  - Interest expenses on long-term construction payables: Amount Baht 221 million in 2019 which is an accretion cost from a discounting of long-term construction payables based on accounting standards.
  - Unrealised gain on exchange rate from financing activities in 2019: This item mainly comes from the outstanding of US dollar debts; the company booked unrealised gain of Baht 605 million in 2019 from the THB appreciation against US dollar during that period while there was unrealised loss of Baht 81 million in 2018 from THB depreciation against US dollar during that period.

## Tax Expense

- Tax expense increased 32.6% y-on-y in 2019 to Baht 236 million primarily attributable to an increase in taxable profit.

## 2.6 Normalised Net Profit (NNP)

|                                                      | 2018<br>Million Baht | 2019<br>Million Baht | % Change<br>y-on-y |
|------------------------------------------------------|----------------------|----------------------|--------------------|
| Net profit for the year                              | 2,976                | 3,977                | 33.6               |
| <u>Add</u> unrealised loss (gain) on exchange rate   | 46                   | (730)                | n/a                |
| <u>Add</u> Non-operating expenses                    | 5                    | 411                  | 8,120.0            |
| <b>Normalised net profit (NNP)</b>                   | <b>3,027</b>         | <b>3,658</b>         | <b>20.8</b>        |
| <u>Less</u> Minority interest                        | 1,184                | 1,496                | 26.4               |
| <b>NNP - Owner of the parent</b>                     | <b>1,842</b>         | <b>2,161</b>         | <b>17.3</b>        |
| <i>NNP per share (Baht per share)</i>                | <i>0.71</i>          | <i>0.83</i>          | <i>17.3</i>        |
| <i>No. of shares in calculation (million shares)</i> | <i>2,607</i>         | <i>2,607</i>         |                    |

## Normalised Net Profit (NNP)

- NNP / NNP - owner of the parent increased 20.8% / 17.3% y-on-y in 2019 to Baht 3,658 million / Baht 2,161 million due to 1) full year operation of 3 SPP projects, 2) the contributions from SPP1, Nam Che 1 and 2 solar projects in Vietnam, 3) ABP3 and ABP5 improving heat rate after gas turbine upgrade in December 2018 - January 2019 and July 2019, respectively and 4) interest cost saving. This was despite a 5.3% y-on-y increasing gas cost per unit in 2019. There are adjustments for NNP as follows;



- An unrealised gain on exchange rate of Baht 730 million, mainly from THB and VND appreciation against US dollar of the US dollar debt outstanding and construction liabilities; and
- Non-operating expenses of Baht 411 million, primarily from 1) a non-cash item of Baht 221 million is an accretion cost from a discounting of long-term construction payables based on a requirement of accounting standards, 2) a one-time additional provision of retirement benefit obligations according to Labour Protection Law in the amount of Baht 51 million, 3) a remuneration programme's expense in the amount of Baht 61 million, 4) a provision of obsolete inventory in the amount of Baht 69 million, and 5) a deferred financing fee write-off from solar projects refinancing in the amount of Baht 9 million.

### 3. Analysis of Financial Position

#### 3.1 Assets

|                                                  | 31 Dec 2018<br>Million Baht | 31 Dec 2019<br>Million Baht | % Change<br>y-on-y |
|--------------------------------------------------|-----------------------------|-----------------------------|--------------------|
| Cash, cash equivalent and short-term investments | 15,179                      | 23,663                      | 55.9               |
| Trade and other receivable - Net                 | 6,122                       | 7,156                       | 16.9               |
| Other current assets                             | 2,521                       | 2,674                       | 6.07               |
| <b>Total current assets</b>                      | <b>23,822</b>               | <b>33,493</b>               | <b>40.6</b>        |
| Plant, property and equipment - Net              | 62,350                      | 72,132                      | 15.7               |
| Intangible assets - Net                          | 10,115                      | 10,451                      | 3.3                |
| Other non-current assets                         | 4,349                       | 5,160                       | 18.6               |
| <b>Total non-current assets</b>                  | <b>76,814</b>               | <b>88,200</b>               | <b>14.8</b>        |
| <b>Total assets</b>                              | <b>100,636</b>              | <b>121,693</b>              | <b>20.9</b>        |

- Total assets increased Baht 21,057 million or 20.9% from Baht 100,636 million as of 31 December 2018 to Baht 121,693 million as of 31 December 2019, primarily due to:
  - An increase of Baht 1,035 million or 16.9% in net trade and other accounts receivable mainly driven by revenue from 3 SPP projects, namely ABPR3, ABPR4 and ABPR5 which started commercial operation in 2018 and additional contributions from SPP1 described previously.
  - An increase of Baht 9,781 million or 15.7% in net plant, property and equipment mainly from the continual expansion of project portfolio both local and overseas.
  - An increase of Baht 336 million or 3.3% in net intangible assets mainly from the investment in solar projects, the construction of hydro power plants in Lao PDR, the construction of PIC and acquisition of SPP1.
  - An increase of Baht 811 million or 18.6% in other non-current assets due to prepaid long-term service agreement, advance for projects development and advance payments for construction.

### 3.2 Liabilities and Owners' Equity

|                                             | 31 Dec 2018<br>Million Baht | 31 Dec 2019<br>Million Baht | % Change<br>y-on-y |
|---------------------------------------------|-----------------------------|-----------------------------|--------------------|
| Interest-bearing debts                      | 58,173                      | 60,387                      | 3.8                |
| Borrowing from related parties (ABPIF)      | 3,558                       | 2,385                       | (33.0)             |
| Other current liabilities                   | 6,188                       | 18,656                      | 201.5              |
| Other non-current liabilities               | 4,978                       | 1,588                       | (68.1)             |
| <b>Total liabilities</b>                    | <b>72,897</b>               | <b>83,016</b>               | <b>13.9</b>        |
| Equity attributable to owners of the parent | 19,253                      | 28,144                      | 46.2               |
| Non-controlling interest                    | 8,486                       | 10,533                      | 24.1               |
| <b>Total owners' equity</b>                 | <b>27,739</b>               | <b>38,677</b>               | <b>39.4</b>        |

- Total liabilities increased Baht 10,119 million or 13.9% from Baht 72,897 million as of 31 December 2018 to Baht 83,016 million as of 31 December 2019, primarily due to:
  - Total interest-bearing debts increase Baht 2,213 million or 3.8% from Baht 58,173 million as of 31 December 2018 to Baht 60,387 million as of 31 December 2019, primarily due to short-term borrowings for project acquisition.
  - A decrease of Baht 1,173 million or 33.0% in borrowing from a related party (ABPIF) mainly due to maturity of ABP1's cash flow to ABPIF since 17 September 2019 as specified in the claim assignment agreements made by ABP1, ABP2 and ABPIF.
  - An increase of Baht 12,469 million or 201.5% in other current liabilities mainly from an increase of construction payables for solar projects in Vietnam.
  - A decrease of Baht 3,390 million or 68.1% in other non-current liabilities mainly from construction payables of solar projects in Vietnam due for payment over than 1 year in 2018.
- Total owners' equity increased Baht 10,938 million or 39.4% from Baht 27,739 million as of 31 December 2018 to Baht 38,677 million as of 31 December 2019, primarily due to:
  - An increase of Baht 8,891 million or 46.2% in the equity attributable to the owners of the parent, mainly from an increase in retained earnings during the period and the record of subordinated perpetual bond issued in November 2019.
  - An increase of Baht 2,047 million or 24.1% in non-controlling interest mainly from higher retained earnings from the power plants that are in commercial operation, disposal of 25% shares of SPP1 without losing control and an increase of capital from other shareholders in the Company's subsidiaries.

#### 4. Analysis of Cashflow Statement

As of 31 December 2019, cash and cash equivalent amounted to Baht 21,161 million, an increase of Baht 8,601 million from the end of 2018, divided into:

|                                              | Million Baht |
|----------------------------------------------|--------------|
| Net cash from operating activities           | 9,455        |
| Net cash from (used in) investing activities | (6,657)      |
| Net cash from (used in) financing activities | 5,910        |
| Gain (loss) on exchange rate                 | (107)        |
| Net increase in cash and cash equivalent     | 8,601        |

- Net cash from operating activities in 2019 amounted of Baht 9,455 million was mainly attributed to cash generated by operating activities of the Company and subsidiaries.
- Net cash used in investing activities in 2019 amounted to Baht 6,657 million was mainly attributed to cash payment for SPP1 acquisition, investment in subsidiaries and short-term investment.
- Net cash from financing activities in 2019 amounted to Baht 5,910 million was mainly attributed to net cash from subordinated perpetual bond issuance, disposal of shares in subsidiaries without losing control and borrowing from financial institutions.

#### Key Financial Ratios

|                                                     | For the Year Ended 31 December |      |      |
|-----------------------------------------------------|--------------------------------|------|------|
|                                                     | 2017                           | 2018 | 2019 |
| <b>Liquidity Ratio</b>                              |                                |      |      |
| Current ratio (times)                               | 2.7                            | 2.9  | 1.3  |
| Quick ratio <sup>1</sup> (times)                    | 2.6                            | 2.8  | 1.2  |
| Cash flow liquidity ratio (times)                   | 0.8                            | 1.0  | 0.4  |
| Account receivable turnover <sup>2</sup> (times)    | 7.6                            | 7.3  | 7.1  |
| Average collection period (days)                    | 47.3                           | 49.4 | 50.5 |
| Account payable turnover <sup>3</sup> (times)       | 9.8                            | 9.2  | 10.5 |
| Account payable days (days)                         | 36.6                           | 39.0 | 34.3 |
| <b>Profitability Ratio</b>                          |                                |      |      |
| Gross profit margin (percent)                       | 21.4                           | 18.7 | 18.5 |
| EBITDA margin <sup>4</sup> (percent)                | 27.7                           | 25.1 | 26.0 |
| Cash to profit margin (times)                       | 1.4                            | 1.4  | 1.5  |
| Normalized net profit margin <sup>4</sup> (percent) | 9.3                            | 8.3  | 8.3  |

|                                                            | For the Year Ended 31 December |      |      |
|------------------------------------------------------------|--------------------------------|------|------|
|                                                            | 2017                           | 2018 | 2019 |
| <b>Efficiency Ratio</b>                                    |                                |      |      |
| Return on equity <sup>5</sup> (percent)                    | 14.1                           | 9.7  | 9.1  |
| Return on assets <sup>6</sup> (percent)                    | 3.5                            | 3.2  | 3.3  |
| Asset turnover (times)                                     | 0.4                            | 0.4  | 0.4  |
| <b>Financial Policy Ratio</b>                              |                                |      |      |
| Debt to equity ratio (times)                               | 2.5                            | 2.6  | 2.1  |
| Interest-bearing debt to equity ratio <sup>7</sup> (times) | 2.1                            | 2.1  | 1.6  |
| Net debt to equity ratio <sup>8 9</sup> (times)            | 1.4                            | 1.5  | 1.0  |
| Interest coverage ratio <sup>10</sup> (times)              | 2.6                            | 2.7  | 3.0  |
| Commitment coverage ratio (cash basis) (times)             | 0.3                            | 0.2  | 0.8  |

Remark:

<sup>1</sup> Inclusive of restricted cash less than 1 year.

<sup>2</sup> Inclusive of accrued income.

<sup>3</sup> Inclusive of accrued expenses.

<sup>4</sup> Profitability ratio calculated from adjusted EBITDA and NNP which could be different from the ratio based on Thai Financial Reporting Standards or TFRS.

<sup>5</sup> Calculated as NNP attributable to the owners of parent divided by equity attributable to the owners of parent.

<sup>6</sup> Calculated as NNP divided by average total assets.

<sup>7</sup> Interest Bearing Debt to equity ratio is calculated as Interest Bearing Debt divided by total equity. Interest Bearing Debt as of 31 December 2019 includes: 1) short-term borrowings from financial institutions, 2) short-term borrowings from a third party, 3) long-term borrowings from financial institutions, and 4) bonds.

<sup>8</sup> Interest Bearing Debt less cash and cash equivalents, and short-term investments.

<sup>9</sup> According to the provisions relating to the rights and duties of the bond issuer (the Company) and the bondholders, the bond issuer must maintain the net debt to equity ratio at 3:1 or lower on any calculation dates.

<sup>10</sup> Inclusive of interest expenses from ABPIF.

## Report of the Board of Directors' Responsibility for Financial Reporting

### Dear shareholders,

The Board of Directors places emphasis on its duties and responsibilities in overseeing the Company's compliance with the Good Corporate Governance Policy and the accuracy, completeness and adequacy of financial statements and financial information that appear in the Annual Report. The financial statements have been prepared in full accordance with the Thai Financial Reporting Standards with careful judgment. An effective internal control system has been established and maintained to provide reasonable assurance regarding the reliability of the financial statements, the effective safeguarding and protection of assets, the non-existence of frauds or irregularities, and the best interest of the Company. In addition, applicable laws, rules and regulations have been complied with. The Audit Committee has reported its performance to the Board of Directors and its opinions in this respect have been included in the Audit Committee's Report which is a part of this Annual Report.

The Board of Directors is of the opinion that the Company's overall internal control system is satisfactory and can provide reasonable assurance regarding the reliability of the consolidated financial statements and the separate financial statements for the year ended 31 December 2019. The Company's auditor has audited the financial statements in accordance with the auditing standards and has rendered an opinion that the financial statements presented fairly in all material respects, including the Company's financial position, results of operation, and cash flows in conformity with the financial reporting standards.



**Mr. Harald Link**  
Chairman



**Mrs. Preeyanart Soontornwata**  
President



# Independent Auditor's Report

To the shareholders and the Board of Directors of B.Grimm Power Public Company Limited

## My opinion

In my opinion, the consolidated financial statements of B.Grimm Power Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial statements of the Company present fairly, in all material respects, the consolidated and separate financial position of the Group and of the Company as at 31 December 2019, and the consolidated and separate financial performance and the consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRSs).

## What I have audited

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2019;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include a summary of significant accounting policies.

## Basis for opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Federation of Accounting Professions under the Royal Patronage of his Majesty the King's Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

## Key audit matters

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

| Key audit matter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | How my audit addressed the key audit matter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Acquisition of Glow SPP1 Company Limited</b></p> <p>Referring to Note 4 'Critical accounting estimates and judgements', Note 13 'Investments in subsidiaries' and Note 36 'Business combination'.</p> <p>On 13 March 2019, the Group acquired 100% equity interest in Glow SPP1 Company Limited (GSPP1) for a consideration amounting to Baht 3,300 million. The investment is considered as a business combination under TFRS 3 - Business Combinations.</p> <p>The management engaged an independent valuer to prepare a purchase price allocation to evaluate fair value of net assets acquired.</p> <p>I focused on this matter because the nature of transaction is complex and the significant amounts of right in power purchase agreements as well as goodwill were recognised upon the purchase price allocation exercise which involves management judgement on the inputs and assumptions in the valuation model as well as discount rates applied.</p> | <p>I assessed the management's consideration of whether the acquisition should be accounted for as a business combination under TFRS 3.</p> <p>I assessed the appropriateness of the identification of assets acquired and liabilities assumed at the acquisition date. I also evaluated the valuer's competency, independence and objectivity.</p> <p>In testing the fair valuation method, I engaged an auditor expert to review the appropriateness and reasonableness of the methodology used in the valuation, the estimation of the discount rate and discount factor, and the model's logic and calculations, comparing with market practice in a comparable industry.</p> <p>I evaluated the reasonableness of key assumptions applied in purchase price allocation by comparing to the relative contracts, the subsidiary's historical data, market data in a comparable industry and the business plan of the subsidiary.</p> <p>I tested the calculation of the goodwill arisen from the acquisition being the difference between the total purchase consideration and the fair value of the net identifiable assets.</p> <p>I evaluated the appropriateness of the accounting treatment and the adequacy of the disclosures made in notes to the financial statements.</p> <p>From the above procedures performed, I noted that the acquisition was a business combination in accordance with TFRS 3 and management's key assumptions used in assessing the fair value of the net assets acquired were reasonable based on available evidence.</p> |

| Key audit matter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | How my audit addressed the key audit matter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Subordinated perpetual bond</b></p> <p>Referring to the Note 26 'Subordinated perpetual bond'.</p> <p>On 22 November 2019, the Company issued a Baht 8,000 million perpetual bond.</p> <p>The bond is an unguaranteed, subordinated bond and will be redeemed when the Company is liquidated or when the Company exercises its right to early redeem as per terms and conditions specified. The Company has the sole right to defer interest payment without requirement for bondholder's consent and without time limitation, but accumulated interest will be accrued. The management has classified the bond as equity instrument.</p> <p>I focused on the classification of the bond because it can be treated either a debt or equity instrument depending on the terms and conditions, which has material implication on the Group and the Company's financial situation. The appropriate classification requires an understanding as well as legal interpretation of terms and conditions of the bond, in order to assess which criteria set out per the financial reporting standards they fall into.</p> | <p>I read and gained an understanding of the bond's terms and conditions and assessed the interpretation of the management's legal counsellor. I evaluated the appropriateness of bond's classification as equity instrument under TFRS.</p> <p>I also assessed the appropriateness of the accounting treatment of the accrued interest and interest expense with the bond classified as equity instrument.</p> <p>From the above procedures performed, I noted that the bond's classification and the accounting treatment were appropriate based on available evidence.</p> |

### Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to the audit committee.

### Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRSs, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are responsible for assessing the Group and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group and the Company's financial reporting process.

### Auditor's responsibilities for the audit of the consolidated and separate financial statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the audit committee with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers ABAS Ltd.



**Kajornkiet Aroonpirodkul**  
 Certified Public Accountant (Thailand) No. 3445  
 Bangkok  
 24 February 2020



## Statements of Financial Position

B.Grimm Power Public Company Limited

As at 31 December 2019

|                                                          | Notes  | Consolidated<br>financial statements |                        | Separate<br>financial statements |                       |
|----------------------------------------------------------|--------|--------------------------------------|------------------------|----------------------------------|-----------------------|
|                                                          |        | 2019<br>Baht                         | 2018<br>Baht           | 2019<br>Baht                     | 2018<br>Baht          |
| <b>Assets</b>                                            |        |                                      |                        |                                  |                       |
| <b>Current assets</b>                                    |        |                                      |                        |                                  |                       |
| Cash and cash equivalents                                | 7      | 21,161,169,988                       | 12,559,726,178         | 8,705,264,927                    | 3,736,128,251         |
| Restricted deposits within one year                      | 8      | 391,875,891                          | 534,852,672            | -                                | -                     |
| Fixed bank deposits                                      |        |                                      |                        |                                  |                       |
| with maturity over 3 months                              |        | 2,109,780,072                        | 2,084,408,410          | 1,012,823                        | -                     |
| Trade and other receivables, net                         | 9      | 7,156,109,075                        | 6,121,523,318          | 2,676,064,142                    | 1,962,041,879         |
| Short-term loans to third parties                        | 10     | 498,562,194                          | -                      | 128,899,810                      | -                     |
| Short-term loans to related parties                      | 37.5   | 218,273,000                          | 18,240,000             | 871,676,430                      | 7,960,069,661         |
| Current portion of long-term loan<br>to third party      |        | 68,421,912                           | 66,753,085             | 68,421,912                       | 66,753,085            |
| Current portion of long-term loans<br>to related parties | 37.6   | -                                    | -                      | 453,570,234                      | 237,052,113           |
| Spare parts and supplies, net                            | 11     | 968,653,824                          | 979,084,526            | -                                | -                     |
| Other current assets                                     | 12     | 920,262,710                          | 1,457,174,622          | 44,727,970                       | 38,607,773            |
| <b>Total current assets</b>                              |        | <b>33,493,108,666</b>                | <b>23,821,762,811</b>  | <b>12,949,638,248</b>            | <b>14,000,652,762</b> |
| <b>Non-current assets</b>                                |        |                                      |                        |                                  |                       |
| Restricted deposits over than one year                   | 8      | 129,079,800                          | 220,181,335            | -                                | -                     |
| Long-term loan to third party                            |        | 136,578,088                          | 205,246,915            | 136,578,088                      | 205,246,915           |
| Long-term loans to related parties                       | 37.6   | -                                    | -                      | 18,596,978,875                   | 6,838,813,922         |
| Investments in subsidiaries                              | 13     | -                                    | -                      | 9,553,811,946                    | 9,522,637,609         |
| Investment in associate                                  | 14 (a) | 816,248,943                          | 1,148,344,998          | -                                | -                     |
| Investments in joint ventures                            | 14 (b) | 714,294,314                          | 653,877,296            | 522,375,832                      | 509,007,832           |
| Investment property                                      | 15     | 4,902,251                            | 4,902,251              | -                                | -                     |
| Property, plant and equipment, net                       | 16     | 72,131,623,379                       | 62,350,379,547         | 674,292,851                      | 676,183,649           |
| Goodwill                                                 | 17     | 457,191,626                          | -                      | -                                | -                     |
| Intangible assets, net                                   | 18     | 10,450,902,123                       | 10,114,708,626         | 566,646,593                      | 582,331,319           |
| Deposits for land                                        |        | 891,773,065                          | 644,093,730            | -                                | -                     |
| Deferred tax assets                                      | 19     | 134,486,663                          | 141,936,821            | 6,427,200                        | 3,749,499             |
| Other non-current assets                                 | 20     | 2,332,615,768                        | 1,330,605,561          | 27,062,007                       | 20,751,527            |
| <b>Total non-current assets</b>                          |        | <b>88,199,696,020</b>                | <b>76,814,277,080</b>  | <b>30,084,173,392</b>            | <b>18,358,722,272</b> |
| <b>Total assets</b>                                      |        | <b>121,692,804,686</b>               | <b>100,636,039,891</b> | <b>43,033,811,640</b>            | <b>32,359,375,034</b> |

The accompanying notes are an integral part of these consolidated and separate financial statements.

# Statements of Financial Position (Cont'd)

B.Grimm Power Public Company Limited

As at 31 December 2019

|                                                                               | Notes | Consolidated<br>financial statements |                       | Separate<br>financial statements |                       |
|-------------------------------------------------------------------------------|-------|--------------------------------------|-----------------------|----------------------------------|-----------------------|
|                                                                               |       | 2019<br>Baht                         | 2018<br>Baht          | 2019<br>Baht                     | 2018<br>Baht          |
| <b>Liabilities and equity</b>                                                 |       |                                      |                       |                                  |                       |
| <b>Current liabilities</b>                                                    |       |                                      |                       |                                  |                       |
| Short-term borrowing from<br>financial institution                            | 22    | 3,000,000,000                        | -                     | 3,000,000,000                    | -                     |
| Trade and other payables                                                      | 21    | 18,253,751,781                       | 5,581,040,846         | 296,427,797                      | 611,883,009           |
| Short-term borrowing from third party                                         |       | 36,019,991                           | 38,305,377            | 36,019,991                       | 38,305,377            |
| Short-term borrowing<br>from related party                                    | 37.7  | -                                    | 5,308,600             | -                                | -                     |
| Current portion of long-term borrowings<br>from financial institutions, net   | 22    | 832,972,368                          | 775,578,963           | -                                | -                     |
| Current portion of debentures, net                                            | 23    | 2,697,952,858                        | 299,398,000           | 499,726,091                      | -                     |
| Current portion of long-term borrowings<br>from related party                 | 37.8  | 608,500,000                          | 883,000,000           | -                                | -                     |
| Accrued income tax                                                            |       | 80,400,966                           | 73,269,757            | -                                | -                     |
| Other current liabilities                                                     |       | 322,147,610                          | 533,270,185           | 11,171,791                       | 12,526,234            |
| <b>Total current liabilities</b>                                              |       | <b>25,831,745,574</b>                | <b>8,189,171,728</b>  | <b>3,843,345,670</b>             | <b>662,714,620</b>    |
| <b>Non-current liabilities</b>                                                |       |                                      |                       |                                  |                       |
| Construction payables due<br>for payment over than 1 year                     |       | -                                    | 3,538,927,448         | -                                | -                     |
| Long-term borrowings from<br>financial institutions, net                      | 22    | 24,017,678,747                       | 24,572,296,765        | -                                | -                     |
| Debentures, net                                                               | 23    | 29,801,948,550                       | 32,482,582,342        | 14,122,306,847                   | 14,605,983,111        |
| Long-term borrowings<br>from related party                                    | 37.8  | 1,776,000,000                        | 2,675,000,000         | -                                | -                     |
| Deferred tax liabilities                                                      | 19    | 203,213,858                          | 117,697,101           | -                                | -                     |
| Provision for minimum payments under<br>rights to sell electricity agreements |       | 301,326,346                          | 310,708,820           | 243,425,054                      | 251,061,340           |
| Provision for decommissioning costs                                           |       | 315,320,599                          | 305,574,317           | -                                | -                     |
| Employee benefit obligations                                                  | 24    | 404,717,703                          | 226,407,654           | 32,136,002                       | 18,747,493            |
| Other non-current liabilities                                                 |       | 363,592,429                          | 478,550,106           | -                                | -                     |
| <b>Total non-current liabilities</b>                                          |       | <b>57,183,798,232</b>                | <b>64,707,744,553</b> | <b>14,397,867,903</b>            | <b>14,875,791,944</b> |
| <b>Total liabilities</b>                                                      |       | <b>83,015,543,806</b>                | <b>72,896,916,281</b> | <b>18,241,213,573</b>            | <b>15,538,506,564</b> |

The accompanying notes are an integral part of these consolidated and separate financial statements.

## Statements of Financial Position (Cont'd)

B.Grimm Power Public Company Limited

As at 31 December 2019

|                                                                            | Notes | Consolidated<br>financial statements |                 | Separate<br>financial statements |                |
|----------------------------------------------------------------------------|-------|--------------------------------------|-----------------|----------------------------------|----------------|
|                                                                            |       | 2019<br>Baht                         | 2018<br>Baht    | 2019<br>Baht                     | 2018<br>Baht   |
| <b>Liabilities and equity (Cont'd)</b>                                     |       |                                      |                 |                                  |                |
| <b>Equity</b>                                                              |       |                                      |                 |                                  |                |
| Share capital                                                              | 25    |                                      |                 |                                  |                |
| Authorised share capital                                                   |       |                                      |                 |                                  |                |
| 2,700,000,000 ordinary shares                                              |       |                                      |                 |                                  |                |
| at par value of Baht 2 each                                                |       | 5,400,000,000                        | 5,400,000,000   | 5,400,000,000                    | 5,400,000,000  |
| Issued and paid-up share capital                                           |       |                                      |                 |                                  |                |
| 2,606,900,000 ordinary shares, fully-paid                                  |       | 5,213,800,000                        | 5,213,800,000   | 5,213,800,000                    | 5,213,800,000  |
| Share premium on ordinary shares                                           | 25    | 9,644,039,948                        | 9,644,039,948   | 9,644,039,948                    | 9,644,039,948  |
| Subordinated perpetual bond                                                | 26    | 7,951,674,002                        | -               | 7,951,674,002                    | -              |
| Reserved shares for employee benefits<br>under share-based payments scheme |       | (160,190,400)                        | (163,782,400)   | (77,100,800)                     | (79,616,000)   |
| Other reserve - share-based payments                                       | 38    | 123,004,576                          | 80,333,127      | 60,067,338                       | 41,276,450     |
| Retained earnings                                                          |       |                                      |                 |                                  |                |
| Appropriated - legal reserve                                               | 27    | 334,426,502                          | 292,425,254     | 334,426,502                      | 292,425,254    |
| Unappropriated                                                             |       | 5,993,593,631                        | 4,588,738,092   | 1,665,691,077                    | 1,708,942,818  |
| Other components of equity                                                 |       | (955,948,935)                        | (402,096,150)   | -                                | -              |
| <b>Equity attributable to owners of the parent</b>                         |       | 28,144,399,324                       | 19,253,457,871  | 24,792,598,067                   | 16,820,868,470 |
| Non-controlling interests                                                  |       | 10,532,861,556                       | 8,485,665,739   | -                                | -              |
| <b>Total equity</b>                                                        |       | 38,677,260,880                       | 27,739,123,610  | 24,792,598,067                   | 16,820,868,470 |
| <b>Total liabilities and equity</b>                                        |       | 121,692,804,686                      | 100,636,039,891 | 43,033,811,640                   | 32,359,375,034 |

The accompanying notes are an integral part of these consolidated and separate financial statements.

# Statements of Comprehensive Income

B.Grimm Power Public Company Limited

For the year ended 31 December 2019

|                                                                    | Notes       | Consolidated<br>financial statements |                         | Separate<br>financial statements |                      |
|--------------------------------------------------------------------|-------------|--------------------------------------|-------------------------|----------------------------------|----------------------|
|                                                                    |             | 2019<br>Baht                         | 2018<br>Baht            | 2019<br>Baht                     | 2018<br>Baht         |
| Sales and services income                                          | 28          | 43,771,052,541                       | 35,856,786,519          | 378,471,784                      | 636,694,334          |
| Construction revenue under concession agreements                   |             | 360,836,111                          | 728,310,454             | -                                | -                    |
| <b>Total revenue from sales and services</b>                       |             | <b>44,131,888,652</b>                | <b>36,585,096,973</b>   | <b>378,471,784</b>               | <b>636,694,334</b>   |
| Cost of sales and services                                         |             | (35,636,806,766)                     | (29,079,376,954)        | (193,366,922)                    | (105,380,850)        |
| Construction cost under concession agreements                      |             | (316,244,812)                        | (652,772,780)           | -                                | -                    |
| <b>Total costs of sales and services</b>                           |             | <b>(35,953,051,578)</b>              | <b>(29,732,149,734)</b> | <b>(193,366,922)</b>             | <b>(105,380,850)</b> |
| <b>Gross profit</b>                                                |             | <b>8,178,837,074</b>                 | <b>6,852,947,239</b>    | <b>185,104,862</b>               | <b>531,313,484</b>   |
| Other income                                                       | 29          | 289,497,221                          | 459,737,295             | 1,719,190,277                    | 2,001,972,820        |
| Administrative expenses                                            |             | (1,864,864,448)                      | (1,408,514,160)         | (383,753,134)                    | (236,303,686)        |
| Gain (loss) on exchange rate                                       |             | 137,569,227                          | (5,653,254)             | (44,494,290)                     | (7,636,122)          |
| Finance costs                                                      | 31          | (2,630,169,000)                      | (2,927,560,992)         | (636,933,601)                    | (370,028,260)        |
| Share of profit from associate and joint ventures                  | 14 (a), (b) | 101,330,264                          | 182,030,305             | -                                | -                    |
| <b>Profit before income tax</b>                                    |             | <b>4,212,200,338</b>                 | <b>3,152,986,433</b>    | <b>839,114,114</b>               | <b>1,919,318,236</b> |
| Income tax                                                         | 32          | (235,171,397)                        | (177,207,053)           | 910,840                          | 1,477,130            |
| <b>Profit for the year</b>                                         |             | <b>3,977,028,941</b>                 | <b>2,975,779,380</b>    | <b>840,024,954</b>               | <b>1,920,795,366</b> |
| <b>Other comprehensive income (expense):</b>                       |             |                                      |                         |                                  |                      |
| Items that will not be reclassified subsequently to profit or loss |             |                                      |                         |                                  |                      |
| Remeasurements of retirement benefit obligations, net of tax       |             | (74,941,477)                         | (16,289,692)            | (7,067,447)                      | (1,952,889)          |
| Items that will be reclassified subsequently to profit or loss     |             |                                      |                         |                                  |                      |
| Currency translation difference                                    |             | (528,260,598)                        | (130,330,521)           | -                                | -                    |
| <b>Total comprehensive income for the year</b>                     |             | <b>3,373,826,866</b>                 | <b>2,829,159,167</b>    | <b>832,957,507</b>               | <b>1,918,842,477</b> |
| <b>Profit attributable to:</b>                                     |             |                                      |                         |                                  |                      |
| Owners of the parent                                               |             | 2,331,152,758                        | 1,862,806,380           | 840,024,954                      | 1,920,795,366        |
| Non-controlling interests                                          |             | 1,645,876,183                        | 1,112,973,000           | -                                | -                    |
|                                                                    |             | <b>3,977,028,941</b>                 | <b>2,975,779,380</b>    | <b>840,024,954</b>               | <b>1,920,795,366</b> |
| <b>Total comprehensive income attributable to:</b>                 |             |                                      |                         |                                  |                      |
| Owners of the parent                                               |             | 1,771,596,810                        | 1,724,330,961           | 832,957,507                      | 1,918,842,477        |
| Non-controlling interests                                          |             | 1,602,230,056                        | 1,104,828,206           | -                                | -                    |
|                                                                    |             | <b>3,373,826,866</b>                 | <b>2,829,159,167</b>    | <b>832,957,507</b>               | <b>1,918,842,477</b> |
| <b>Earnings per share (Baht)</b>                                   |             |                                      |                         |                                  |                      |
| Basic earnings per share                                           | 33          | 0.88                                 | 0.71                    | 0.31                             | 0.74                 |

The accompanying notes are an integral part of these consolidated and separate financial statements.



# Statement of Changes in Equity

B.Grimm Power Public Company Limited

For the year ended 31 December 2019

| Consolidated financial statements                                       |                                      |                                  |                                                                         |                                      |                              |                 |                             |                                                         |                                  |                            |                 |                           |              |
|-------------------------------------------------------------------------|--------------------------------------|----------------------------------|-------------------------------------------------------------------------|--------------------------------------|------------------------------|-----------------|-----------------------------|---------------------------------------------------------|----------------------------------|----------------------------|-----------------|---------------------------|--------------|
|                                                                         | Attributable to owners of the parent |                                  |                                                                         |                                      |                              |                 |                             |                                                         |                                  |                            |                 |                           |              |
|                                                                         | Issued and paid-up share capital     | Share premium on ordinary shares | Reserved shares for employee benefits under share-based payments scheme | Other reserve -share -based payments | Other components of equity   |                 |                             |                                                         |                                  |                            |                 | Non-controlling interests | Total equity |
|                                                                         |                                      |                                  |                                                                         |                                      | Retained earnings            |                 | Other comprehensive expense | Changes in parent's ownership interests in subsidiaries | Total other components of equity | Total owners of the parent |                 |                           |              |
|                                                                         |                                      |                                  |                                                                         |                                      | Appropriated - legal reserve | Unappropriated  |                             |                                                         |                                  |                            |                 |                           |              |
|                                                                         |                                      |                                  |                                                                         |                                      |                              |                 |                             |                                                         |                                  |                            | Baht            |                           |              |
| Notes                                                                   | Baht                                 | Baht                             | Baht                                                                    | Baht                                 | Baht                         | Baht            | Baht                        | Baht                                                    | Baht                             | Baht                       | Baht            | Baht                      |              |
| Opening balance at 1 January 2018                                       | 5,213,800,000                        | 9,644,039,948                    | (169,355,200)                                                           | 36,926,838                           | 196,385,486                  | 4,005,015,258   | (199,289,772)               | (74,269,737)                                            | (273,559,509)                    | 18,653,252,821             | 7,090,524,731   | 25,743,777,552            |              |
| Changes in equity for the year 2018                                     |                                      |                                  |                                                                         |                                      |                              |                 |                             |                                                         |                                  |                            |                 |                           |              |
| Reserved shares for employee benefits under share-based payments scheme | -                                    | -                                | 5,572,800                                                               | -                                    | -                            | -               | -                           | -                                                       | -                                | 5,572,800                  | -               | 5,572,800                 |              |
| Share-based payments                                                    | -                                    | -                                | -                                                                       | 43,406,289                           | -                            | -               | -                           | -                                                       | -                                | 43,406,289                 | -               | 43,406,289                |              |
| Acquisition of subsidiaries                                             | -                                    | -                                | -                                                                       | -                                    | -                            | -               | -                           | -                                                       | -                                | -                          | 356,630,236     | 356,630,236               |              |
| Additional paid-up share capital of subsidiaries                        | -                                    | -                                | -                                                                       | -                                    | -                            | -               | -                           | -                                                       | -                                | -                          | 1,301,616,656   | 1,301,616,656             |              |
| Legal reserve appropriation                                             | -                                    | -                                | -                                                                       | -                                    | 96,039,768                   | (96,039,768)    | -                           | -                                                       | -                                | -                          | -               | -                         |              |
| Changes in parent's ownership interests in subsidiaries                 | -                                    | -                                | -                                                                       | -                                    | -                            | -               | -                           | -                                                       | -                                | -                          | (339,413,175)   | (339,413,175)             |              |
| Dividends                                                               | -                                    | -                                | -                                                                       | -                                    | -                            | (1,173,105,000) | -                           | -                                                       | -                                | (1,173,105,000)            | -               | (1,173,105,000)           |              |
| Dividends of subsidiaries                                               | -                                    | -                                | -                                                                       | -                                    | -                            | -               | -                           | -                                                       | -                                | -                          | (1,028,520,915) | (1,028,520,915)           |              |
| Total comprehensive income (expense) for the year                       | -                                    | -                                | -                                                                       | -                                    | -                            | 1,852,867,602   | (128,536,641)               | -                                                       | (128,536,641)                    | 1,724,330,961              | 1,104,828,206   | 2,829,159,167             |              |
| Closing balance at 31 December 2018                                     | 5,213,800,000                        | 9,644,039,948                    | (163,782,400)                                                           | 80,333,127                           | 292,425,254                  | 4,588,738,092   | (327,826,413)               | (74,269,737)                                            | (402,096,150)                    | 19,253,457,871             | 8,485,665,739   | 27,739,123,610            |              |

The accompanying notes are an integral part of these consolidated and separate financial statements.

## Statement of Changes in Equity (Cont'd)

B.Grimm Power Public Company Limited  
For the year ended 31 December 2019

|                                                                         | Consolidated financial statements    |                                  |                             |                                                                         |                                      |                              |                |                             |                                                         |                                  |                            |                           |                |
|-------------------------------------------------------------------------|--------------------------------------|----------------------------------|-----------------------------|-------------------------------------------------------------------------|--------------------------------------|------------------------------|----------------|-----------------------------|---------------------------------------------------------|----------------------------------|----------------------------|---------------------------|----------------|
|                                                                         | Attributable to owners of the parent |                                  |                             |                                                                         |                                      |                              |                |                             |                                                         |                                  |                            |                           |                |
|                                                                         | Issued and paid-up share capital     | Share premium on ordinary shares | Subordinated perpetual bond | Reserved shares for employee benefits under share-based payments scheme | Other reserve - share-based payments | Retained earnings            |                | Other components of equity  |                                                         |                                  | Total owners of the parent | Non-controlling interests | Total equity   |
|                                                                         |                                      |                                  |                             |                                                                         |                                      | Appropriated - legal reserve | Unappropriated | Other comprehensive expense | Changes in parent's ownership interests in subsidiaries | Total other components of equity |                            |                           |                |
| Notes                                                                   | Baht                                 | Baht                             | Baht                        | Baht                                                                    | Baht                                 | Baht                         | Baht           | Baht                        | Baht                                                    | Baht                             | Baht                       | Baht                      | Baht           |
| Opening balance at 1 January 2019                                       | 5,213,800,000                        | 9,644,039,948                    | -                           | (163,782,400)                                                           | 80,333,127                           | 292,425,254                  | 4,588,738,092  | (327,826,413)               | (74,269,737)                                            | (402,096,150)                    | 19,253,457,871             | 8,485,665,739             | 27,739,123,610 |
| Changes in equity for the year 2019                                     |                                      |                                  |                             |                                                                         |                                      |                              |                |                             |                                                         |                                  |                            |                           |                |
| Reserved shares for employee benefits under share-based payments scheme | -                                    | -                                | -                           | 3,592,000                                                               | -                                    | -                            | -              | -                           | -                                                       | -                                | 3,592,000                  | -                         | 3,592,000      |
| Share-based payments                                                    | -                                    | -                                | -                           | -                                                                       | 42,671,449                           | -                            | -              | -                           | -                                                       | -                                | 42,671,449                 | -                         | 42,671,449     |
| Issuance of subordinated perpetual bond                                 | -                                    | -                                | 7,951,674,002               | -                                                                       | -                                    | -                            | -              | -                           | -                                                       | -                                | 7,951,674,002              | -                         | 7,951,674,002  |
| Acquisition of subsidiaries                                             | -                                    | -                                | -                           | -                                                                       | -                                    | -                            | -              | -                           | -                                                       | -                                | -                          | 505,741                   | 505,741        |
| Additional paid-up share capital of subsidiaries                        | -                                    | -                                | -                           | -                                                                       | -                                    | 42,001,248                   | (42,001,248)   | -                           | -                                                       | -                                | -                          | 116,376,191               | 116,376,191    |
| Legal reserve appropriation                                             | -                                    | -                                | -                           | -                                                                       | -                                    | -                            | -              | -                           | -                                                       | -                                | -                          | -                         | -              |
| Changes in parent's ownership interests in subsidiaries                 | -                                    | -                                | -                           | -                                                                       | -                                    | -                            | -              | -                           | (44,384,808)                                            | (44,384,808)                     | (44,384,808)               | 869,384,808               | 825,000,000    |
| Dividends                                                               | -                                    | -                                | -                           | -                                                                       | -                                    | -                            | (834,208,000)  | -                           | -                                                       | -                                | (834,208,000)              | -                         | (834,208,000)  |
| Dividends of subsidiaries                                               | -                                    | -                                | -                           | -                                                                       | -                                    | -                            | -              | -                           | -                                                       | -                                | -                          | (541,300,979)             | (541,300,979)  |
| Total comprehensive income (expense) for the year                       | -                                    | -                                | -                           | -                                                                       | -                                    | -                            | 2,281,064,787  | (509,467,977)               | -                                                       | (509,467,977)                    | 1,771,596,810              | 1,602,230,056             | 3,373,826,866  |
| Closing balance at 31 December 2019                                     | 5,213,800,000                        | 9,644,039,948                    | 7,951,674,002               | (160,190,400)                                                           | 123,004,576                          | 334,426,502                  | 5,993,593,631  | (837,294,390)               | (118,654,545)                                           | (955,948,935)                    | 28,144,399,324             | 10,532,861,556            | 38,677,260,880 |

The accompanying notes are an integral part of these consolidated and separate financial statements.

## Statement of Changes in Equity (Cont'd)

B.Grimm Power Public Company Limited  
For the year ended 31 December 2019

|                                                                         |       | Separate financial statements    |                                  |                             |                                                                         |                                      |                              |                 |                 |
|-------------------------------------------------------------------------|-------|----------------------------------|----------------------------------|-----------------------------|-------------------------------------------------------------------------|--------------------------------------|------------------------------|-----------------|-----------------|
|                                                                         |       | Issued and paid-up share capital | Share premium on ordinary shares | Subordinated perpetual bond | Reserved shares for employee benefits under share-based payments scheme | Other reserve - share-based payments | Retained earnings            |                 | Total equity    |
|                                                                         | Notes | Baht                             | Baht                             | Baht                        | Baht                                                                    | Baht                                 | Appropriated - legal reserve | Unappropriated  | Baht            |
| Opening balance at 1 January 2018                                       |       | 5,213,800,000                    | 9,644,039,948                    | -                           | (79,616,000)                                                            | 20,862,675                           | 196,385,486                  | 1,059,245,109   | 16,054,717,218  |
| Changes in equity for the year 2018                                     |       |                                  |                                  |                             |                                                                         |                                      |                              |                 |                 |
| Share-based payments                                                    | 38    | -                                | -                                | -                           | -                                                                       | 20,413,775                           | -                            | -               | 20,413,775      |
| Legal reserve appropriation                                             | 27    | -                                | -                                | -                           | -                                                                       | -                                    | 96,039,768                   | (96,039,768)    | -               |
| Dividends                                                               | 34    | -                                | -                                | -                           | -                                                                       | -                                    | -                            | (1,173,105,000) | (1,173,105,000) |
| Total comprehensive income for the year                                 |       | -                                | -                                | -                           | -                                                                       | -                                    | -                            | 1,918,842,477   | 1,918,842,477   |
| Closing balance at 31 December 2018                                     |       | 5,213,800,000                    | 9,644,039,948                    | -                           | (79,616,000)                                                            | 41,276,450                           | 292,425,254                  | 1,708,942,818   | 16,820,868,470  |
| Opening balance at 1 January 2019                                       |       | 5,213,800,000                    | 9,644,039,948                    | -                           | (79,616,000)                                                            | 41,276,450                           | 292,425,254                  | 1,708,942,818   | 16,820,868,470  |
| Changes in equity for the year 2019                                     |       |                                  |                                  |                             |                                                                         |                                      |                              |                 |                 |
| Reserved shares for employee benefits under share-based payments scheme |       | -                                | -                                | -                           | 2,515,200                                                               | -                                    | -                            | -               | 2,515,200       |
| Share-based payments                                                    | 38    | -                                | -                                | -                           | -                                                                       | 18,790,888                           | -                            | -               | 18,790,888      |
| Issuance of subordinated perpetual bond                                 | 26    | -                                | -                                | 7,951,674,002               | -                                                                       | -                                    | -                            | -               | 7,951,674,002   |
| Legal reserve appropriation                                             | 27    | -                                | -                                | -                           | -                                                                       | -                                    | 42,001,248                   | (42,001,248)    | -               |
| Dividends                                                               | 34    | -                                | -                                | -                           | -                                                                       | -                                    | -                            | (834,208,000)   | (834,208,000)   |
| Total comprehensive income for the year                                 |       | -                                | -                                | -                           | -                                                                       | -                                    | -                            | 832,957,507     | 832,957,507     |
| Closing balance at 31 December 2019                                     |       | 5,213,800,000                    | 9,644,039,948                    | 7,951,674,002               | (77,100,800)                                                            | 60,067,338                           | 334,426,502                  | 1,665,691,077   | 24,792,598,067  |

The accompanying notes are an integral part of these consolidated and separate financial statements.

# Statements of Cash Flows

B.Grimm Power Public Company Limited

For the year ended 31 December 2019

|                                                                                                | Notes       | Consolidated<br>financial statements |                 | Separate<br>financial statements |                 |
|------------------------------------------------------------------------------------------------|-------------|--------------------------------------|-----------------|----------------------------------|-----------------|
|                                                                                                |             | 2019<br>Baht                         | 2018<br>Baht    | 2019<br>Baht                     | 2018<br>Baht    |
| <b>Cash flows from operating activities</b>                                                    |             |                                      |                 |                                  |                 |
| Profit before income tax                                                                       |             | 4,212,200,338                        | 3,152,986,433   | 839,114,114                      | 1,919,318,236   |
| Adjustments for :                                                                              |             |                                      |                 |                                  |                 |
| - Depreciation and amortisation                                                                | 30          | 4,659,940,259                        | 3,341,008,822   | 82,149,623                       | 29,720,185      |
| - Amortisation of deferred financing fees                                                      | 31          | 41,035,267                           | 174,065,604     | 16,049,827                       | 9,292,280       |
| - Write-off withholding tax deducted at sources                                                |             | 23,426,147                           | 242,611         | 7,653,994                        | -               |
| - Allowance for slow moving spare parts and supplies                                           |             | 69,127,853                           | 47,009,050      | -                                | -               |
| - Loss (gain) on disposal and write-off of plant and equipment and intangible assets           |             | (6,284,179)                          | 846,711         | -                                | -               |
| - Interest income                                                                              | 29          | (184,401,609)                        | (138,531,183)   | (767,304,304)                    | (338,533,640)   |
| - Interest expense                                                                             |             | 3,145,143,715                        | 2,784,999,096   | 623,232,816                      | 341,171,427     |
| - Employee benefit expense                                                                     | 24          | 87,462,039                           | 33,249,601      | 4,606,203                        | 7,443,579       |
| - Share-based payments for employees                                                           |             | 26,871,007                           | 29,677,862      | 3,808,035                        | 3,808,035       |
| - Unrealised loss (gain) on exchange rate                                                      |             | (730,344,738)                        | 45,612,443      | 30,910,772                       | (175,318)       |
| - Dividends income                                                                             | 29          | -                                    | -               | (950,676,374)                    | (1,662,939,338) |
| - Share of profit from associate and joint ventures                                            | 14 (a), (b) | (101,330,264)                        | (182,030,305)   | -                                | -               |
| - Gain from measurement of fair value of equity interests held before the business combination | 36          | -                                    | (35,318,818)    | -                                | -               |
| - Gain on bargain purchase                                                                     | 36          | -                                    | (240,287,181)   | -                                | -               |
| - Construction revenue under concession agreements                                             |             | (360,836,111)                        | (728,310,454)   | -                                | -               |
| Changes in working capital :                                                                   |             |                                      |                 |                                  |                 |
| - Trade and other receivables                                                                  |             | (468,837,158)                        | (1,109,602,550) | (406,651,572)                    | (377,891,978)   |
| - Spare parts and supplies                                                                     |             | (52,014,752)                         | (226,609,950)   | -                                | -               |
| - Other current assets                                                                         |             | 708,722,153                          | (482,736,183)   | 5,511,150                        | 8,255,201       |
| - Other non-current assets                                                                     |             | (666,515,203)                        | 1,137,500,076   | (13,964,474)                     | 30,100,850      |
| - Trade and other payables                                                                     |             | (419,120,786)                        | 261,978,766     | (2,568,790)                      | (203,852,720)   |
| - Other current liabilities                                                                    |             | (296,603,094)                        | 27,042,856      | (1,354,443)                      | 7,642,489       |
| - Provision for minimum payments under right to sell electricity agreements                    |             | (19,855,218)                         | -               | (15,930,300)                     | -               |
| - Employee benefits obligations                                                                | 24          | (11,597,363)                         | (936,919)       | (52,003)                         | (57,927)        |
| - Other non-current liabilities                                                                |             | (57,311,495)                         | (97,501,389)    | -                                | -               |
| Cash generated from (used in) operating activities                                             |             | 9,598,876,808                        | 7,794,354,999   | (545,465,726)                    | (226,698,639)   |
| - Interest received                                                                            |             | 149,145,094                          | 136,234,390     | 169,221,330                      | 45,617,500      |
| - Withholding tax received                                                                     |             | 2,271,450                            | -               | -                                | -               |
| - Income tax paid                                                                              |             | (295,222,433)                        | (272,569,095)   | (11,631,347)                     | (19,461,699)    |
| Net cash generated from (used in) operating activities                                         |             | 9,455,070,919                        | 7,658,020,294   | (387,875,743)                    | (200,542,838)   |

The accompanying notes are an integral part of these consolidated and separate financial statements.



# Statements of Cash Flows (Cont'd)

## B.Grimm Power Public Company Limited

For the year ended 31 December 2019

|                                                                                                 | Notes  | Consolidated<br>financial statements |                  | Separate<br>financial statements |                 |
|-------------------------------------------------------------------------------------------------|--------|--------------------------------------|------------------|----------------------------------|-----------------|
|                                                                                                 |        | 2019                                 | 2018             | 2019                             | 2018            |
|                                                                                                 |        | Baht                                 | Baht             | Baht                             | Baht            |
| <b>Cash flows from investing activities</b>                                                     |        |                                      |                  |                                  |                 |
| Decrease in restricted deposits                                                                 |        | 234,078,316                          | 102,700,680      | -                                | -               |
| Increase in fixed deposits with maturity over 3 months                                          |        | (25,371,662)                         | (1,738,369,545)  | (1,012,823)                      | -               |
| Repayments received from short-term loans to related parties                                    | 37.5   | 1,911,040,000                        | 28,000,000       | 2,748,200,000                    | 983,992,849     |
| Payments for short-term loans to related parties                                                | 37.5   | (2,111,073,000)                      | (18,240,000)     | (8,159,993,414)                  | (4,035,306,690) |
| Repayments received from long-term loans to related parties                                     | 37.6   | -                                    | -                | 1,519,485,117                    | 358,399,110     |
| Payments for long-term loans to related parties                                                 | 37.6   | -                                    | -                | (998,382,697)                    | (6,296,317,645) |
| Repayments received from long-term loans to third party                                         |        | 67,000,000                           | -                | 67,000,000                       | -               |
| Payments for long-term loan to third party                                                      |        | -                                    | (93,000,000)     | -                                | (93,000,000)    |
| Payments for short-term loan to third party                                                     |        | (491,239,055)                        | -                | (111,356,150)                    | -               |
| Payments for acquisition of subsidiaries considered as assets acquisition, net of cash acquired |        | (8,992,662)                          | (1,748,991,436)  | -                                | -               |
| Payments for purchases of investment in subsidiaries from non-controlling interests             |        | -                                    | (339,413,175)    | -                                | -               |
| Payments for additional of investment in subsidiaries                                           | 13     | -                                    | -                | (11,394,833)                     | (583,190,007)   |
| Proceeds from capital reduction of associate                                                    | 14 (a) | 299,236,964                          | 157,935,116      | -                                | -               |
| Payments for acquisition of investment in joint ventures                                        | 14 (b) | (13,368,000)                         | (105,064,975)    | (13,368,000)                     | (101,065,000)   |
| Payment for business combination, net of cash acquired                                          | 36     | (2,827,842,800)                      | (331,427,251)    | -                                | (600,000,000)   |
| Payments for purchase of property, plant and equipment                                          |        | (3,152,852,943)                      | (6,130,837,288)  | (337,805,595)                    | (353,356,851)   |
| Payments for purchase of intangible assets                                                      |        | (395,254,913)                        | (431,667,043)    | (36,084,984)                     | (40,072,763)    |
| Proceeds from disposals of property, plant and equipment and intangible assets                  |        | 18,401,428                           | 4,664,006        | -                                | -               |
| Refunds of deposits for land                                                                    |        | -                                    | 919,040,300      | -                                | -               |
| Payments for deposits for land                                                                  |        | (247,679,335)                        | (193,574,030)    | -                                | -               |
| Dividends received                                                                              |        | 87,140,336                           | 174,984,847      | 1,213,032,147                    | 1,803,501,310   |
| Advance payments for projects development                                                       |        | -                                    | (230,017,168)    | -                                | -               |
| Net cash used in investing activities                                                           |        | (6,656,777,326)                      | (9,973,276,962)  | (4,121,681,232)                  | (8,956,415,687) |
| <b>Cash flows from financing activities</b>                                                     |        |                                      |                  |                                  |                 |
| Proceeds from issuance of subordinated perpetual bond                                           | 26     | 8,000,000,000                        | -                | 8,000,000,000                    | -               |
| Payment for issuance costs of subordinated perpetual bond                                       | 26     | (48,325,998)                         | -                | (48,325,998)                     | -               |
| Proceeds from additional paid-up capital of subsidiaries                                        |        | 84,085,545                           | 1,304,116,655    | -                                | -               |
| Proceed from disposal of interest in subsidiary without losing control                          | 36     | 825,000,000                          | -                | -                                | -               |
| Proceeds from short-term borrowings from financial institutions                                 |        | 3,241,000,000                        | 1,286,000,000    | 3,000,000,000                    | -               |
| Repayments to short-term borrowings from financial institutions                                 |        | (241,000,000)                        | (1,286,000,000)  | -                                | -               |
| Proceeds from long-term borrowings from financial institutions                                  | 22     | 1,004,305,409                        | 589,802,532      | -                                | -               |
| Repayments to long-term borrowings from financial institutions                                  | 22     | (829,494,671)                        | (15,254,237,787) | -                                | (1,912,240,000) |
| Proceeds from issuance of debentures                                                            | 23     | -                                    | 21,400,000,000   | -                                | 14,700,000,000  |
| Redemption of debentures                                                                        | 23     | (299,892,000)                        | (5,500,000,000)  | -                                | (5,500,000,000) |
| Payments for deferred financing fees                                                            |        | (12,558,306)                         | (97,941,077)     | (4,051,269)                      | (90,531,077)    |
| Proceeds from short-term borrowings from related parties                                        |        | -                                    | 5,308,600        | -                                | -               |
| Repayment to short-term borrowing from a related party                                          |        | (5,079,017)                          | -                | -                                | -               |
| Repayments to long-term borrowings from a related party                                         | 37.8   | (1,173,500,000)                      | (527,000,000)    | -                                | -               |
| Dividends paid to owners of parent                                                              |        | (834,208,000)                        | (1,173,105,000)  | (834,208,000)                    | (1,173,105,000) |
| Dividends paid to non-controlling interests                                                     |        | (720,123,843)                        | (1,083,704,084)  | -                                | -               |
| Payments for interest                                                                           |        | (3,080,266,602)                      | (2,953,245,700)  | (614,449,131)                    | (299,395,789)   |
| Net cash generated from (used in) financing activities                                          |        | 5,909,942,517                        | (3,290,005,861)  | 9,498,965,602                    | 5,724,728,134   |

The accompanying notes are an integral part of these consolidated and separate financial statements.

## Statements of Cash Flows (Cont'd)

B.Grimm Power Public Company Limited

For the year ended 31 December 2019

|                                                                                             | Notes | Consolidated<br>financial statements |                       | Separate<br>financial statements |                      |
|---------------------------------------------------------------------------------------------|-------|--------------------------------------|-----------------------|----------------------------------|----------------------|
|                                                                                             |       | 2019<br>Baht                         | 2018<br>Baht          | 2019<br>Baht                     | 2018<br>Baht         |
| <b>Net increase (decrease) in cash and cash equivalents</b>                                 |       | 8,708,236,110                        | (5,605,262,529)       | 4,989,408,627                    | (3,432,230,391)      |
| Cash and cash equivalents at beginning of the year                                          |       | 12,559,726,178                       | 18,209,461,277        | 3,736,128,251                    | 7,168,721,667        |
| Loss on exchange rate on cash and cash equivalents                                          |       | (106,792,300)                        | (44,472,570)          | (20,271,951)                     | (363,025)            |
| <b>Cash and cash equivalents at end of the year</b>                                         |       | <b>21,161,169,988</b>                | <b>12,559,726,178</b> | <b>8,705,264,927</b>             | <b>3,736,128,251</b> |
| <b>Supplementary information :</b>                                                          |       |                                      |                       |                                  |                      |
| Significant non-cash items :                                                                |       |                                      |                       |                                  |                      |
| - Payables arising from purchases of property, plant and equipment and intangible assets    |       | 13,580,836,862                       | 4,466,651,779         | 6,614,234                        | 315,930,712          |
| - Provision for decommissioning cost                                                        |       | 9,746,282                            | 71,715,450            | -                                | -                    |
| - Provision arising from minimum payments under rights to sell electricity agreements       |       | -                                    | 310,708,820           | -                                | 251,061,340          |
| - Transfer other receivables to short-term loans to third parties                           |       | 25,800,000                           | -                     | 25,800,000                       | -                    |
| - Payable arising from investing in subsidiaries                                            | 13    | 95,543,595                           | 410,946,480           | -                                | 32,615               |
| - Transfer spare parts and supplies to plant and equipment                                  |       | 60,707,641                           | 98,052,473            | -                                | -                    |
| - Amortisation of deferred financing fees and capitalised to power plant under construction |       | -                                    | 3,612,136             | -                                | -                    |
| - Transfer from advances for projects development to intangible assets                      |       | -                                    | 74,000,000            | -                                | 253,273,490          |
| - Intangible assets from consession agreement                                               |       | 360,836,111                          | 728,310,454           | -                                | -                    |
| - Accrued dividends income                                                                  | 9     | -                                    | -                     | 441,002,106                      | 703,357,879          |
| - Capital contribution under employee benefits scheme of subsidiaries                       |       | -                                    | -                     | 19,779,505                       | 21,832,965           |
| - Transfer other receivables to intangible assets                                           |       | 58,282,965                           | -                     | -                                | -                    |

The accompanying notes are an integral part of these consolidated and separate financial statements.

## Notes to the Consolidated and Separate Financial Statements

**B.Grimm Power Public Company Limited**

**For the year ended 31 December 2019**

### **1 General information**

B.Grimm Power Public Company Limited (“the Company”) is a public limited company listed on the Stock Exchange of Thailand and is incorporated and domiciled in Thailand. The address of the Company’s registered office is as follows:

5, Krunghthepkreetha Road, Huamark, Bangkok, Bangkok 10240 Thailand.

The principal business operations of the Company and its subsidiaries (together “the Group”) are the generating and distribution of electricity for the government sectors and Industrial Users, both in Thailand and overseas.

These consolidated and separate financial statements were authorised for issue by the Board of Directors on 24 February 2020.

### **2 Accounting policies**

The principal accounting policies applied in the preparation of these consolidated and separate financial statements are set out below:

#### **2.1 Basis of preparation**

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards (“TFRSs”) and the financial reporting requirements issued under the Securities and Exchange Act.

The consolidated and separate financial statements have been prepared under the historical cost convention except as disclosed in the accounting policies below.

The preparation of financial statements in conformity with Thai Generally Accepted Accounting Principles requires management to use certain critical accounting estimates and to exercise its judgement in applying the Group’s accounting policies. The areas involving a higher degree of judgement or complexity, or areas that are more likely to be materially adjusted due to changes in estimates and assumptions are disclosed in Note 4.

An English version of the consolidated and separate financial statements have been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

## 2 Accounting policies (Cont'd)

### 2.2 New and amended financial reporting standards that are relevant to the Group

#### 2.2.1 New and amended financial reporting standards that are effective for accounting period beginning on or after 1 January 2019.

|                       |                                              |
|-----------------------|----------------------------------------------|
| TFRS 15               | Revenue from contracts with customers        |
| TFRS 2 (revised 2018) | Share-based payment                          |
| TAS 28 (revised 2018) | Investments in associates and joint ventures |
| TAS 40 (revised 2018) | Investment property                          |

#### - Thai Financial Reporting Standard no.15 (TFRS 15), Revenue from contracts with customers

The standard provides principle and approach of revenue recognition under five-step process. The underlying principle is that the Group will recognise revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. It replaces the principles of transferring the significant risks and rewards of ownership of the goods or services to the buyer in accordance with TAS 11, Construction contracts, TAS 18, Revenue and related interpretations.

The Group has adopted the new TFRS 15, Revenue from contracts with customers from 1 January 2019 by applying the modified retrospective approach and the comparative figures have not been restated.

The Group already adopted the above amended standards and there is no material impact on the Group's financial statements.

#### 2.2.2 New and amended financial reporting standards that are effective for accounting period beginning on or after 1 January 2020

Certain new and amended financial reporting standards have been issued that are not mandatory for current period end 31 December 2019 reporting period and have not been early adopted by the Group.

##### a) Financial instruments

The new financial standards relate to financial instruments are:

|          |                                                             |
|----------|-------------------------------------------------------------|
| TAS 32   | Financial instruments: Presentation                         |
| TFRS 7   | Financial instruments: Disclosures                          |
| TFRS 9   | Financial instruments                                       |
| TFRIC 16 | Hedges of a net investment in a foreign operation           |
| TFRIC 19 | Extinguishing financial liabilities with equity instruments |

These new standards address the classification, measurement, derecognition of financial assets and financial liabilities, impairment of financial assets, hedge accounting, and presentation and disclosure of financial instruments.

The Group's management is currently assessing the impact of initial adoption of these standards and expecting that the Group will be affected on the derivatives and hedging instruments. The significant balance of derivative assets and derivative liabilities which were previously off-balance transaction under TAS 105, Accounting for Investments in Debt and Equity Securities and TAS 107, Financial Instruments: Disclosure and Presentation will be recognised in the financial statements.

## 2 Accounting policies (Cont'd)

### 2.2 New and amended financial reporting standards that are relevant to the Group (Cont'd)

#### 2.2.2 New and amended financial reporting standards that are effective for accounting period beginning on or after 1 January 2020 (Cont'd)

##### b) TFRS 16, Leases

Where the Group is a lessee, TFRS 16, Leases will result in almost all leases being recognised on the statements of financial position as the distinction between operating and finance leases is removed. A right-of-use asset and a lease liability will be recognised, with exception on short-term and low-value leases.

The Group's management is currently assessing the impact of initial adoption of this standard and expecting that the Group will be affected by recognition of lease liabilities on land, building and car rental contracts, which was previously classified as 'operating lease' under TAS 17, Lease, and recognition of right-of-use asset, simultaneously.

### 2.3 Principles of consolidation and equity accounting

#### (1) Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method.

#### (2) Associates

Associates are all entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting.

In the separate financial statements, investments in associates are accounted for using cost method.

#### (3) Joint arrangements

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

##### *Joint ventures*

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method.

In the separate financial statements, investments in joint ventures are accounted for using cost method.



## **2 Accounting policies (Cont'd)**

### **2.3 Principles of consolidation and equity accounting (Cont'd)**

#### **(4) Equity method**

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income, respectively. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

#### **(5) Changes in ownership interests**

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A difference between the amount of the adjustment to non-controlling interests to reflect their relative interest in the subsidiary and any consideration paid or received is recognised within equity.

If the ownership interest in associates and joint ventures is reduced but significant influence and joint control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate. Profit or loss from reduce of the ownership interest in associates and joint ventures is recognise in profit or loss.

When the Group losses control, joint control or significant influence over investments, any retained interest in the investment is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value becomes the initial carrying amount of the retained interest which is reclassified to investment in an associate, or a joint venture or a financial asset accordingly.

#### **(6) Intercompany transactions on consolidation**

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

### **2.4 Business combination**

The Group applies the acquisition method to account for business combinations with an exception on business combination under common control. The consideration transferred for the acquisition of a subsidiary comprises.

- fair value of the assets transferred
- liabilities incurred to the former owners of the acquiree
- equity interests issued by the Group

Identifiable assets and liabilities acquired and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date.

## 2 Accounting policies (Cont'd)

### 2.4 Business combination (Cont'd)

On an acquisition-by-acquisition basis, the Group initially recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest recognised and the acquisition-date fair value of any previous equity interest in the acquiree (for business combination achieved in stages) over the fair value of the identifiable net assets acquired is recorded as goodwill. In the case of a bargain purchase, the difference is recognised directly in profit or loss.

#### *Acquisition-related cost*

Acquisition-related cost are recognised as expenses.

#### *Step-up acquisition*

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measured are recognised in profit or loss.

#### *Changes in fair value of contingent consideration paid/received*

Subsequent changes to the fair value of the contingent consideration that is an asset or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not re-measured.

### 2.5 Foreign currency translation

#### (a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in Thai Baht, which is the Company's functional and the Group's presentation currency.

#### (b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss is recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in profit or loss, any exchange component of that gain or loss is recognised in profit or loss.

## **2 Accounting policies (Cont'd)**

### **2.5 Foreign currency translation (Cont'd)**

#### **(c) Group companies**

The results and financial position of all the Group entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position;
- Income and expenses for each statement of comprehensive income are translated at average exchange rates; and
- All resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate.

### **2.6 Cash and cash equivalents**

In the statements of cash flows, cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less and bank overdrafts. In the statements of financial position, bank overdrafts are shown in current liabilities.

### **2.7 Trade accounts receivable**

Trade receivables are amounts due from customers for goods sold or service performed in the ordinary course of business.

Trade receivables are recognised initially at the amount of consideration that is unconditionally unless they contain significant financing components, when they are recognised at its present value. The Group presented trade receivables at cost less allowance for doubtful accounts.

### **2.8 Spare parts and supplies**

#### **2.8.1 Fuel**

Fuel represents natural gas. Costs are calculated based on the moving average basis.

#### **2.8.2 Spare parts and supplies**

Spare parts and supplies, which have useful life less than one year, are stated at the lower of cost or net realisable value. Costs are calculated based on the moving average basis. The cost of purchase comprises both the purchase price and costs directly attributable to the acquisition of the spare parts and supplies, such as import duties and transportation charges, less all attributable discounts. Allowance is made, where necessary, for slow-moving spare parts and supplies.

## 2 Accounting policies (Cont'd)

### 2.9 Investment property

Land that is not occupied by the Group, is classified as investment property.

Investment property is measured initially at its cost, including related transaction costs.

Land is not depreciated.

Subsequent expenditure is capitalised to the asset's carrying amount only when it is probable that future economic benefits associated with the expenditure will flow to the Group and the cost of the item can be measured reliably.

### 2.10 Property, plant and equipment

All other property, plant and equipment are stated at historical cost less accumulated depreciation. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

Spare parts categorised as "specific spare parts" are used for specific equipment of the power plant, and "common spare parts" are used for general use. Spare parts that have useful lives of more than one year are classified as property, plant and equipment and are depreciated using the straight-line method over the estimated useful lives once they are in the manner as intended by the management.

Land is not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

|                                                            |              |
|------------------------------------------------------------|--------------|
| Land improvement                                           | 5 - 25 years |
| Power plant, substation, transmission system and equipment | 5 - 30 years |
| Office equipment, furniture and computer                   | 3 - 15 years |
| Building and structure                                     | 5 - 25 years |
| Motor vehicles                                             | 5 years      |

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

The asset's carrying amount is written-down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains or losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised in the statement of income.

### 2.11 Goodwill

Goodwill is tested for impairment annually, or more frequently if events or changes in circumstances indicate that it might be impaired, and is carried at cost less accumulated impairment losses.

For the purpose of impairment testing, goodwill is allocated to cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose. The units or groups of units are identified at the lowest level at which goodwill is monitored for internal management purposes.

## **2 Accounting policies (Cont'd)**

### **2.12 Service concession arrangements**

Service concession arrangements are arrangements between government (the grantor) and a private sector entity (the operator) which involve the operator constructing the infrastructure used to provide the public service or upgrading it and operating and maintaining that infrastructure for a specified period of time. The operator is paid for its services over the period of the arrangement. The grantor controls or regulates what services the operator must provide with the infrastructure, to whom it must provide them, and at what price and the grantor control-through ownership, beneficial entitlement or otherwise - any significant residual interest in the infrastructure at the end of the term of the arrangement.

If the Group as the operator provides construction or upgrade services, revenue and costs relating to construction or upgrade services shall be accounted for based on the stage of completion on the construction contract. The consideration received or receivable by the operator shall be recognised at its fair value of an intangible asset.

The Group shall recognise an intangible asset to the extent that it receives a right (a licence) to charge users of the public service. A right to charge users of the public service is not an unconditional right to receive cash because the amounts are contingent on the extent that the public uses the service. Revenue and costs relating to operation services shall be recognised when service is provided by reference to the contract term.

Contractual obligations to maintain or restore infrastructure, except for any upgrade element shall be recognised and measured at the best estimate of the expenditure that would be required to settle the present obligation at the end of the reporting period.

### **2.13 Intangible assets**

#### **2.13.1 Right to use assets**

Right to use assets consist of

##### **(a) Right to use gas pipeline**

Cost of gas piping of which the right was transferred to gas supplier according to the gas purchase agreement is classified as intangible assets on right transferring date and amortised using the straight-line basis over the period of the gas purchase agreement from 5 years to 25 years.

##### **(b) Right to use substations**

Cost of substation of which the right was transferred to provincial Electricity Authority according to the power purchase agreement is classified as intangible assets on right transferring date and amortised using the straight-line basis over the period of power purchase agreement from 17 years to 25 years.

##### **(c) Right to use utility system**

Right to use utility system is the cost incurred to obtain right over utility system for transmission of water. The cost is capitalised and amortised using the straight-line method over the period of contract from 3 year to 13 years .



## 2 Accounting policies (Cont'd)

### 2.13.2 Right in operation and maintenance contracts

The right in operation and maintenance contracts arising on acquisition of subsidiary is amortised using the straight-line basis over the periods of the operation and maintenance contracts of which 21 years.

### 2.13.3 Right from service concession arrangements

Right from service concession arrangements is the right from service concession arrangements to generating and distribution of electricity with the Laos PDR government as described in the accounting policies in Note 2.12 Service concession arrangements are amortised using the straight-line method over the period of power purchase agreement attached to the concession agreements and recorded as expense in profit and loss for a period of 25 years.

### 2.13.4 Deferred power plant costs

Deferred power plant costs include the necessary and relevant expenditures on acquiring relevant licences for the power plant's operation and costs incurred on development projects that are recognised as intangible assets when it is probable that the project will be a success and only if the cost can be measured reliably. Other development expenditure is recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period. Deferred power plant costs have been capitalised and amortised using the straight-line basis over the period of power purchase agreement of 21 to 25 years, starting from the commercial operation date.

### 2.13.5 Land use right

Land use right is the cost incurred to obtain right over land for installation of power plant, substation, transmission system, and electricity posts. The cost is capitalised and amortised using the straight-line method over the useful lives of power plant, generally over 25 years.

### 2.13.6 Right in power purchase agreements

Right in power purchase agreements acquired in business combination are initially recognised at fair value at the acquisition date. Right in power purchase agreements will be amortised using the straight-line basis over the period of power purchase agreements, power supply agreements and stream supply agreements to customers with period from 1 year to 25 years.

The amount paid to obtain right in power purchase agreements which is not from business combination is capitalised as intangible assets and amortised using the straight-line basis over the period of power purchase agreements.

### 2.13.7 Computer software

Acquired computer software licenses are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortised over their estimated useful lives 3 - 10 years.

## **2 Accounting policies (Cont'd)**

### **2.14 Impairment of assets**

Assets that have an indefinite useful life are tested annually for impairment, or more frequently if events or changes in circumstances indicate that it might be impaired. Assets that are subject to amortisation are reviewed for impairment whenever there is an indication of impairment. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use.

Where the reasons for previously recognised impairments no longer exist, the impairment losses on the assets concerned other than goodwill is reversed.

### **2.15 Leases - where the Group is the lessee**

Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the period of the lease.

At the inception of finance lease, the lower of the fair value of the leased property and the present value of the minimum lease payments is capitalised. Each lease payment is allocated between the liability and finance charges to achieve a constant rate on the liabilities balance outstanding. The corresponding rental obligations is presented net of finance charges. Finance cost is charged to profit or loss over the lease period.

### **2.16 Borrowings**

Borrowings are recognised initially at the fair value, net of directly attributable transaction costs incurred. Borrowings are subsequently stated at amortised cost.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it will be drawn down. The fee is deferred until the drawn down occurs and included in effective interest calculation. However, if it is probable that facility will not be drawn down, that portion of the fee paid is recognised as a prepayment and amortised over the period of related facility.

Borrowings are removed from the statements of financial position when the obligation specified in the contract is discharged, cancelled, or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss as finance costs.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

### **2.17 Borrowing costs**

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are added to the cost of those assets less investment income earned from those specific borrowings. The capitalisation of borrowing costs is ceased when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete.

Other borrowing costs are expensed in the period in which they are incurred.

## 2 Accounting policies (Cont'd)

### 2.18 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

#### *Current tax*

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

#### *Deferred income tax*

Deferred income tax is recognised on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not recognised for temporary differences arise from:

- initial recognition of an asset or liability in a transaction other than a business combination that affects neither accounting nor taxable profit or loss is not recognised
- investments in subsidiaries, associates and joint arrangements where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax is measured using tax rates of the period in which temporary difference is expected to be reversed, based on tax rates and laws that have been enacted or substantially enacted by the end of the reporting period.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

## **2 Accounting policies (Cont'd)**

### **2.19 Employee Benefits**

#### **2.19.1 Post-employment**

The Group operates various retirement benefits schemes. The Group has both defined benefit and defined contribution plans.

##### **2.19.1.1 Defined contribution plan**

A defined contribution plan is a plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions once the contributions have been paid if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. The Group pays contributions to a separate fund which is managed by an external fund manager in accordance with the provident fund Act. B.E. 2530. The contributions are recognised as employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

##### **2.19.1.2 Retirement benefits**

A defined benefit plan is a retirement plan that is not a defined contribution plan. Amount of retirement benefits is defined by the agreed benefits the employees will receive after the completion of employment. It usually depends on factors such as age, years of service and an employee's latest compensation at retirement.

The defined benefit obligation is calculated by an independent actuary using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market yield of government bonds that matches the terms and currency of the expected cash outflows.

Remeasurement gains and losses are recognised directly to other comprehensive income in the period in which they arise. They are included in retained earnings in the statements of changes in equity.

Past-service costs are recognised immediately in profit or loss.

##### **2.19.2 Long service awards**

The Group gives gold rewards to employees when they have a minimum of 10 years of services and consecutively paid every 5 years after. These obligations are measured similar to defined benefit plan except remeasurement gains and losses that are recognised to profit or loss.

##### **2.19.3 Termination benefits**

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits when it is demonstrably committed to either: terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or providing termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than 12 months after the end of the reporting period are discounted to their present value.

## 2 Accounting policies (Cont'd)

### 2.20 Share-based payment

The Group measures equity - settled, share-based compensation plans for employees by reference to the fair value of the equity instrument granted at the grant date. The expense is recognised corresponding to increase in equity, over the period that the employee become conditionally entitled to the awards. The amount recognised as an expense is adjusted to reflect the actual amount of awards for which the related service and non-market vesting conditions are expected to be met.

Share-based payment expense is charged to profit or loss corresponding to the increase in "Other reserve - share-based payments" in equity over the periods in which the service conditions are fulfilled. The amount of shares, which has been allocated for share-based compensation plans for employees, will be presented deducting in equity as "Reserved shares for employee benefits under share-based payment scheme". Once the employee service condition is met, this reserved amount will be offsetting with "Other reserve - share-based payments" in equity.

The grant by the Company of common shares over its equity instruments to the employees of subsidiary undertakings in the Group is treated as a capital contribution. The fair value of employee services received, measured by reference to the grant date fair value of equity instrument, is recognised over the vesting period as an increase to investment in subsidiaries, in separate financial statements undertakings, with a corresponding credit to equity.

### 2.21 Provisions

#### 2.21.1 General provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events. It is probable that an outflow of resources will be required to settle the obligation and the amount has been reliably estimated.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation. The increase in the provision due to passage of time is recognised as interest expense.

Provisions exclude the provisions for employee benefits. The accounting policy for employee benefit obligations are mentioned in Note 2.19.

#### 2.21.2 Provision for minimum payments under rights to sell electricity agreements

The Group recognises provision for minimum payments under rights to sell electricity agreements at present value of minimum amount to be paid to the counterparty, according to the conditions specified in the right in power purchase agreements ("PPA"), on a monthly basis throughout the PPA's period. The Group's cost of capital rate is used as discount rate in determining the present value. Provision for minimum payments under rights to sell electricity agreements is recognised corresponding to "right in power purchase agreement" (in "intangible assets") and will be gradually decreased as the payment is made to the counterparty.

#### 2.21.3 Provision for decommissioning costs

The Group recognises provision for decommissioning costs, which are provided at the onset of completion of the project, for the estimate of the eventual costs that relate to the removal of the power plants. The recognised provision for decommissioning costs are calculated based on many assumptions such as abandonment time, future inflation rate and present value of cost estimation. Removal costs are calculated by discounting the estimated future cash outflows using market yield of government bonds that matches the terms and currency of the expected cash outflows. These costs are included as part of the power plants.



## **2 Accounting policies (Cont'd)**

### **2.22 Share capital**

Ordinary shares and non-redeemable preference shares with discretionary dividends are classified as equity. Other shares including mandatory redeemable preference shares are classified as liabilities.

Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

### **2.23 Subordinated perpetual bond**

Subordinated perpetual bond is recognised as equity when the bond will be redeemed at the Company's liquidation. The Company has the sole right to exercise early redemption as per terms and conditions specified and to defer interest payment without requirement for bondholder's consent and without time limitation. Accordingly, any interest payments are recognised similar as dividends and directly in equity when payment obligation arises. Interest payments are presented in the statement of cash flows at the same way as dividends paid to ordinary shareholders.

### **2.24 Revenue recognition**

Revenue include all revenues from ordinary business activities. All ancillary income in connection with the rendering of services in the course of the Group's ordinary activities is also presented as revenue.

Revenue are recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectibility of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfillment of the obligation to the customer.

Electricity sales under PPA are recognised on delivery of electricity and customer's acceptance, and measured based on actual electricity delivered and the price as set out in the PPA.

Steam sales with industrial users are recognised on delivery of steam, and measured based on actual steam delivered and the price as set out in the steam sales/purchase agreements.

The Group recognised service contracts with a continuous service provision as revenue on a straight-line basis over the contract term, regardless of the payment pattern.

Construction revenue under concession agreement is recognised over time using the percentage of completion method. The stage of completion is generally determined as the percentage of cost incurred up until the reporting date relative to total estimated cost. Where the stage of completion is not reliably measured, revenue is only recognised up to the amount of contract costs expensed, provided it is recoverable.

Interest income is recognised using the effective interest method.

Dividend income is recognised when the shareholder's right to receive payment is established.

## **2 Accounting policies (Cont'd)**

### **2.25 Dividends**

Dividends paid are recorded in financial statements in the period in which they are approved by the shareholders and the Board of Directors of the Company.

### **2.26 Segment reporting**

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Board of Directors that makes strategic decisions.

## **3 Financial risk management**

### **3.1 Financial risk factors**

The Group's activities expose it to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance.

Risk management is carried out by a central treasury department (Group treasury) under policies approved by the Board of Directors. The Group treasury identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units.

#### **3.1.1 Foreign exchange risk**

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to US dollars. Foreign exchange risk arises from future commercial transactions, recognised assets and liabilities and net investments in foreign operations.

The Group use forward contracts and cross-currency swap contracts to hedge their exposure to foreign currency risk in connection with measurement currency. The Group treasury is responsible for hedging the net position in each currency by using currency borrowings and external forward currency contracts.

#### **3.1.2 Interest rate risk**

Risk on interest rates is derived from fluctuation of market interest rate in the future which affect upon operation result and cash flows. The Group uses interest rate swaps to hedge future interest payments.

#### **3.1.3 Credit risk**

The Group has no significant concentrations of credit risk relating to its cash and investments. The Group places its cash and investments with high quality financial institutions. The Group's policy is designed to limit exposure with any one institution and to invest its excess cash in low risk investment accounts. The Group has not experienced any losses on such accounts. For trade receivables, the Group's sales are made to state-owned enterprises and industrial users which are in good financial status, under the terms and conditions of the long-term PPA and the long-term electricity and steam sales and purchase agreements.

### **3 Financial risk management (Cont'd)**

#### **3.1 Financial risk factors (Cont'd)**

##### **3.1.4 Liquidity risk**

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities, and the ability to close out market positions. Due to the dynamic nature of the underlying business, the Group treasury aims at maintaining flexibility in funding by keeping committed credit lines available.

#### **3.2 Accounting for derivative financial instruments and hedging activities**

The Group is party to derivative financial instruments, which mainly comprise foreign currency forward contracts and interest rate swap agreements. Such instruments are not recognised in the financial statements on inception.

Foreign currency forward contracts protect the Group from movements in exchange rates by establishing the rate at which a foreign currency asset will be realised or a foreign currency liability settled. Any increase or decrease in the amount required to realise the asset or settle the liability is offset by a corresponding movement in the value of the forward exchange contract. The gains and losses on the derivative instruments and the underlying financial asset or liability are therefore offset for present in notes to financial statements and are not recognised in the financial statements. The fee incurred in establishing each agreement is amortised over the contract period, if any.

Interest rate swap agreements protect the Group from movements in interest rates. Any differential to be paid or received on an interest rate swap agreement is recognised as a component of interest revenue or expense over the period of the agreement. Gains and losses on early termination of interest rate swaps or on repayment of the borrowing are taken to profit or loss.

Disclosures about derivative financial instruments to which the Group is a party are provided in Note 35.

#### **3.3 Fair value estimation**

The Group estimates fair value for available for investment property, long-term borrowings from financial institutions and financial instruments. The different levels of fair value estimation have been defined as follows:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3: Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The Group discloses the fair value measurement of above items in related notes to financial statements.

## 4 Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

### 4.1 Critical accounting estimates and assumptions

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below.

#### (a) Power plant, equipment and intangible assets

Management determines the estimated useful lives and residual values for the power plant, equipment and intangible assets mainly based on its technical ability and economic useful lives. The management will revise the depreciation charge where useful lives and residual values are significantly different to previously estimated, or it will write-off or write-down technically obsolete or assets that have been abandoned or sold.

#### (b) Retirement benefits and long service awards

The present value of the employee retirement benefits and long service awards obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions, including the discount rate. Any changes in these assumptions will have an impact on the carrying amount of employee retirement benefits and long service awards obligations.

The Group determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the employee retirement benefits and long service awards obligations. In determining the appropriate discount rate, the Group considers the market yield of government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related employee retirement benefits and long service awards obligations.

Additional information of other key assumptions for retirement benefits and long service awards obligations other is disclosed in Note 24.

#### (c) Goodwill impairment

The recoverable amounts of cash-generating units have been determined based on fair value less cost to sell calculations. The calculations use cash flow projections based on financial budget covering the remaining period of power purchase agreement. Details of key assumptions used are disclosed in Note 17.

#### (d) Fair value estimation on business combination

The Group estimates fair value of net assets acquired under business combination by engaging professional valuer, applying appropriate valuation method based on financial assumptions to derive fair value of net assets acquired. These calculations require the use of management judgment on the inputs and assumptions in the valuation model.

### 4.2 Critical judgements in applying the entity's accounting policies

#### (a) Joint arrangements

The Company holds 48% to 70% of the voting rights of its joint arrangements as disclosed in Note 14 (b). The Group has joint control over this arrangement as under the contractual agreements, unanimous consent is required from all parties to the agreements for all relevant activities.

The Group's joint arrangement is structured as a limited company and provides the Group and the parties to the agreements with rights to the net assets of the limited company under the arrangements. Therefore, this arrangement is classified as a joint venture.

## 5 Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares, or sell assets to reduce debt.

## 6 Segment information

The Group has two reportable segments report which are comprised of electricity generating and other businesses.

- (1) Electricity generating: This segment is the generating and distribution of electricity for the government sectors and industrial users both in Thailand and overseas.
- (2) Other businesses: This segment is the business of investment holding and maintenance and operating services for power plants.

The Board of Directors primarily uses a measure of segment profit before tax, which is derived on a basis consistent with the measurement of profit in the consolidated financial statements.

|                                                   | Consolidated financial statements   |                               |                    |
|---------------------------------------------------|-------------------------------------|-------------------------------|--------------------|
|                                                   | Electricity generating<br>Baht '000 | Other businesses<br>Baht '000 | Total<br>Baht '000 |
| <b>For the year ended 31 December 2019</b>        |                                     |                               |                    |
| Segment revenues                                  | 45,634,974                          | 1,003,436                     | 46,638,410         |
| <u>Less</u> Intersegment revenues                 | (1,507,085)                         | (999,436)                     | (2,506,521)        |
| Revenue from external customers                   | 44,127,889                          | 4,000                         | 44,131,889         |
| Operating profit (loss)                           | 7,835,494                           | (1,278,856)                   | 6,556,638          |
| Interest income                                   | 122,100                             | 62,301                        | 184,401            |
| Finance costs                                     | (1,595,139)                         | (1,035,030)                   | (2,630,169)        |
| Share of profit from associate and joint ventures | -                                   | 101,330                       | 101,330            |
| Profit (loss) before income tax                   | 6,362,455                           | (2,150,255)                   | 4,212,200          |
| Income tax                                        | (241,980)                           | 6,809                         | (235,171)          |
| Net profit (loss)                                 | 6,120,475                           | (2,143,446)                   | 3,977,029          |
| Depreciation and amortisation                     | 4,592,140                           | 67,800                        | 4,659,940          |
| Segment fixed assets                              | 71,968,985                          | 162,638                       | 72,131,623         |
| Investment in associate and joint ventures        | -                                   | 1,530,543                     | 1,530,543          |
| Unallocated assets                                |                                     |                               | 48,030,639         |
| Consolidated total assets                         |                                     |                               | 121,692,805        |



**6 Segment information (Cont'd)**

| For the year ended 31 December 2018               | Consolidated financial statements   |                               |                    |
|---------------------------------------------------|-------------------------------------|-------------------------------|--------------------|
|                                                   | Electricity generating<br>Baht '000 | Other businesses<br>Baht '000 | Total<br>Baht '000 |
| Segment revenues                                  | 37,752,492                          | 1,337,557                     | 39,090,049         |
| <u>Less</u> Intersegment revenues                 | <u>(1,176,016)</u>                  | <u>(1,328,936)</u>            | <u>(2,504,952)</u> |
| Revenue from external customers                   | 36,576,476                          | 8,621                         | 36,585,097         |
| Operating profit (loss)                           | 6,446,726                           | (686,741)                     | 5,759,985          |
| Interest income                                   | 100,742                             | 37,790                        | 138,532            |
| Finance costs                                     | (2,194,477)                         | (733,084)                     | (2,927,561)        |
| Share of profit from associate and joint ventures | -                                   | 182,030                       | 182,030            |
| Profit (loss) before income tax                   | 4,352,991                           | (1,200,005)                   | 3,152,986          |
| Income tax                                        | (228,608)                           | 51,401                        | (177,207)          |
| Net profit (loss)                                 | 4,124,383                           | (1,148,604)                   | 2,975,779          |
| Depreciation and amortisation                     | 3,294,934                           | 46,075                        | 3,341,009          |
| Segment fixed assets                              | 62,221,736                          | 128,644                       | 62,350,380         |
| Investment in associate and joint ventures        | -                                   | 1,802,222                     | 1,802,222          |
| Unallocated assets                                |                                     |                               | 36,483,438         |
| Consolidated total assets                         |                                     |                               | 100,636,040        |

Timing of revenue recognition for the year ended 31 December 2019 are as follows:

| Timing of revenue recognition: | Consolidated financial statements   |                               |                    |
|--------------------------------|-------------------------------------|-------------------------------|--------------------|
|                                | Electricity generating<br>Baht '000 | Other businesses<br>Baht '000 | Total<br>Baht '000 |
| At a point in time             | 43,765,663                          | -                             | 43,765,663         |
| Over time                      | 362,226                             | 4,000                         | 366,226            |
| Total                          | 44,127,889                          | 4,000                         | 44,131,889         |

| Timing of revenue recognition: | Separate financial statements       |                               |                    |
|--------------------------------|-------------------------------------|-------------------------------|--------------------|
|                                | Electricity generating<br>Baht '000 | Other businesses<br>Baht '000 | Total<br>Baht '000 |
| At a point in time             | 117,234                             | -                             | 117,234            |
| Over time                      | -                                   | 261,238                       | 261,238            |
| Total                          | 117,234                             | 261,238                       | 378,472            |

Revenue segment information for the year ended 31 December 2018 had been prepared in accordance with Thai Accounting Standard (TAS) no.18. Therefore, the disclosure of timing of revenue recognition is not required.

**Geographical segments**

In presenting geographical information, revenue is based on the geographical location of customers and assets are based on the geographical location of the assets.

## 6 Segment information (Cont'd)

### Geographical information

|                                 | Total revenue     |                   | Total assets       |                    |
|---------------------------------|-------------------|-------------------|--------------------|--------------------|
|                                 | 2019<br>Baht '000 | 2018<br>Baht '000 | 2019<br>Baht '000  | 2018<br>Baht '000  |
| Thailand                        | 40,642,153        | 34,566,221        | 96,889,314         | 88,449,280         |
| Lao PDR                         | 628,604           | 835,717           | 5,135,085          | 4,379,671          |
| Vietnam                         | 2,861,132         | 1,183,159         | 19,001,628         | 7,806,920          |
| Cambodia                        | -                 | -                 | 182,688            | 169                |
| The Republic of Korea           | -                 | -                 | 374,354            | -                  |
| The Republic of the Philippines | -                 | -                 | 109,736            | -                  |
|                                 | <u>44,131,889</u> | <u>36,585,097</u> | <u>121,692,805</u> | <u>100,636,040</u> |

### Major customer

One customer of the electricity generating has contributed revenue of Baht 28,726.45 million (2018: Baht 23,663.98 million).

## 7 Cash and cash equivalents

|                                       | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|---------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                       | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Cash on hand                          | 2,570                                | 2,072             | 10                               | 10                |
| Cash deposits at banks                | 17,769,773                           | 12,122,787        | 7,190,459                        | 3,724,691         |
| Fixed deposits due within<br>3 months | 3,388,827                            | 434,867           | 1,514,796                        | 11,427            |
|                                       | <u>21,161,170</u>                    | <u>12,559,726</u> | <u>8,705,265</u>                 | <u>3,736,128</u>  |

The interest rates on deposits at banks were ranging from 0.04% to 5.20% per annum (2018: 0.10% to 4.60% per annum).

## 8 Restricted deposits

|                                                                                 | Consolidated<br>financial statements |                   |
|---------------------------------------------------------------------------------|--------------------------------------|-------------------|
|                                                                                 | 2019<br>Baht '000                    | 2018<br>Baht '000 |
| <b>Current</b>                                                                  |                                      |                   |
| Benefits from the electricity generation under<br>the revenue sharing agreement | 364,798                              | 515,777           |
| Bank deposits                                                                   | 27,078                               | 19,076            |
|                                                                                 | <u>391,876</u>                       | <u>534,853</u>    |
| <b>Non-current</b>                                                              |                                      |                   |
| Cash reserved for Amata B.Grimm Power Power Plant<br>Infrastructure Fund's fees | 129,080                              | 220,181           |
|                                                                                 | <u>520,956</u>                       | <u>755,034</u>    |

**8 Restricted deposits (Cont'd)**

The subsidiary has restricted deposits in accordance with the revenue sharing agreement as a security for the repayment of all current and future liabilities to Amata B.Grimm Power Power Plant Infrastructure Fund.

As at 31 December 2019, bank deposits of Baht 27.08 million (2018: Baht 19.08 million) were pledged as collateral against bank guarantees. The bank deposits bear interest at the rates ranging from 0.22% to 4.00% per annum (2018: 0.37% to 4.00% per annum).

**9 Trade and other receivables, net**

|                                                       | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                       | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Trade receivables                                     |                                      |                   |                                  |                   |
| - third parties                                       | 3,245,806                            | 2,912,048         | 1,693                            | -                 |
| - related parties (Note 37.3)                         | 781                                  | 831               | 29,622                           | 22,634            |
| Total trade receivables                               | 3,246,587                            | 2,912,879         | 31,315                           | 22,634            |
| Accrued income                                        | 3,418,753                            | 2,792,982         | 19,997                           | 1,859             |
| Accrued interest income                               |                                      |                   |                                  |                   |
| - third parties                                       | 26,706                               | 3,876             | 1,743                            | -                 |
| - related parties (Note 37.3)                         | 1,984                                | 292               | 1,113,360                        | 525,084           |
| Prepaid insurance                                     | 113,201                              | 54,154            | 1,099                            | 973               |
| Prepaid expenses                                      | 147,164                              | 80,548            | 22,678                           | 7,910             |
| Deferred employee benefits<br>expense                 | 16,318                               | 17,006            | 5,063                            | 5,227             |
| Advances for projects development                     | 26,235                               | 33,552            | 800,417                          | 457,626           |
| Advances to employees                                 | 5,898                                | 2,217             | 3,618                            | 133               |
| Dividends receivable - related<br>parties (Note 37.3) | -                                    | -                 | 441,002                          | 703,358           |
| Other receivables, net                                |                                      |                   |                                  |                   |
| - third parties                                       | 30,622                               | 1,278             | 7                                | -                 |
| - related parties (Note 37.3)                         | 32,525                               | 107,010           | 233,636                          | 236,108           |
| Others, net                                           | 90,116                               | 115,729           | 2,129                            | 1,130             |
| Total trade and other receivables, net                | 7,156,109                            | 6,121,523         | 2,676,064                        | 1,962,042         |

**Advances for projects development**

Advances for projects development are the advances that the Company or subsidiaries paid for development of future projects of the Group. The advances will be charged to project companies once those companies are incorporated. Advances for project development were presented under "trade and other receivables" in the separate financial statements but being presented under "non-current assets" in the consolidated financial statements as they will be transferred to non-current assets of the Group in the future.

## 9 Trade and other receivables, net (Cont'd)

Outstanding trade receivables from third parties as at 31 December can be analysed as follows:

|                          | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|--------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                          | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Not yet due              | 3,233,995                            | 2,849,905         | 1,693                            | -                 |
| Overdue - up to 3 months | 11,753                               | 34,800            | -                                | -                 |
| - 3 - 6 months           | -                                    | 27,281            | -                                | -                 |
| - 6 - 12 months          | -                                    | -                 | -                                | -                 |
| - over 12 months         | 58                                   | 62                | -                                | -                 |
|                          | <u>3,245,806</u>                     | <u>2,912,048</u>  | <u>1,693</u>                     | <u>-</u>          |

Outstanding trade receivables from related parties as at 31 December can be analysed as follows:

|                          | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|--------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                          | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Not yet due              | 781                                  | 831               | 17,022                           | 13,607            |
| Overdue - up to 3 months | -                                    | -                 | 3,424                            | 3,879             |
| - 3 - 6 months           | -                                    | -                 | 1,926                            | 3,398             |
| - 6 - 12 months          | -                                    | -                 | 880                              | 1,750             |
| - over 12 months         | -                                    | -                 | 6,370                            | -                 |
|                          | <u>781</u>                           | <u>831</u>        | <u>29,622</u>                    | <u>22,634</u>     |

## 10 Short-term loans to third parties

During 2019, the Group has short-term loans to third parties as follows:

- The Company provided loan to a third party for project development in the Republic of Korea amounting to USD 3.50 million (equivalent to Baht 109.09 million). The loan is secured by common shares of a subsidiary of the borrower, bears interest rate at fixed rate per annum and due for repayment within one year.
- The Company transferred advance for project development in the Republic of the Philippines to short-term loan amounting to USD 0.80 million (equivalent to Baht 19.81 million). The loan is unsecured, bears interest rate at MLR minus certain margin per annum and due for repayment within one year.
- A subsidiary provided loan to a third party for project development in the Republic of Korea amounting to USD 12.28 million (equivalent to Baht 369.66 million). The loan is unsecured, bears interest rate at fixed rate per annum and due for repayment within one year.

The carrying amounts of short-term loans to third parties approximate their fair values as the effect of discounted cash flows is insignificant.

**11 Spare parts and supplies, net**

|                                       | <b>Consolidated<br/>financial statements</b> |                           |
|---------------------------------------|----------------------------------------------|---------------------------|
|                                       | <b>2019<br/>Baht '000</b>                    | <b>2018<br/>Baht '000</b> |
| Fuel                                  | 657                                          | 926                       |
| Spare parts and supplies              | 1,189,312                                    | 1,032,681                 |
| Spare parts and supplies in transit   | 1,365                                        | 30,355                    |
|                                       | 1,191,334                                    | 1,063,962                 |
| <u>Less</u> Allowance for slow-moving | (222,680)                                    | (84,877)                  |
|                                       | <u>968,654</u>                               | <u>979,085</u>            |

**12 Other current assets**

|                                     | <b>Consolidated<br/>financial statements</b> |                           | <b>Separate<br/>financial statements</b> |                           |
|-------------------------------------|----------------------------------------------|---------------------------|------------------------------------------|---------------------------|
|                                     | <b>2019<br/>Baht '000</b>                    | <b>2018<br/>Baht '000</b> | <b>2019<br/>Baht '000</b>                | <b>2018<br/>Baht '000</b> |
| Withholding tax deducted at sources | 48,356                                       | 57,266                    | 12,830                                   | 20,660                    |
| Refundable value added tax          | 853,401                                      | 1,384,822                 | 30,618                                   | 14,646                    |
| Undue input value added tax         | 16,516                                       | 12,574                    | 1,280                                    | 3,302                     |
| Others                              | 1,990                                        | 2,513                     | -                                        | -                         |
|                                     | <u>920,263</u>                               | <u>1,457,175</u>          | <u>44,728</u>                            | <u>38,608</u>             |



### 13 Investments in subsidiaries

The Group has the following subsidiaries at 31 December:

| Name of entity                                                                                | Place of business/<br>Country of incorporation | Nature of business                          | Proportion of equity interests held by parent (%) |       | Effective proportion of equity interests held by the Group (%) |       | Effective proportion of equity interests held by non-controlling interests (%) |       |
|-----------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------|---------------------------------------------------|-------|----------------------------------------------------------------|-------|--------------------------------------------------------------------------------|-------|
|                                                                                               |                                                |                                             | 2019                                              | 2018  | 2019                                                           | 2018  | 2019                                                                           | 2018  |
| Amata B. Grimm Power Limited                                                                  | Thailand                                       | Investing in electric power business        | 51.20                                             | 51.20 | 51.20                                                          | 51.20 | 48.80                                                                          | 48.80 |
| with subsidiaries as follows:                                                                 |                                                |                                             |                                                   |       |                                                                |       |                                                                                |       |
| - Amata B. Grimm Power Holding Limited                                                        | Thailand                                       | Investing in electric power business        | -                                                 | -     | 51.19                                                          | 51.19 | 48.81                                                                          | 48.81 |
| - Amata B. Grimm Power 1 Limited                                                              | Thailand                                       | Electricity generating                      | -                                                 | -     | 50.69                                                          | 50.69 | 49.31                                                                          | 49.31 |
| - Amata B. Grimm Power 2 Limited                                                              | Thailand                                       | Electricity generating                      | -                                                 | -     | 51.20                                                          | 51.20 | 48.80                                                                          | 48.80 |
| - Amata B. Grimm Power 3 Limited                                                              | Thailand                                       | Electricity generating                      | 30.00                                             | 30.00 | 60.72                                                          | 60.72 | 39.28                                                                          | 39.28 |
| - Amata B. Grimm Power 4 Limited                                                              | Thailand                                       | Electricity generating                      | 29.88                                             | 29.88 | 55.48                                                          | 55.48 | 44.52                                                                          | 44.52 |
| - Amata B. Grimm Power 5 Limited                                                              | Thailand                                       | Electricity generating                      | 29.88                                             | 29.88 | 55.48                                                          | 55.48 | 44.52                                                                          | 44.52 |
| - Amata B. Grimm Power (Rayong) 1 Limited                                                     | Thailand                                       | Electricity generating                      | 30.00                                             | 30.00 | 61.74                                                          | 61.74 | 38.26                                                                          | 38.26 |
| - Amata B. Grimm Power (Rayong) 2 Limited                                                     | Thailand                                       | Electricity generating                      | 30.00                                             | 30.00 | 61.74                                                          | 61.74 | 38.26                                                                          | 38.26 |
| - Amata B. Grimm Power (Rayong) 3 Limited                                                     | Thailand                                       | Electricity generating                      | 29.88                                             | 29.88 | 55.48                                                          | 55.48 | 44.52                                                                          | 44.52 |
| - Amata B. Grimm Power (Rayong) 4 Limited                                                     | Thailand                                       | Electricity generating                      | 29.88                                             | 29.88 | 55.48                                                          | 55.48 | 44.52                                                                          | 44.52 |
| - Amata B. Grimm Power (Rayong) 5 Limited                                                     | Thailand                                       | Electricity generating                      | 29.88                                             | 29.88 | 55.48                                                          | 55.48 | 44.52                                                                          | 44.52 |
| - Amata Power (Bien Hoa) Limited<br>(Amata B. Grimm Power Limited holds 60% equity interests) | Vietnam                                        | Electricity generating                      | -                                                 | -     | 30.72                                                          | 30.72 | 69.28                                                                          | 69.28 |
| - Amata Power (Rayong) Limited                                                                | Thailand                                       | Electricity generating (dormant)            | -                                                 | -     | 51.19                                                          | 51.19 | 48.81                                                                          | 48.81 |
| - Amata B. Grimm Power Service Limited                                                        | Thailand                                       | Operation and maintenance service (dormant) | -                                                 | -     | 51.19                                                          | 51.19 | 48.81                                                                          | 48.81 |
| - Amata B. Grimm Power SPV 1 Limited                                                          | Thailand                                       | Debentures Issuing                          | -                                                 | -     | 61.40                                                          | 61.40 | 38.60                                                                          | 38.60 |

## 13 Investments in subsidiaries (Cont'd)

| Name of entity                                       | Place of business/<br>Country of<br>incorporation | Nature of business                                                          | Proportion of equity<br>interests held by parent<br>(%) |        | Effective proportion of<br>equity interests held<br>by the Group<br>(%) |        | Effective proportion of<br>equity interests held by<br>non-controlling interests<br>(%) |       |
|------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------|--------|-------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------|-------|
|                                                      |                                                   |                                                                             | 2019                                                    | 2018   | 2019                                                                    | 2018   | 2019                                                                                    | 2018  |
| B.Grimm Power Holding (Laem Chabang)<br>Limited      | Thailand                                          | Investing in electric power business                                        | 99.97                                                   | 99.97  | 99.97                                                                   | 99.97  | 0.03                                                                                    | 0.03  |
| with subsidiaries as follows:                        |                                                   |                                                                             |                                                         |        |                                                                         |        |                                                                                         |       |
| - B.Grimm Power (Laem Chabang) 1 Limited             | Thailand                                          | Electricity generating                                                      | -                                                       | -      | 99.96                                                                   | 99.96  | 0.04                                                                                    | 0.04  |
| - B.Grimm Power (Laem Chabang) 2 Limited             | Thailand                                          | Electricity generating                                                      | -                                                       | -      | 99.96                                                                   | 99.96  | 0.04                                                                                    | 0.04  |
| - B.Grimm Power Service (Laem Chabang)<br>Limited    | Thailand                                          | Operation and maintenance service<br>(dormant)                              | -                                                       | -      | 99.96                                                                   | 99.96  | 0.04                                                                                    | 0.04  |
| with a subsidiary as follows:                        |                                                   |                                                                             |                                                         |        |                                                                         |        |                                                                                         |       |
| - Glow SPP1 Company Limited (Note 36)                | Thailand                                          | Electricity generating                                                      | -                                                       | -      | 74.97                                                                   | -      | 25.03                                                                                   | -     |
| B.Grimm Power (Lao) Company Limited                  | Lao PDR                                           | Investing in electric power business                                        | 100.00                                                  | 100.00 | 100.00                                                                  | 100.00 | -                                                                                       | -     |
| with subsidiaries as follows:                        |                                                   |                                                                             |                                                         |        |                                                                         |        |                                                                                         |       |
| - Xenamnoy and Xekatam Hydropower<br>Company Limited | Lao PDR                                           | Electricity generating from hydropower                                      | -                                                       | -      | 70.00                                                                   | 70.00  | 30.00                                                                                   | 30.00 |
| - Nam Che 1 Hydropower Company Limited               | Lao PDR                                           | Electricity generating from hydropower<br>(commenced operation in 2019)     | -                                                       | -      | 72.00                                                                   | 72.00  | 28.00                                                                                   | 28.00 |
| - Nam Khao Hydropower Company Limited                | Lao PDR                                           | Electricity generating from hydropower<br>(has not yet commenced operation) | -                                                       | -      | 72.00                                                                   | 72.00  | 28.00                                                                                   | 28.00 |
| - Tadsakhoi Power Company Limited                    | Lao PDR                                           | Electricity generating from hydropower<br>(has not yet commenced operation) | -                                                       | -      | 72.00                                                                   | -      | 28.00                                                                                   | -     |
| B.Grimm BIP Power 1 Limited                          | Thailand                                          | Electricity generating                                                      | 74.00                                                   | 74.00  | 74.00                                                                   | 74.00  | 26.00                                                                                   | 26.00 |
| B.Grimm BIP Power 2 Limited                          | Thailand                                          | Electricity generating                                                      | 74.00                                                   | 74.00  | 74.00                                                                   | 74.00  | 26.00                                                                                   | 26.00 |
| B.Grimm Power (WHA) 1 Limited                        | Thailand                                          | Electricity generating                                                      | 74.99                                                   | 74.99  | 74.99                                                                   | 74.99  | 25.01                                                                                   | 25.01 |
| B.Grimm Power (Bowin) 2 Limited                      | Thailand                                          | Electricity generating<br>(has not yet commenced operation)                 | 100.00                                                  | 100.00 | 100.00                                                                  | 100.00 | -                                                                                       | -     |
| B.Grimm Power (Ratchaburi) 1 Limited                 | Thailand                                          | Electricity generating<br>(has not yet commenced operation)                 | 100.00                                                  | 100.00 | 100.00                                                                  | 100.00 | -                                                                                       | -     |
| B.Grimm Power (Ratchaburi) 2 Limited                 | Thailand                                          | Electricity generating<br>(has not yet commenced operation)                 | 100.00                                                  | 100.00 | 100.00                                                                  | 100.00 | -                                                                                       | -     |

### 13 Investments in subsidiaries (Cont'd)

| Name of entity                                                                                                                                                                                  | Place of business/<br>Country of incorporation | Nature of business                                                        | Proportion of equity interests held by parent (%) |       | Effective proportion of equity interests held by the Group (%) |       | Effective proportion of equity interests held by non-controlling interests (%) |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------|-------|----------------------------------------------------------------|-------|--------------------------------------------------------------------------------|-------|
|                                                                                                                                                                                                 |                                                |                                                                           | 2019                                              | 2018  | 2019                                                           | 2018  | 2019                                                                           | 2018  |
| B.Grimm Renewable Power 1 Limited<br>with subsidiaries as follows:<br>- Viet Thai Solar Joint Stock Company<br>with a subsidiary as follows:<br>- Dau Tieng Tay Ninh Energy Joint Stock Company | Thailand                                       | Investing in electric power business                                      | 91.31                                             | 91.31 | 99.97                                                          | 99.97 | 0.03                                                                           | 0.03  |
| B.Grimm Renewable Power 2 Limited<br>with a subsidiary as follows:<br>- Phu Yen TTP Joint Stock Company                                                                                         | Vietnam                                        | Investing in electric power business                                      | -                                                 | -     | 99.97                                                          | 99.97 | 0.03                                                                           | 0.03  |
| B.Grimm Renewable Power 3<br>(formerly B.Grimm Renewable Power 3 Limited)                                                                                                                       | Vietnam                                        | Electricity generating from solar power (commenced operation in 2019)     | -                                                 | -     | 54.98                                                          | 54.98 | 45.02                                                                          | 45.02 |
| B.Grimm Renewable Power 4<br>(formerly B.Grimm Renewable Power 4 Limited)                                                                                                                       | Thailand                                       | Investing in electric power business                                      | 91.31                                             | 91.31 | 99.97                                                          | 99.97 | 0.03                                                                           | 0.03  |
| B.Grimm Power Smart Solution Limited<br>(formerly B.Grimm Renewable Power 3 Limited)                                                                                                            | Vietnam                                        | Electricity generating from solar power (commenced operation in 2019)     | -                                                 | -     | 79.98                                                          | 79.98 | 20.02                                                                          | 20.02 |
| B.Grimm LNG Limited<br>(formerly B.Grimm Renewable Power 4 Limited)                                                                                                                             | Thailand                                       | Solar power plant project management (has not yet commenced operation)    | 91.31                                             | 91.31 | 99.97                                                          | 99.97 | 0.03                                                                           | 0.03  |
| Thai Wind Power (Mukdahan) Limited                                                                                                                                                              | Thailand                                       | Natural gas generating and distributing (has not yet commenced operation) | 91.31                                             | 91.31 | 99.97                                                          | 99.97 | 0.03                                                                           | 0.03  |
|                                                                                                                                                                                                 | Thailand                                       | Investing in electric power business                                      | 70.00                                             | 70.00 | 70.00                                                          | 70.00 | 30.00                                                                          | 30.00 |

## 13 Investments in subsidiaries (Cont'd)

| Name of entity                                 | Place of business/<br>Country of incorporation | Nature of business                                                               | Proportion of equity interests held by parent (%) |        | Effective proportion of equity interests held by the Group (%) |        | Effective proportion of equity interests held by non-controlling interests (%) |       |
|------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------|--------|----------------------------------------------------------------|--------|--------------------------------------------------------------------------------|-------|
|                                                |                                                |                                                                                  | 2019                                              | 2018   | 2019                                                           | 2018   | 2019                                                                           | 2018  |
| B.Grimm Solar Power 1 Limited                  | Thailand                                       | Investing in electric power business and electricity generating from solar power | 100.00                                            | 100.00 | 100.00                                                         | 100.00 | -                                                                              | -     |
| with subsidiaries as follows:                  |                                                |                                                                                  |                                                   |        |                                                                |        |                                                                                |       |
| - Sisophon Clean Power Co., Ltd.               | Cambodia                                       | Land development for power plant project (has not yet commenced operation)       | -                                                 | -      | 100.00                                                         | -      | -                                                                              | -     |
| - Ray Power Supply Co., Ltd.                   | Cambodia                                       | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 100.00                                                         | -      | -                                                                              | -     |
| - B.Grimm Solar Power (Bamnet Narong) Limited  | Thailand                                       | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 100.00                                                         | 100.00 | -                                                                              | -     |
| - B.Grimm Solar Power (Cha Am) Limited         | Thailand                                       | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 100.00                                                         | 100.00 | -                                                                              | -     |
| - B.Grimm Solar Power (Chai Badan) Limited     | Thailand                                       | Electricity generating from solar power                                          | -                                                 | -      | 100.00                                                         | 100.00 | -                                                                              | -     |
| - B.Grimm Solar Power (Chon Daen) Limited      | Thailand                                       | Electricity generating from solar power                                          | -                                                 | -      | 100.00                                                         | 100.00 | -                                                                              | -     |
| - B.Grimm Solar Power Rooftop Limited          | Thailand                                       | Electricity generating from solar rooftop (commenced operation in 2019)          | -                                                 | -      | 99.99                                                          | 99.99  | 0.01                                                                           | 0.01  |
| with a subsidiary as follows:                  |                                                |                                                                                  |                                                   |        |                                                                |        |                                                                                |       |
| - B.Grimm Solar Power, Inc.                    | The Republic of the Philippines                | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 99.99                                                          | -      | 0.01                                                                           | -     |
| - B.Grimm Solar Power (Sap Yai) Limited        | Thailand                                       | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 51.00                                                          | 51.00  | 49.00                                                                          | 49.00 |
| - B.Grimm Solar Power (Si Boon Rueang) Limited | Thailand                                       | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 100.00                                                         | 100.00 | -                                                                              | -     |
| - B.Grimm Solar Power (Wanon Niwat) Limited    | Thailand                                       | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 100.00                                                         | 100.00 | -                                                                              | -     |
| - B.Grimm Solar Power (Yang Talat) Limited     | Thailand                                       | Electricity generating from solar power (has not yet commenced operation)        | -                                                 | -      | 100.00                                                         | 100.00 | -                                                                              | -     |

### 13 Investments in subsidiaries (Cont'd)

| Name of entity                         | Place of business/<br>Country of incorporation | Nature of business                                                | Proportion of equity interests held by parent (%) |        | Effective proportion of equity interests held by the Group (%) |        | Effective proportion of equity interests held by non-controlling interests (%) |      |
|----------------------------------------|------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------|--------|----------------------------------------------------------------|--------|--------------------------------------------------------------------------------|------|
|                                        |                                                |                                                                   | 2019                                              | 2018   | 2019                                                           | 2018   | 2019                                                                           | 2018 |
| B.Grimm Solar Power (Sakaeo) 1 Limited | Thailand                                       | Electricity generating from solar power                           | 99.99                                             | 99.99  | 99.99                                                          | 99.99  | 0.01                                                                           | 0.01 |
| B.Grimm Power Service Limited          | Thailand                                       | Operation and maintenance service                                 | 100.00                                            | 100.00 | 100.00                                                         | 100.00 | -                                                                              | -    |
| Bothong Wind Farm Limited              | Thailand                                       | Electricity generating from wind power (construction in progress) | 74.00                                             | 74.00  | 92.20                                                          | 92.20  | 7.80                                                                           | 7.80 |
| B.Grimm Power (Chonburi) 1 Limited     | Thailand                                       | Electricity generating (has not yet commenced operation)          | 99.97                                             | 99.97  | 99.97                                                          | 99.97  | 0.03                                                                           | 0.03 |
| B.Grimm Power (Chonburi) 2 Limited     | Thailand                                       | Electricity generating (has not yet commenced operation)          | 99.97                                             | 99.97  | 99.97                                                          | 99.97  | 0.03                                                                           | 0.03 |
| B.Grimm Power (Cambodia) Co., Ltd.     | Cambodia                                       | Investing in electric power business                              | 100.00                                            | 100.00 | 100.00                                                         | 100.00 | -                                                                              | -    |
| B.Grimm Yanhee Solar Power Limited     | Thailand                                       | Electricity generating from solar power                           | 99.99                                             | 99.99  | 99.99                                                          | 99.99  | 0.01                                                                           | 0.01 |
| B.Grimm Power Korea Limited            | The Republic of Korea                          | Investing in electric power business                              | 100.00                                            | -      | 100.00                                                         | -      | -                                                                              | -    |
| B.Grimm Power (Malaysia) Sdn. Bhd.     | Malaysia                                       | Investing in electric power business                              | 100.00                                            | -      | 100.00                                                         | -      | -                                                                              | -    |



**13 Investments in subsidiaries (Cont'd)**

As at 31 December 2019, under the terms and conditions of long-term credit facility agreements of subsidiaries, the Group pledged all ordinary shares of 9 subsidiaries as collateral for the long-term borrowings (2018: 11 subsidiaries).

The total non-controlling interests as at 31 December 2019 is Baht 10,532.86 million (2018: Baht 8,485.67 million) of which Baht 6,312.13 million belongs to Amata B.Grimm Power Limited (2018: Baht 5,679.14 million). The non-controlling interests in respect of the others is not material.

**Summarised financial information of a subsidiary with material non-controlling interests**

Summarised statement of financial position as at 31 December:

|                                     | <b>Amata B.Grimm Power Limited<br/>(consolidated financial statements)</b> |                           |
|-------------------------------------|----------------------------------------------------------------------------|---------------------------|
|                                     | <b>2019<br/>Baht '000</b>                                                  | <b>2018<br/>Baht '000</b> |
| <b>Current:</b>                     |                                                                            |                           |
| Assets                              | 13,570,117                                                                 | 12,817,364                |
| Liabilities                         | (6,255,182)                                                                | (5,689,224)               |
| <b>Total net current assets</b>     | <b>7,314,935</b>                                                           | <b>7,128,140</b>          |
| <b>Non-current:</b>                 |                                                                            |                           |
| Assets                              | 37,868,484                                                                 | 40,277,662                |
| Liabilities                         | (30,740,970)                                                               | (34,317,440)              |
| <b>Total net non-current assets</b> | <b>7,127,514</b>                                                           | <b>5,960,222</b>          |
| <b>Net assets</b>                   | <b>14,442,449</b>                                                          | <b>13,088,362</b>         |
| <b>Non-controlling interests</b>    | <b>6,252,674</b>                                                           | <b>5,853,282</b>          |

Summarised statement of comprehensive income for the year ended 31 December:

|                                                  | <b>Amata B.Grimm Power Limited<br/>(consolidated financial statements)</b> |                           |
|--------------------------------------------------|----------------------------------------------------------------------------|---------------------------|
|                                                  | <b>2019<br/>Baht '000</b>                                                  | <b>2018<br/>Baht '000</b> |
| Revenue                                          | 27,872,451                                                                 | 24,814,859                |
| Other income                                     | 117,004                                                                    | 92,524                    |
| Profit before income tax                         | 2,729,633                                                                  | 2,459,841                 |
| Income tax                                       | (139,401)                                                                  | (177,252)                 |
| Post-tax profit from continuing operations       | 2,590,232                                                                  | 2,282,589                 |
| Other comprehensive expense                      | (76,625)                                                                   | (16,446)                  |
| <b>Total comprehensive income</b>                | <b>2,513,607</b>                                                           | <b>2,266,143</b>          |
| Profit attributable to non-controlling interests | 1,089,010                                                                  | 809,963                   |
| Dividends paid to non-controlling interests      | 676,313                                                                    | 719,674                   |

### 13 Investments in subsidiaries (Cont'd)

#### Summarised financial information of a subsidiary with material non-controlling interests (Cont'd)

Summarised statement of cash flows for the year ended 31 December:

|                                                             | <b>Amata B.Grimm Power Limited<br/>(consolidated financial statements)</b> |                           |
|-------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------|
|                                                             | <b>2019<br/>Baht '000</b>                                                  | <b>2018<br/>Baht '000</b> |
| Cash generated from operations                              | 6,035,702                                                                  | 5,566,895                 |
| Interest paid                                               | (1,834,375)                                                                | (1,801,264)               |
| Income tax paid                                             | (176,730)                                                                  | (162,722)                 |
| Net cash generated from operating activities                | 4,024,597                                                                  | 3,602,909                 |
| Net cash generated from (used in) investing activities      | 358,508                                                                    | (3,802,515)               |
| Net cash used in financing activities                       | (2,676,153)                                                                | (1,708,237)               |
| <b>Net increase (decrease) in cash and cash equivalents</b> | <b>1,706,952</b>                                                           | <b>(1,907,843)</b>        |
| Cash and cash equivalents at beginning of the year          | 5,517,413                                                                  | 7,431,978                 |
| Loss on exchange differences                                | (29,040)                                                                   | (6,722)                   |
| <b>Cash and cash equivalents at end of the year</b>         | <b>7,195,325</b>                                                           | <b>5,517,413</b>          |

The amounts disclosed are before inter-company eliminations.

#### Movements of investments

The movements of investments in subsidiaries during the year ended 31 December are as follows:

|                                                                                 | <b>Separate<br/>financial statements</b> |                           |
|---------------------------------------------------------------------------------|------------------------------------------|---------------------------|
|                                                                                 | <b>2019<br/>Baht '000</b>                | <b>2018<br/>Baht '000</b> |
| Opening net book value                                                          | 9,522,638                                | 7,752,864                 |
| Business combination (Note 36)                                                  | -                                        | 600,000                   |
| Transfer from investment in joint venture to subsidiary<br>(Note 14 (b) and 36) | -                                        | 564,718                   |
| Additional investments                                                          | 11,395                                   | 583,223                   |
| Capital contribution under employee benefits scheme<br>of subsidiaries          | 19,779                                   | 21,833                    |
| Closing net book value                                                          | <b>9,553,812</b>                         | <b>9,522,638</b>          |

**13 Investments in subsidiaries (Cont'd)**

The significant movements of investments in subsidiaries are as follows:

**2019****a) Investments of the Company****B.Grimm Power Korea Limited (“BGPKL”)**

During the first quarter of 2019, BGPKL, a direct subsidiary, was established in the Republic of Korea to invest in electric power business. BGPKL has registered share capital of Korean Won 300 million (equivalent to Baht 8.46 million). The Company owns 100% interest in BGPKL.

**B.Grimm Power (Malaysia) Sdn. Bhd. (“BGPMA”)**

During the second quarter of 2019, BGPMA, a direct subsidiary, was established in Malaysia to invest in electric power business. BGPMA has registered share capital of Malaysian Ringgit 1 (equivalent to Baht 7.7). The Company owns 100% interest in BGPMA.

**B.Grimm Power Smart Solution Limited (“BGPSS”) (formerly B.Grimm Renewable Power 3 Limited)**

During the third quarter of 2019, B.Grimm Renewable Power 3 Limited, a direct subsidiary, registered to change the company's name with the Ministry of Commerce to be B.Grimm Power Smart Solution Limited.

During the fourth quarter of 2019, BGPSS called for additional paid-up share capital, and the Company paid for the called-up to maintain the same proportion of holdings, totalling Baht 0.68 million.

**B.Grimm LNG Limited (“BGLNG”) (formerly B.Grimm Renewable Power 4 Limited)**

During the third quarter of 2019, B.Grimm Renewable Power 4 Limited, a direct subsidiary, registered to change the company's name with the Ministry of Commerce to be B.Grimm LNG Limited.

BGLNG increased authorised share capital from Baht 1 million to Baht 10 million by issuing 90,000 new ordinary shares with a par value of Baht 100 each. The Company paid-up for 90,000 shares at Baht 25 per share, totalling Baht 2.25 million.

**b) Investments of subsidiaries****Glow SPP1 Company Limited (“GSPP1”)**

During the first quarter of 2019, B.Grimm Power Service (Laem Chabang) Limited, an indirect subsidiary, acquired 100% equity interest in GSPP1, for a consideration of Baht 3,300 million. Subsequently, during the fourth quarter of 2019, the subsidiary disposed 25% interest in GSPP1 for a consideration of Baht 825 million. Details of the acquisition and disposal are disclosed in Note 36.

**B.Grimm Solar Power Rooftop Limited (“BSPR”)**

During the first quarter of 2019, BSPR, a subsidiary of B.Grimm Solar Power 1 Limited (“BGSP1”), increased authorised share capital from Baht 10 million to Baht 251 million by issuing 2,410,000 new ordinary shares with a par value of Baht 100 each. BGSP1 paid-up for 2,410,000 shares at Baht 100 per share, totalling Baht 241 million. In addition, BSPR called for additional paid-up share capital from the existing 100,000 ordinary shares and BGSP1 paid for the called-up to maintain the same proportion of holdings, totalling Baht 6.5 million.

### 13 Investments in subsidiaries (Cont'd)

2019 (Cont'd)

#### b) Investments of subsidiaries (Cont'd)

##### **Dau Tieng Tay Ninh Energy Joint Stock Company ("DTE")**

During the first quarter of 2019, DTE, a subsidiary of Viet Thai Solar Joint Stock Company ("VTS"), called for additional paid-up share capital and VTS paid for the called-up to maintain the same proportion of holdings, totalling VND 70,780 million.

##### **B.Grimm Solar Power, Inc. ("BGSPI")**

During the third quarter of 2019, BGSP1, a subsidiary of BSPR, was established in the Republic of the Philippines to operate in electricity generating business. BGSP1 has registered share capital of Philippine Peso 25 million (equivalent to Baht 15 million). BSPR owns 100% interest in BGSP1.

##### **Tadsakhoi Power Company Limited ("TSK")**

During the third quarter of 2019, TSK, a subsidiary of B.Grimm Power (Lao) Company Limited ("BGPL"), was established in Lao PDR to operate in electricity generating from hydropower. TSK has registered share capital of Kib 146.20 billion (equivalent to Baht 512.62 million) BGPL owns 70% interest in TSK. As at 31 December 2019, BGPL has not yet paid for the investment.

##### **Sisophon Clean Power Co., Ltd. ("SSCP")**

During the fourth quarter of 2019, SSCP, a subsidiary of BGSP1, was established in Cambodia to develop land for future power plant projects. SSCP has registered share capital of Cambodian Riel 134 million (equivalent to Baht 1 million). BGSP1 owns 100% interest in SSCP.

##### **Ray Power Supply Co., Ltd. ("Ray Power")**

During the fourth quarter of 2019, BGSP1 acquired 100% equity interest in Ray Power, a registered company, which operates solar power plant project in Cambodia, for a consideration of US Dollar 0.3 million (equivalent to Baht 9.15 million). As a result, Ray Power became subsidiary of the Group. The management of the Group considered the acquisition in accordance with the concepts underlying the procedures used in accounting for the acquisition of subsidiary under TFRS 3 - Business Combinations and concluded that the acquisition of this investment is asset acquisition. The difference between consideration paid and net assets acquired was considered as value of "right in power purchase agreement" (include in intangible assets).

The following table summarises the consideration paid for Ray Power and the amounts of the assets acquired and liabilities assumed recognised at the acquisition date.

| <b>Consideration paid on 25 December 2019:</b>                                     |  | <b>Baht '000</b> |
|------------------------------------------------------------------------------------|--|------------------|
| Cash                                                                               |  | <u>9,145</u>     |
| <b>Recognised amounts of identifiable assets acquired and liabilities assumed:</b> |  |                  |
| Cash and cash equivalent                                                           |  | 151              |
| Right in power purchase agreement                                                  |  | <u>8,994</u>     |
| Acquired net assets                                                                |  | <u>9,145</u>     |

**13 Investments in subsidiaries (Cont'd)****2018****a) Investments of the Company****B.Grimm Power (Cambodia) Co., Ltd. ("BGPCAM")**

On 12 January 2018, BGPCAM, a subsidiary, was established in Cambodia to invest in electric power business. BGPCAM has registered share capital of US Dollar 1,000. The Company owns 100% interest in BGPCAM. As of 31 December 2019, the Company has not yet paid for the investment.

**Amata B.Grimm Power (Rayong) 3 Limited ("ABPR3")**

On 30 April 2018, ABPR3 called for additional paid-up share capital. The Company paid for additional investment to maintain the same proportion of holdings, totalling Baht 136.17 million.

**Amata B.Grimm Power (Rayong) 4 Limited ("ABPR4")**

On 30 April 2018, ABPR4 called for additional paid-up share capital. The Company paid for additional investment to maintain the same proportion of holdings, totalling Baht 138.07 million.

**Amata B.Grimm Power (Rayong) 5 Limited ("ABPR5")**

On 28 February 2018 and 2 July 2018, ABPR5 called for additional paid-up share capital. The Company paid for additional investment to maintain the same proportion of holdings, totalling Baht 308.95 million.

**b) Investments of subsidiaries****Increase of ownership interests in 7 subsidiaries**

7 subsidiaries are:

- B.Grimm Solar Power (Bamnet Narong) Limited
- B.Grimm Solar Power (Cha Am) Limited
- B.Grimm Solar Power (Chai Badan) Limited
- B.Grimm Solar Power (Chon Daen) Limited
- B.Grimm Solar Power (Si Boon Rueang) Limited
- B.Grimm Solar Power (Wanon Niwat) Limited
- B.Grimm Solar Power (Yang Talat) Limited

On 29 June 2018, BGSP1, a direct subsidiary who held 51% interests in the above-mentioned subsidiaries, acquired the other 49% interests from non-controlling interests in each of those 7 subsidiaries for a total consideration of Baht 515 million. As a result, BGSP1's ownership interests in 7 subsidiaries increased from 51% to 100%. The carrying amounts of equity of the parent and non-controlling interests were adjusted to reflect change in controlling interests. The difference between increase in ownership interest in 7 subsidiaries and consideration paid was considered as value of "right in power purchase agreement" (included in intangible assets).

The transaction can be summarised as follows:

|                                                      | <b>Consolidated<br/>financial<br/>information<br/>Baht '000</b> |
|------------------------------------------------------|-----------------------------------------------------------------|
| Carrying value of non-controlling interests acquired | 339,413                                                         |
| Right in power purchase agreements                   | 175,587                                                         |
| Consideration paid to non-controlling interests      | 515,000                                                         |



### 13 Investments in subsidiaries (Cont'd)

2018 (Cont'd)

#### b) Investments of subsidiaries (Cont'd)

##### **Viet Thai Solar Joint Stock Company ("VTS") and Dau Tieng Tay Ninh Energy Joint Stock Company ("DTE")**

On 16 July 2018, B.Grimm Renewable Power 1 Limited ("BGRP1"), a direct subsidiary, paid a consideration of VND 55,000 million and US Dollar 31.50 million (equivalent to Baht 1,135.49 million) to acquire 100% interests in VTS which is a company incorporated in Vietnam. VTS owns 55% interests in DTE which operates solar power plant project in Vietnam. As a result, VTS and DTE became subsidiaries of the Group. The management of the Group considered the acquisition in accordance with the concepts underlying the procedures used in accounting for the acquisition of subsidiary under TFRS 3 - Business Combinations and concluded that the acquisition of this investment is assets acquisition. The difference between consideration paid and net assets acquired was considered as value of "right in power purchase agreement" (included in intangible assets).

The following table summarises the consideration paid for VTS and the amounts of the assets acquired and liabilities assumed recognised at the acquisition date.

| <b>Consideration paid on 16 July 2018:</b>                                         |  | <b>Baht '000</b> |
|------------------------------------------------------------------------------------|--|------------------|
| Cash                                                                               |  | <u>1,135,493</u> |
| <b>Recognised amounts of identifiable assets acquired and liabilities assumed:</b> |  |                  |
| Consolidated financial information of VTS                                          |  |                  |
| Cash and cash equivalents                                                          |  | 43,282           |
| Other current assets                                                               |  | 3,675            |
| Plants and equipment, net                                                          |  | 81,062           |
| Right in power purchase agreement                                                  |  | 1,055,633        |
| Other non-current assets                                                           |  | 30,842           |
| Other current liabilities                                                          |  | (13,661)         |
| Non-controlling interests in DTE                                                   |  | <u>(65,340)</u>  |
| Acquired net assets                                                                |  | <u>1,135,493</u> |

As at 31 December 2019, the Group has outstanding payable arising from the acquisition of investment amounting to US Dollar 3.15 million (equivalent to Baht 95.54 million) (2018: US Dollars 12.60 million, equivalent to Baht 410.95 million).

##### **Phu Yen TTP Joint Stock Company ("PYT")**

On 17 September 2018, B.Grimm Renewable Power 2 Limited ("BGRP2"), a direct subsidiary, paid a consideration of US Dollar 35.20 million (equivalent to Baht 1,165.33 million) for shares at par value of PYT which is a company incorporated in Vietnam and operates solar power plant project. As a result, BGRP2 owns 80% interests in PYT and PYT becomes a subsidiary of the Group.

**14 Investments in associate and joint ventures**

The amounts recognised in the statements of financial position are as follows:

|                | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|----------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Associate      | 816,249                              | 1,148,345         | -                                | -                 |
| Joint ventures | 714,294                              | 653,877           | 522,376                          | 509,008           |

The share of profit recognised in the statements of comprehensive income is as follows:

|                | Consolidated<br>financial statements |                   |
|----------------|--------------------------------------|-------------------|
|                | 2019<br>Baht '000                    | 2018<br>Baht '000 |
| Associate      | 54,281                               | 96,184            |
| Joint ventures | 47,049                               | 85,846            |
|                | <u>101,330</u>                       | <u>182,030</u>    |

**(a) Investment in associate**

Nature of investment in associate as at 31 December:

| Name of entity                                            | Place of<br>business/<br>Country of<br>incorporation | % of ownership<br>interest |       | Nature of the<br>relationship | Measurement<br>method |
|-----------------------------------------------------------|------------------------------------------------------|----------------------------|-------|-------------------------------|-----------------------|
|                                                           |                                                      | 2019                       | 2018  |                               |                       |
| Amata B.Grimm Power<br>Power Plant<br>Infrastructure Fund | Thailand                                             | 29.97                      | 29.97 | Note 1                        | Equity method         |

Note 1: Amata B.Grimm Power Power Plant Infrastructure Fund is a power plant infrastructure fund. The Group indirectly held the investment units through Amata B.Grimm Power Limited, which is a subsidiary.

There are no contingent liabilities relating to the Group's interest in the associate.

The movements of investment in associate during the year ended 31 December are as follows:

|                                | Consolidated<br>financial statements |                   |
|--------------------------------|--------------------------------------|-------------------|
|                                | 2019<br>Baht '000                    | 2018<br>Baht '000 |
| Opening net book value         | 1,148,345                            | 1,358,033         |
| Share of profit from associate | 54,281                               | 96,184            |
| Capital reduction              | (299,237)                            | (157,935)         |
| Dividends received             | (87,140)                             | (147,937)         |
| Closing net book value         | <u>816,249</u>                       | <u>1,148,345</u>  |

As at 31 December 2019, the fair value of the Group's interest in Amata B.Grimm Power Power Plant Infrastructure Fund, which is a listed fund in Stock Exchange of Thailand, is Baht 823.58 million (2018: Baht 1,105.89 million).

## 14 Investments in associate and joint ventures (Cont'd)

### (b) Investments in joint ventures

The joint ventures listed below have ordinary shares which are directly held by the Group.

Nature of investments in joint ventures as at 31 December:

| Name of entity                                                      | Place of Business/<br>Country of incorporation | % of ownership interest |       | Nature of the business                                                                     |
|---------------------------------------------------------------------|------------------------------------------------|-------------------------|-------|--------------------------------------------------------------------------------------------|
|                                                                     |                                                | 2019                    | 2018  |                                                                                            |
| <u><b>Joint ventures of the Company</b></u>                         |                                                |                         |       |                                                                                            |
| B.Grimm Sena Solar Power Limited                                    | Thailand                                       | 49.00                   | 49.00 | Investing in business of generating and distribution of electricity from solar power       |
| with subsidiaries as follows:                                       |                                                |                         |       |                                                                                            |
| - Solarwa Company Limited<br>- TPS Commercial Company Limited       |                                                |                         |       |                                                                                            |
| B.Grimm Power (Poipet) Co.,Ltd.                                     | Cambodia                                       | 55.00                   | 55.00 | Operating in business of distribution of electricity                                       |
| Progress Interchem (Thailand) Limited                               | Thailand                                       | 48.00                   | 48.00 | Operating in business of generating and distribution of electricity from industrial wastes |
| <u><b>Joint ventures of B.Grimm Solar Power Rooftop Limited</b></u> |                                                |                         |       |                                                                                            |
| B.Grimm S.Napa Solar Power Limited                                  | Thailand                                       | 51.00                   | 51.00 | Operating in business of generating and distribution of electricity from solar rooftop     |
| B.Grimm Spectrum Solar Power Limited                                | Thailand                                       | 70.00                   | 70.00 | Operating in business of generating and distribution of electricity from solar rooftop     |

Investments in joint ventures are measured using equity method.

The significant movements of investments in joint ventures are as follows:

### 2019

#### Progress Interchem (Thailand) Limited ("PIC")

During the third quarter of 2019, PIC, a joint venture of the Company, called for additional share paid-up capital and the Company paid for the called-up to maintain the same proportion of holdings, totalling Baht 13.37 million.

**14 Investment in associate and joint ventures (Cont'd)****(b) Investments in joint ventures (Cont'd)****2018****Progress Interchem (Thailand) Limited ("PIC")**

On 4 January 2018, the Company invested amounting to Baht 99.84 million, representing 48% interest in PIC which operates industrial waste-to-energy power plant with an installed capacity of 4.8 megawatts. As a result, PIC is considered as a joint venture of the Company. The management of the Group considered the acquisition in accordance with the concepts underlying the procedures used in accounting for the acquisition of subsidiary under TFRS 3 - Business Combinations and concluded that the acquisition of this investment is the assets acquisition.

**B.Grimm S.Napa Solar Power Limited ("BGSNSP")**

On 10 August 2018, BGSNSP was established in Thailand to operate solar rooftop projects, with the registered share capital of Baht 10 million. BSPR, an indirect subsidiary, invested Baht 2.25 million for 51% interest in BGSNSP.

**B.Grimm Spectrum Solar Power Limited ("BGSSP")**

On 28 August 2018, BGSSP was established in Thailand to operate solar rooftop projects, with the registered share capital of Baht 10 million. BSPR, an indirect subsidiary, invested Baht 1.75 million for 70% interest in BGSSP.

All joint ventures are company limited and their shares do not have a quoted market price.

**Commitments and contingent liabilities in respect of joint ventures:**

As at 31 December, the joint ventures of the Group have commitments which have not been recognised in the financial statements as follows:

|                     | <b>2019<br/>Baht '000</b> | <b>2018<br/>Baht '000</b> |
|---------------------|---------------------------|---------------------------|
| Capital commitments | 573,382                   | 104                       |

There are no contingent liabilities relating to the Group's interest in the joint ventures.

#### 14 Investment in associate and joint ventures (Cont'd)

##### (b) Investments in joint ventures (Cont'd)

The movements of investments in joint ventures during the year ended 31 December are as follows:

|                                                                                | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|--------------------------------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                                                | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Opening net book value                                                         | 653,877                              | 1,069,544         | 509,008                          | 972,661           |
| Additions                                                                      | 13,368                               | 105,065           | 13,368                           | 101,065           |
| Share of profit from joint ventures                                            | 47,049                               | 85,846            | -                                | -                 |
| Transfer from investment in<br>joint venture to subsidiary<br>(Note 13 and 36) | -                                    | (606,578)         | -                                | (564,718)         |
| Closing net book value                                                         | 714,294                              | 653,877           | 522,376                          | 509,008           |

#### 15 Investment property

There was no movement in investment property during 2019 and 2018.

The investment property of the Group is land held for a currently undetermined future use. The Group has not determined whether it will be held as owner-occupied property or for short-term capital appreciation.

At 31 December 2019, fair value of investment property were Baht 15.07 million. (2018: Baht 8.79 million) which was appraised by comparing the selling price of comparable land in term of physical conditions and location, with the investment property of the Group and has been made nearly to the date of valuation.

The fair value of the investment property is based on the selling price comparison approach using significant observable inputs. The fair value is within level 2 of the fair value hierarchy.



## 16 Property, plant and equipment, net

|                                     | Consolidated financial statements |                                  |                                                                                     |                                                                |                                        |                                |                                          |                          |                    |
|-------------------------------------|-----------------------------------|----------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------|--------------------------------|------------------------------------------|--------------------------|--------------------|
|                                     | Land<br>Baht '000                 | Land<br>improvement<br>Baht '000 | Power plant,<br>substation,<br>transmission<br>system and<br>equipment<br>Baht '000 | Office<br>equipment,<br>furniture and<br>computer<br>Baht '000 | Building and<br>structure<br>Baht '000 | Motor<br>vehicles<br>Baht '000 | Construction<br>in progress<br>Baht '000 | Spare parts<br>Baht '000 | Total<br>Baht '000 |
| At 1 January 2018                   | 2,277,243                         | 65,181<br>(14,490)               | 53,631,793<br>(16,430,551)                                                          | 278,848<br>(153,475)                                           | 695,179<br>(216,311)                   | 56,357<br>(33,228)             | 10,996,259                               | 328,036                  | 68,328,896         |
|                                     | -                                 | -                                | (140)                                                                               | -                                                              | -                                      | -                              | -                                        | (10,849)                 | (16,848,055)       |
|                                     | -                                 | -                                | -                                                                                   | -                                                              | -                                      | -                              | -                                        | -                        | (10,989)           |
| Net book value                      | 2,277,243                         | 50,691                           | 37,201,102                                                                          | 125,373                                                        | 478,868                                | 23,129                         | 10,996,259                               | 317,187                  | 51,469,852         |
| For the year ended 31 December 2018 | 2,277,243                         | 50,691                           | 37,201,102                                                                          | 125,373                                                        | 478,868                                | 23,129                         | 10,996,259                               | 317,187                  | 51,469,852         |
|                                     | -                                 | 3,651                            | 449,355                                                                             | 85,974                                                         | 15,940                                 | 13,412                         | 9,928,222                                | 53,989                   | 10,550,543         |
|                                     | -                                 | 333,093                          | 2,851,015                                                                           | 33                                                             | 623                                    | -                              | 23,462                                   | -                        | 3,208,226          |
|                                     | -                                 | -                                | -                                                                                   | -                                                              | -                                      | 4,157                          | 76,905                                   | -                        | 81,062             |
|                                     | -                                 | -                                | (1,872)                                                                             | (19)                                                           | -                                      | (3,523)                        | -                                        | -                        | (5,414)            |
|                                     | -                                 | 60,070                           | 14,371,800                                                                          | 1,448                                                          | 177,083                                | (167)                          | (14,500,921)                             | (11,436)                 | 97,877             |
|                                     | -                                 | -                                | -                                                                                   | -                                                              | -                                      | -                              | -                                        | (10,024)                 | (10,024)           |
|                                     | -                                 | -                                | (138)                                                                               | (120)                                                          | 102                                    | (258)                          | (66,600)                                 | 6                        | (67,008)           |
|                                     | -                                 | (14,997)                         | (2,878,949)                                                                         | (40,308)                                                       | (33,803)                               | (6,677)                        | -                                        | -                        | (2,974,734)        |
|                                     | -                                 | -                                | -                                                                                   | -                                                              | -                                      | -                              | -                                        | -                        | -                  |
| Closing net book value              | 2,277,243                         | 432,508                          | 51,992,313                                                                          | 172,381                                                        | 638,813                                | 30,073                         | 6,457,327                                | 349,722                  | 62,350,380         |
| At 31 December 2018                 | 2,277,243                         | 506,340                          | 71,459,498                                                                          | 353,698                                                        | 888,901                                | 67,490                         | 6,457,327                                | 370,595                  | 82,381,092         |
|                                     | -                                 | (73,832)                         | (19,467,045)                                                                        | (181,317)                                                      | (250,088)                              | (37,417)                       | -                                        | -                        | (20,009,699)       |
|                                     | -                                 | -                                | (140)                                                                               | -                                                              | -                                      | -                              | -                                        | (20,873)                 | (21,013)           |
|                                     | -                                 | -                                | -                                                                                   | -                                                              | -                                      | -                              | -                                        | -                        | -                  |
| Net book value                      | 2,277,243                         | 432,508                          | 51,992,313                                                                          | 172,381                                                        | 638,813                                | 30,073                         | 6,457,327                                | 349,722                  | 62,350,380         |

**16 Property, plant and equipment, net (Cont'd)**

|                                                                                                                                                                                                                                                                | Consolidated financial statements |                                  |                                                                                     |                                                                |                                        |                                |                                          |                          |                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------|--------------------------------|------------------------------------------|--------------------------|--------------------|
|                                                                                                                                                                                                                                                                | Land<br>Baht '000                 | Land<br>improvement<br>Baht '000 | Power plant,<br>substation,<br>transmission<br>system and<br>equipment<br>Baht '000 | Office<br>equipment,<br>furniture and<br>computer<br>Baht '000 | Building and<br>structure<br>Baht '000 | Motor<br>vehicles<br>Baht '000 | Construction<br>in progress<br>Baht '000 | Spare parts<br>Baht '000 | Total<br>Baht '000 |
| <b>For the year ended 31 December 2019</b><br><br>Opening net book value<br>Additions<br>Additions from business combination<br>(Note 36)<br>Disposal/ write-off, net<br>Transfer in (out)<br>Impairment charge<br>Exchange differences<br>Depreciation charge | 2,277,243                         | 432,508                          | 51,992,313                                                                          | 172,381                                                        | 638,813                                | 30,073                         | 6,457,327                                | 349,722                  | 62,350,380         |
|                                                                                                                                                                                                                                                                | 304,246                           | 54,935                           | 10,873,926                                                                          | 75,851                                                         | 451,334                                | 8,284                          | 1,023,830                                | 14,764                   | 12,807,170         |
|                                                                                                                                                                                                                                                                | 177,751                           | -                                | 1,773,657                                                                           | 1,954                                                          | 16,811                                 | -                              | 410                                      | 5,953                    | 1,976,536          |
|                                                                                                                                                                                                                                                                | -                                 | -                                | (9,830)                                                                             | (189)                                                          | -                                      | (1,829)                        | -                                        | -                        | (11,848)           |
|                                                                                                                                                                                                                                                                | -                                 | 1,095                            | 6,037,705                                                                           | 17,934                                                         | 63,710                                 | -                              | (6,185,116)                              | (23,259)                 | (87,931)           |
|                                                                                                                                                                                                                                                                | -                                 | -                                | -                                                                                   | -                                                              | -                                      | -                              | -                                        | (11,325)                 | (11,325)           |
|                                                                                                                                                                                                                                                                | (1)                               | (1,310)                          | (430,185)                                                                           | (730)                                                          | (11,613)                               | (1,267)                        | (287,182)                                | (60)                     | (732,348)          |
|                                                                                                                                                                                                                                                                | -                                 | (25,334)                         | (4,005,692)                                                                         | (61,882)                                                       | (58,276)                               | (7,827)                        | -                                        | -                        | (4,159,011)        |
| <b>Closing net book value</b>                                                                                                                                                                                                                                  | <b>2,759,239</b>                  | <b>461,894</b>                   | <b>66,231,894</b>                                                                   | <b>205,319</b>                                                 | <b>1,100,779</b>                       | <b>27,434</b>                  | <b>1,009,269</b>                         | <b>335,795</b>           | <b>72,131,623</b>  |
| <b>At 31 December 2019</b>                                                                                                                                                                                                                                     |                                   |                                  |                                                                                     |                                                                |                                        |                                |                                          |                          |                    |
| Cost                                                                                                                                                                                                                                                           | 2,759,239                         | 561,937                          | 94,104,221                                                                          | 460,662                                                        | 1,421,266                              | 67,281                         | 1,009,269                                | 367,993                  | 100,751,868        |
| Less Accumulated depreciation                                                                                                                                                                                                                                  | -                                 | (100,043)                        | (27,872,187)                                                                        | (255,343)                                                      | (320,487)                              | (39,847)                       | -                                        | -                        | (28,587,907)       |
| Less Provision for impairment                                                                                                                                                                                                                                  | -                                 | -                                | (140)                                                                               | -                                                              | -                                      | -                              | -                                        | (32,198)                 | (32,338)           |
| <b>Net book value</b>                                                                                                                                                                                                                                          | <b>2,759,239</b>                  | <b>461,894</b>                   | <b>66,231,894</b>                                                                   | <b>205,319</b>                                                 | <b>1,100,779</b>                       | <b>27,434</b>                  | <b>1,009,269</b>                         | <b>335,795</b>           | <b>72,131,623</b>  |



## 16 Property, plant and equipment, net (Cont'd)

Depreciation was charged to profit or loss as follows:

|                         | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                         | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Cost of sales           | 4,102,551                            | 2,937,216         | 28,400                           | 422               |
| Administrative expenses | 56,460                               | 37,518            | 15,528                           | 6,960             |
|                         | <u>4,159,011</u>                     | <u>2,974,734</u>  | <u>43,928</u>                    | <u>7,382</u>      |

Property, plant and equipment with the net book value amounting to Baht 29,458.28 million (2018: Baht 33,877.75 million), was pledged as collateral for borrowings from financial institutions (Note 22).

Borrowing costs of Baht 9.65 million (2018: Baht 173.3 million), arising from financing specifically entered into for the construction of power plants were capitalised to power plant under construction in the consolidated financial statements. The Group's interest capitalisation rates were between 3.83% to 3.91% per annum (2018: between 2.78% to 3.71% per annum), representing the actual borrowing costs for the projects.

In addition, the finance costs of Baht 79.90 million arising from discounted long-term liabilities regarding the construction of power plants in Vietnam were capitalised to power plant in the consolidated financial statements. Discount rate of 2.80% per annum was used with referring to the interest rate of long-term borrowings from financial institution.

## 17 Goodwill

|                                            | Consolidated<br>financial statements<br>Baht '000 |
|--------------------------------------------|---------------------------------------------------|
| <b>For the year ended 31 December 2019</b> |                                                   |
| Opening net book value                     | -                                                 |
| Business combination (Note 36)             | 457,192                                           |
| <b>Closing net book value</b>              | <u>457,192</u>                                    |
| <b>At 31 December 2019</b>                 |                                                   |
| Cost                                       | 457,192                                           |
| <u>Less</u> Provision for impairment       | -                                                 |
| <b>Net book value</b>                      | <u>457,192</u>                                    |

Goodwill is allocated to the Group's cash-generating units (CGUs) identified in electricity generating segment.

Goodwill arose from the acquisition of investment in electricity generating business is tested annually for impairment by comparing the carrying amount to the recoverable amount for each CGU unit which is based on fair value less cost to sell. The calculations use cash flow projections based on financial budget covering the remaining period of power purchase agreement of 28 years. The cash flow projection is based on the power plant capacity and tariffs stipulated in the power purchase agreement. Discount rates applied range between 8% to 9% per annum varying by the effective tax rates in each year.

The recoverable amount, calculated based on fair value less cost to sell, exceed carrying value. A raise in discount rate to 10.38% per annum would make the recoverable amount equals to the carrying value.

## 18 Intangible assets, net

|                                                       | Consolidated financial statements   |                                               |                                |                                                          |                                                                  |                                                                    |                                   |                                                  |                    |
|-------------------------------------------------------|-------------------------------------|-----------------------------------------------|--------------------------------|----------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------|--------------------------------------------------|--------------------|
|                                                       | Right to use<br>assets<br>Baht '000 | Deferred<br>power plant<br>costs<br>Baht '000 | Land use<br>right<br>Baht '000 | Right in<br>power<br>purchase<br>agreements<br>Baht '000 | Right from<br>service<br>concession<br>arrangements<br>Baht '000 | Right in<br>operation and<br>maintenance<br>contracts<br>Baht '000 | Computer<br>software<br>Baht '000 | Intangible<br>assets<br>in progress<br>Baht '000 | Total<br>Baht '000 |
| <b>At 1 January 2018</b>                              |                                     |                                               |                                |                                                          |                                                                  |                                                                    |                                   |                                                  |                    |
| Cost                                                  | 169,743                             | 2,763,591                                     | 712,756                        | 2,009,294                                                | 2,289,358                                                        | 21,670                                                             | 105,393                           | 24,869                                           | 8,096,674          |
| Less Accumulated amortisation                         | (89,834)                            | (223,962)                                     | (40,754)                       | (455,769)                                                | (31,104)                                                         | (15,045)                                                           | (36,403)                          | -                                                | (892,871)          |
| <b>Net book value</b>                                 | <b>79,909</b>                       | <b>2,539,629</b>                              | <b>672,002</b>                 | <b>1,553,525</b>                                         | <b>2,258,254</b>                                                 | <b>6,625</b>                                                       | <b>68,990</b>                     | <b>24,869</b>                                    | <b>7,203,803</b>   |
| <b>For the year ended<br/>31 December 2018</b>        |                                     |                                               |                                |                                                          |                                                                  |                                                                    |                                   |                                                  |                    |
| Opening net book value                                | 79,909                              | 2,539,629                                     | 672,002                        | 1,553,525                                                | 2,258,254                                                        | 6,625                                                              | 68,990                            | 24,869                                           | 7,203,803          |
| Additions                                             | 25,522                              | 148,509                                       | -                              | 580,085                                                  | 728,310                                                          | -                                                                  | 38,764                            | 6,692                                            | 1,527,882          |
| Additions from business<br>combination (Note 36)      | 36,530                              | 255,097                                       | -                              | 429,301                                                  | -                                                                | -                                                                  | 74                                | -                                                | 721,002            |
| Additions from acquisition of<br>subsidiary (Note 13) | -                                   | -                                             | -                              | 1,055,633                                                | -                                                                | -                                                                  | -                                 | -                                                | 1,055,633          |
| Transfer in (out)                                     | -                                   | -                                             | (6,572)                        | -                                                        | -                                                                | -                                                                  | 24,223                            | (24,216)                                         | (6,565)            |
| Exchange differences                                  | (49)                                | (304)                                         | (4)                            | (7,225)                                                  | (13,153)                                                         | -                                                                  | (36)                              | -                                                | (20,771)           |
| Amortisation charge                                   | (11,104)                            | (105,551)                                     | (24,605)                       | (124,238)                                                | (74,216)                                                         | (1,562)                                                            | (24,999)                          | -                                                | (366,275)          |
| <b>Closing net book value</b>                         | <b>130,808</b>                      | <b>2,837,380</b>                              | <b>640,821</b>                 | <b>3,487,081</b>                                         | <b>2,899,195</b>                                                 | <b>5,063</b>                                                       | <b>107,016</b>                    | <b>7,345</b>                                     | <b>10,114,709</b>  |
| <b>At 31 December 2018</b>                            |                                     |                                               |                                |                                                          |                                                                  |                                                                    |                                   |                                                  |                    |
| Cost                                                  | 234,923                             | 3,195,241                                     | 706,176                        | 4,067,095                                                | 3,004,616                                                        | 21,670                                                             | 162,550                           | 7,345                                            | 11,399,616         |
| Less Accumulated amortisation                         | (104,115)                           | (357,861)                                     | (65,355)                       | (580,014)                                                | (105,421)                                                        | (16,607)                                                           | (55,534)                          | -                                                | (1,284,907)        |
| <b>Net book value</b>                                 | <b>130,808</b>                      | <b>2,837,380</b>                              | <b>640,821</b>                 | <b>3,487,081</b>                                         | <b>2,899,195</b>                                                 | <b>5,063</b>                                                       | <b>107,016</b>                    | <b>7,345</b>                                     | <b>10,114,709</b>  |



## 18 Intangible assets, net (Cont'd)

|                                                       | Consolidated financial statements   |                                               |                                |                                                          |                                                       |                                                                    |                                   |                                                  |                    |
|-------------------------------------------------------|-------------------------------------|-----------------------------------------------|--------------------------------|----------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------|--------------------------------------------------|--------------------|
|                                                       | Right to use<br>assets<br>Baht '000 | Deferred<br>power plant<br>costs<br>Baht '000 | Land use<br>right<br>Baht '000 | Right in<br>power<br>purchase<br>agreements<br>Baht '000 | Right from<br>concession<br>arrangements<br>Baht '000 | Right in<br>operation and<br>maintenance<br>contracts<br>Baht '000 | Computer<br>software<br>Baht '000 | Intangible<br>assets<br>in progress<br>Baht '000 | Total<br>Baht '000 |
| <b>For the year ended<br/>31 December 2019</b>        |                                     |                                               |                                |                                                          |                                                       |                                                                    |                                   |                                                  |                    |
| Opening net book value                                | 130,808                             | 2,837,380                                     | 640,821                        | 3,487,081                                                | 2,899,195                                             | 5,063                                                              | 107,016                           | 7,345                                            | 10,114,709         |
| Additions                                             | 13,476                              | 1,769                                         | 288,044                        | 30,079                                                   | 360,836                                               | -                                                                  | 17,477                            | 22,227                                           | 733,908            |
| Disposal/ write-off, net                              | -                                   | -                                             | -                              | -                                                        | -                                                     | -                                                                  | (224)                             | -                                                | (224)              |
| Additions from business<br>combination (Note 36)      | 12,499                              | -                                             | -                              | 225,000                                                  | -                                                     | -                                                                  | -                                 | -                                                | 237,499            |
| Additions from acquisition of<br>subsidiary (Note 13) | -                                   | -                                             | -                              | 8,994                                                    | -                                                     | -                                                                  | -                                 | -                                                | 8,994              |
| Transfer in (out)                                     | 478                                 | -                                             | 139,110                        | -                                                        | -                                                     | -                                                                  | 32,316                            | (19,408)                                         | 152,496            |
| Exchange differences                                  | (1,697)                             | (3,893)                                       | (5,291)                        | (71,691)                                                 | (212,551)                                             | -                                                                  | (428)                             | -                                                | (295,551)          |
| Amortisation charge                                   | (14,669)                            | (126,307)                                     | (36,926)                       | (189,328)                                                | (102,517)                                             | (1,358)                                                            | (29,824)                          | -                                                | (500,929)          |
| <b>Closing net book value</b>                         | <u>140,895</u>                      | <u>2,708,949</u>                              | <u>1,025,758</u>               | <u>3,490,135</u>                                         | <u>2,944,963</u>                                      | <u>3,705</u>                                                       | <u>126,333</u>                    | <u>10,164</u>                                    | <u>10,450,902</u>  |
| <b>At 31 December 2019</b>                            |                                     |                                               |                                |                                                          |                                                       |                                                                    |                                   |                                                  |                    |
| Cost                                                  | 272,735                             | 3,192,817                                     | 1,127,815                      | 4,258,603                                                | 3,142,492                                             | 21,670                                                             | 209,805                           | 10,164                                           | 12,236,101         |
| Less Accumulated amortisation                         | <u>(131,840)</u>                    | <u>(483,868)</u>                              | <u>(102,057)</u>               | <u>(768,468)</u>                                         | <u>(197,529)</u>                                      | <u>(17,965)</u>                                                    | <u>(83,472)</u>                   | <u>-</u>                                         | <u>(1,785,199)</u> |
| <b>Net book value</b>                                 | <u>140,895</u>                      | <u>2,708,949</u>                              | <u>1,025,758</u>               | <u>3,490,135</u>                                         | <u>2,944,963</u>                                      | <u>3,705</u>                                                       | <u>126,333</u>                    | <u>10,164</u>                                    | <u>10,450,902</u>  |

## 18 Intangible assets, net (Cont'd)

|                                            | Separate financial statements    |                             |                                                 |                                |                                                   |                    |
|--------------------------------------------|----------------------------------|-----------------------------|-------------------------------------------------|--------------------------------|---------------------------------------------------|--------------------|
|                                            | Right to use assets<br>Baht '000 | Land use right<br>Baht '000 | Right in power purchase agreements<br>Baht '000 | Computer software<br>Baht '000 | Computer software under installation<br>Baht '000 | Total<br>Baht '000 |
| <b>At 1 January 2018</b>                   |                                  |                             |                                                 |                                |                                                   |                    |
| Cost                                       | -                                | -                           | -                                               | 57,529                         | 15,607                                            | 73,136             |
| <u>Less</u> Accumulated amortisation       | -                                | -                           | -                                               | (11,367)                       | -                                                 | (11,367)           |
| <b>Net book value</b>                      | -                                | -                           | -                                               | 46,162                         | 15,607                                            | 61,769             |
| <b>For the year ended 31 December 2018</b> |                                  |                             |                                                 |                                |                                                   |                    |
| Opening net book value                     | -                                | -                           | -                                               | 46,162                         | 15,607                                            | 61,769             |
| Additions                                  | 11,619                           | -                           | 244,159                                         | 28,817                         | 5,032                                             | 289,627            |
| Transfer in (out)                          | -                                | 253,273                     | -                                               | 14,235                         | (14,235)                                          | 253,273            |
| Amortisation charge                        | (7)                              | (7,973)                     | (155)                                           | (14,203)                       | -                                                 | (22,338)           |
| <b>Closing net book value</b>              | 11,612                           | 245,300                     | 244,004                                         | 75,011                         | 6,404                                             | 582,331            |
| <b>At 31 December 2018</b>                 |                                  |                             |                                                 |                                |                                                   |                    |
| Cost                                       | 11,619                           | 253,273                     | 244,159                                         | 100,581                        | 6,404                                             | 616,036            |
| <u>Less</u> Accumulated amortisation       | (7)                              | (7,973)                     | (155)                                           | (25,570)                       | -                                                 | (33,705)           |
| <b>Net book value</b>                      | 11,612                           | 245,300                     | 244,004                                         | 75,011                         | 6,404                                             | 582,331            |
| <b>For the year ended 31 December 2019</b> |                                  |                             |                                                 |                                |                                                   |                    |
| Opening net book value                     | 11,612                           | 245,300                     | 244,004                                         | 75,011                         | 6,404                                             | 582,331            |
| Additions                                  | 7                                | 175                         | -                                               | 9,856                          | 12,499                                            | 22,537             |
| Transfer in (out)                          | 478                              | -                           | -                                               | 13,717                         | (14,195)                                          | -                  |
| Amortisation charge                        | (468)                            | (9,828)                     | (9,766)                                         | (18,159)                       | -                                                 | (38,221)           |
| <b>Closing net book value</b>              | 11,629                           | 235,647                     | 234,238                                         | 80,425                         | 4,708                                             | 566,647            |
| <b>At 31 December 2019</b>                 |                                  |                             |                                                 |                                |                                                   |                    |
| Cost                                       | 12,104                           | 253,448                     | 244,159                                         | 124,154                        | 4,708                                             | 638,573            |
| <u>Less</u> Accumulated amortisation       | (475)                            | (17,801)                    | (9,921)                                         | (43,729)                       | -                                                 | (71,926)           |
| <b>Net book value</b>                      | 11,629                           | 235,647                     | 234,238                                         | 80,425                         | 4,708                                             | 566,647            |

Amortisation was charged to profit or loss as follows:

|                         | Consolidated financial statements |                   | Separate financial statements |                   |
|-------------------------|-----------------------------------|-------------------|-------------------------------|-------------------|
|                         | 2019<br>Baht '000                 | 2018<br>Baht '000 | 2019<br>Baht '000             | 2018<br>Baht '000 |
| Cost of sales           | 466,756                           | 272,996           | 20,062                        | 308               |
| Administrative expenses | 34,173                            | 93,279            | 18,159                        | 22,030            |
|                         | <u>500,929</u>                    | <u>366,275</u>    | <u>38,221</u>                 | <u>22,338</u>     |

## 19 Deferred income taxes

The amounts recognised in the statements of financial position as at 31 December are as follows:

|                          | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|--------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                          | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Deferred tax assets      | 134,487                              | 141,937           | 6,427                            | 3,749             |
| Deferred tax liabilities | (203,214)                            | (117,697)         | -                                | -                 |
| Deferred tax, net        | (68,727)                             | 24,240            | 6,427                            | 3,749             |

The analysis of deferred tax assets and deferred tax liabilities are as follows:

|                                                            | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|------------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                            | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| <b>Deferred tax assets:</b>                                |                                      |                   |                                  |                   |
| Deferred tax assets to be recovered within 12 months       | 1,130                                | (11,176)          | 10                               | 10                |
| Deferred tax assets to be recovered more than 12 months    | 133,357                              | 153,113           | 6,417                            | 3,739             |
|                                                            | 134,487                              | 141,937           | 6,427                            | 3,749             |
| <b>Deferred tax liabilities:</b>                           |                                      |                   |                                  |                   |
| Deferred tax liabilities to be settled within 12 months    | (20,775)                             | (1,430)           | -                                | -                 |
| Deferred tax liabilities to be settled more than 12 months | (182,439)                            | (116,267)         | -                                | -                 |
|                                                            | (203,214)                            | (117,697)         | -                                | -                 |
| <b>Deferred tax, net</b>                                   | <b>(68,727)</b>                      | <b>24,240</b>     | <b>6,427</b>                     | <b>3,749</b>      |

The movements of deferred income taxes during the year are as follows:

|                                       | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|---------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                       | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| At 1 January                          | 24,240                               | 15,300            | 3,749                            | 1,784             |
| Charged to profit or loss             | 8,415                                | 47,499            | 911                              | 1,477             |
| Charged to other comprehensive income | 8,597                                | 2,377             | 1,767                            | 488               |
| Business combination (Note 36)        | (114,605)                            | (41,320)          | -                                | -                 |
| Exchange differences                  | 4,626                                | 384               | -                                | -                 |
| At 31 December                        | (68,727)                             | 24,240            | 6,427                            | 3,749             |

## 19 Deferred income taxes (Cont'd)

The movements in deferred tax assets and liabilities during the year are as follows:

|                                       | Consolidated financial statements                                     |                                              |                                                 |                                      |                           |                                                                          |                                                            |                    |
|---------------------------------------|-----------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------|--------------------------------------|---------------------------|--------------------------------------------------------------------------|------------------------------------------------------------|--------------------|
|                                       | Mark up<br>margin on<br>property, plant<br>and equipment<br>Baht '000 | Tax losses<br>carry<br>forwards<br>Baht '000 | Employee<br>benefit<br>obligations<br>Baht '000 | Decommissioning<br>cost<br>Baht '000 | Depreciation<br>Baht '000 | Allowance for<br>slow moving<br>spare parts<br>and supplies<br>Baht '000 | Fair value of<br>other non-<br>current assets<br>Baht '000 | Total<br>Baht '000 |
| <b>Deferred tax assets</b>            |                                                                       |                                              |                                                 |                                      |                           |                                                                          |                                                            |                    |
| At 1 January 2018                     | 201,173                                                               | 26,486                                       | 18,775                                          | 23,088                               | 37,358                    | 11,748                                                                   | -                                                          | 318,628            |
| Charged (credited) to profit or loss  | 37,992                                                                | (387)                                        | 1,101                                           | 7,526                                | 12,952                    | 9,402                                                                    | -                                                          | 68,586             |
| Charged to other comprehensive income | -                                                                     | -                                            | 2,377                                           | -                                    | -                         | -                                                                        | -                                                          | 2,377              |
| Business combination (Note 36)        | -                                                                     | -                                            | -                                               | -                                    | -                         | -                                                                        | 23,556                                                     | 23,556             |
| At 31 December 2018                   | 239,165                                                               | 26,099                                       | 22,253                                          | 30,614                               | 50,310                    | 21,150                                                                   | 23,556                                                     | 413,147            |
| <b>At 1 January 2019</b>              | 239,165                                                               | 26,099                                       | 22,253                                          | 30,614                               | 50,310                    | 21,150                                                                   | 23,556                                                     | 413,147            |
| Charged (credited) to profit or loss  | (23,609)                                                              | (7,645)                                      | 9,309                                           | 2,253                                | 14,952                    | 13,826                                                                   | -                                                          | 9,086              |
| Charged to other comprehensive income | -                                                                     | -                                            | 8,597                                           | -                                    | -                         | -                                                                        | -                                                          | 8,597              |
| Business combination (Note 36)        | -                                                                     | -                                            | 3,804                                           | -                                    | 16,695                    | 354                                                                      | -                                                          | 20,853             |
| At 31 December 2019                   | 215,556                                                               | 18,454                                       | 43,963                                          | 32,867                               | 81,957                    | 35,330                                                                   | 23,556                                                     | 451,683            |

## 19 Deferred income taxes (Cont'd)

|                                       | Consolidated financial statements                                                         |                                              |                           |                                      |
|---------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------|--------------------------------------|
|                                       | Fair value of property, plant and equipment from acquisition of subsidiaries<br>Baht '000 | Fair value of intangible assets<br>Baht '000 | Depreciation<br>Baht '000 | Total<br>Baht '000                   |
| <b>Deferred tax liabilities</b>       |                                                                                           |                                              |                           |                                      |
| At 1 January 2018                     | 86,908                                                                                    | 157,132                                      | 59,288                    | 303,328                              |
| Charged (credited) to profit or loss  | (4,504)                                                                                   | (14,469)                                     | 40,060                    | 21,087                               |
| Business combination (Note 36)        | -                                                                                         | 64,876                                       | -                         | 64,876                               |
| Exchange differences                  | -                                                                                         | (384)                                        | -                         | (384)                                |
| At 31 December 2018                   | 82,404                                                                                    | 207,155                                      | 99,348                    | 388,907                              |
| At 1 January 2019                     | 82,404                                                                                    | 207,155                                      | 99,348                    | 388,907                              |
| Charged (credited) to profit or loss  | (11,447)                                                                                  | (23,030)                                     | 35,148                    | 671                                  |
| Business combination (Note 36)        | 44,302                                                                                    | 38,244                                       | 52,912                    | 135,458                              |
| Exchange differences                  | -                                                                                         | (4,626)                                      | -                         | (4,626)                              |
| At 31 December 2019                   | 115,259                                                                                   | 217,743                                      | 187,408                   | 520,410                              |
|                                       |                                                                                           |                                              |                           | <b>Separate financial statements</b> |
|                                       |                                                                                           |                                              |                           | <b>Employee benefit obligations</b>  |
|                                       |                                                                                           |                                              |                           | <b>Baht '000</b>                     |
| <b>Deferred tax assets</b>            |                                                                                           |                                              |                           |                                      |
| At 1 January 2018                     |                                                                                           |                                              |                           | 1,784                                |
| Charged to profit or loss             |                                                                                           |                                              |                           | 1,477                                |
| Charged to other comprehensive income |                                                                                           |                                              |                           | 488                                  |
| At 31 December 2018                   |                                                                                           |                                              |                           | 3,749                                |
| At 1 January 2019                     |                                                                                           |                                              |                           | 3,749                                |
| Charged to profit or loss             |                                                                                           |                                              |                           | 911                                  |
| Charged to other comprehensive income |                                                                                           |                                              |                           | 1,767                                |
| At 31 December 2019                   |                                                                                           |                                              |                           | 6,427                                |

Deferred income tax assets are recognised for tax loss carry forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable. At 31 December 2019, the Group does not recognise from tax losses of Baht 2,932.77 million (2018: Baht 1,511.03 million), to carry forward against future taxable income; these tax losses will expire in 2020 to 2024 (2018: in 2019 to 2023), respectively.

As at 31 December 2019, temporary differences on profit from investments in associate and joint ventures amounting to Baht 207.03 million were not recognised as deferred tax liabilities (2018: Baht 192.84 million).



**20 Other non-current assets**

|                                                                     | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|---------------------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                                     | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Deposits                                                            | 34,096                               | 21,309            | 164                              | 433               |
| Prepaid long-term service agreements                                | 354,136                              | 104,843           | -                                | -                 |
| Advances for projects development                                   | 897,566                              | 508,124           | -                                | -                 |
| Advance payments for investments in<br>a subsidiary (Note 39.4 (g)) | 60,308                               | 64,900            | -                                | -                 |
| Deferred employee benefits<br>expense over than 1 year              | -                                    | 17,053            | -                                | 5,227             |
| Prepaid land rental                                                 | 236,036                              | 248,900           | -                                | -                 |
| Withholding tax deducted at sources                                 | 215,410                              | 60,724            | 26,898                           | 15,091            |
| Advance payments for construction                                   | 535,002                              | 303,483           | -                                | -                 |
| Others                                                              | 62                                   | 1,269             | -                                | -                 |
|                                                                     | <u>2,332,616</u>                     | <u>1,330,605</u>  | <u>27,062</u>                    | <u>20,751</u>     |

**21 Trade and other payables**

|                                                           | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-----------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                           | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Trade payables                                            |                                      |                   |                                  |                   |
| - other parties                                           | 2,300,566                            | 2,626,615         | 5,325                            | 22,644            |
| - a related party (Note 37.4)                             | -                                    | -                 | 29,334                           | -                 |
| Other payables                                            |                                      |                   |                                  |                   |
| - other parties                                           | 421,520                              | 452,267           | 25,987                           | 62,978            |
| - related parties (Note 37.4)                             | 12,121                               | 12,427            | 125,574                          | 369,140           |
| Power plant construction payables                         | 13,975,981                           | 69,714            | -                                | -                 |
| Accrued interest expense                                  |                                      |                   |                                  |                   |
| - financial institutions                                  | 288,480                              | 309,513           | 80,660                           | 80,126            |
| - other parties                                           | 720                                  | 770               | 720                              | 770               |
| - a related party (Note 37.4)                             | 80,298                               | 207,777           | -                                | -                 |
| Accrued expenses                                          | 354,028                              | 594,811           | 28,828                           | 76,225            |
| Accrued expenses from long-term<br>service agreements     | 477,915                              | 471,730           | -                                | -                 |
| Dividends payable                                         | 246,579                              | 424,471           | -                                | -                 |
| Payable from the acquisition of<br>a subsidiary (Note 13) | 95,544                               | 410,946           | -                                | -                 |
|                                                           | <u>18,253,752</u>                    | <u>5,581,041</u>  | <u>296,428</u>                   | <u>611,883</u>    |

## 22 Borrowings from financial institutions

### Short-term borrowing

On 22 February 2019, the Company entered into a short-term borrowing agreement with a financial institution for Thai Baht borrowing amounting to Baht 3,000 million for the purpose of acquisition of shares of GSPP1. The borrowing bears interest rate at 3.25% per annum. The interest and principle is repayable within one year from the agreement date.

### Long-term borrowings

|                                                                          | Consolidated financial statements |                   |
|--------------------------------------------------------------------------|-----------------------------------|-------------------|
|                                                                          | 2019<br>Baht '000                 | 2018<br>Baht '000 |
| Current portion of long-term borrowings from financial institutions      | 855,047                           | 798,371           |
| <u>Less</u> Deferred financing fees                                      | (22,075)                          | (22,792)          |
| Current portion of long-term borrowings from financial institutions, net | 832,972                           | 775,579           |
| Long-term borrowings from financial institutions                         | 24,363,894                        | 24,933,530        |
| <u>Less</u> Deferred financing fees                                      | (346,215)                         | (361,233)         |
| Long-term borrowings from financial institutions, net                    | 24,017,679                        | 24,572,297        |
| Total long-term borrowings from financial institutions, net              | 24,850,651                        | 25,347,876        |

Maturity of long-term borrowings are as follows:

|                                                             | Consolidated financial statements |                   |
|-------------------------------------------------------------|-----------------------------------|-------------------|
|                                                             | 2019<br>Baht '000                 | 2018<br>Baht '000 |
| Within 1 year                                               | 855,047                           | 798,371           |
| Later than 1 year and not later than 5 years                | 5,333,334                         | 4,604,980         |
| Later than 5 years                                          | 19,030,560                        | 20,328,550        |
|                                                             | 25,218,941                        | 25,731,901        |
| <u>Less</u> Deferred financing fees                         | (368,290)                         | (384,025)         |
| Total long-term borrowings from financial institutions, net | 24,850,651                        | 25,347,876        |

Long-term borrowings from financial institutions can be classified by currencies as follows:

|                                                             | Consolidated financial statements |                   |
|-------------------------------------------------------------|-----------------------------------|-------------------|
|                                                             | 2019<br>Baht '000                 | 2018<br>Baht '000 |
| Thai Baht                                                   | 15,684,502                        | 16,163,434        |
| US Dollar                                                   | 9,534,439                         | 9,568,467         |
| <u>Less</u> Deferred financing fees                         | (368,290)                         | (384,025)         |
| Total long-term borrowings from financial institutions, net | 24,850,651                        | 25,347,876        |

**22 Borrowings from financial institutions (Cont'd)****Long-term borrowings (Cont'd)**

Interests on long-term borrowings are floating rates with effective interest rates ranging from 3.11% to 6.20% per annum (2018: 3.19% to 7.03% per annum).

The fair values are based on discounted cash flows using a discount rate based upon the market borrowing rate at the statements of financial position date. The carrying amounts of short-term and long-term borrowings approximate their fair values. The fair values are within level 2 of the fair value hierarchy.

The movements of long-term borrowings from financial institutions during the year ended 31 December are as follows:

|                                                  | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|--------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                  | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Opening net book value                           | 25,347,876                           | 36,841,133        | -                                | 1,909,743         |
| Additions                                        | 1,004,305                            | 589,803           | -                                | -                 |
| Additions from business combination<br>(Note 36) | -                                    | 2,942,449         | -                                | -                 |
| Repayments                                       | (829,495)                            | (15,254,238)      | -                                | (1,912,240)       |
| Unrealised exchange loss (gain)                  | (588,562)                            | 82,180            | -                                | -                 |
| Deferred financing fees                          | (8,507)                              | (14,894)          | -                                | (219)             |
| Amortisation of deferred financing fees          | 23,222                               | 169,543           | -                                | 2,716             |
| Exchange differences                             | (98,188)                             | (8,100)           | -                                | -                 |
| Closing net book value                           | 24,850,651                           | 25,347,876        | -                                | -                 |

During the second quarter of 2018, the Group's two subsidiaries being B.Grimm BIP Power 1 Limited and B.Grimm BIP Power 2 Limited fully repaid the long-term borrowings before the maturity date, totalling Baht 4,773.50 million and US Dollar 60.08 million (equivalent to Baht 1,926.89 million). In addition, the subsidiaries paid for early repayment fees, totalling Baht 2.55 million and US Dollar 0.42 million (equivalent to Baht 13.54 million) and wrote-off the remaining deferred financing fees upon repayment date, totalling Baht 94.52 million. The fees and the written-off were included in finance costs in the consolidated statement of comprehensive income for the year ended 31 December 2018.

During the fourth quarter of 2018, the Company fully repaid the long-term borrowings before the maturity date, totalling Baht 1,712.24 million. The Company wrote-off the remaining deferred financing fees upon the repayment date, totalling Baht 1.87 million, included in finance costs in the consolidated statement of comprehensive income for the year ended 31 December 2018.

In addition, the Group's four subsidiaries being B.Grimm Power (Laem Chabang) 1 Limited, B.Grimm Power (Laem Chabang) 2 Limited, B.Grimm Solar Power (Sakaeo) 1 Limited and B.Grimm Yanhee Solar Power Limited fully repaid the long-term borrowings before the maturity date, totalling Baht 4,762.79 million and US Dollar 9.20 million (equivalent to Baht 302.33 million). The four subsidiaries paid for early repayment fees, totalling Baht 10.14 million and wrote-off the remaining deferred financing fees upon repayment date, totalling Baht 38.98 million. The fees and the written-off were included in finance costs in the consolidated statement of comprehensive income for the year ended 31 December 2018.

Long-term borrowings are secured by pledge of subsidiaries' shares (Note 13), land and power plants of the Group (Note 16), and guaranteed by standby letter of credit provided by the Group (Note 39.3). In addition, the Group has to comply with certain conditions as specified in the agreements including covenants such as maintaining the financial ratios.

## 23 Debentures, net

|                                     | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                     | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Current portion of debentures       | 2,699,990                            | 299,892           | 500,000                          | -                 |
| <u>Less</u> Deferred financing fees | (2,037)                              | (494)             | (274)                            | -                 |
| Current portion of debentures, net  | 2,697,953                            | 299,398           | 499,726                          | -                 |
| Debentures                          | 29,900,118                           | 32,600,108        | 14,200,000                       | 14,700,000        |
| <u>Less</u> Deferred financing fees | (98,170)                             | (117,526)         | (77,693)                         | (94,017)          |
| Debentures, net                     | 29,801,948                           | 32,482,582        | 14,122,307                       | 14,605,983        |
| Total debentures, net               | 32,499,901                           | 32,781,980        | 14,622,033                       | 14,605,983        |

The movements of debentures during the year ended 31 December are as follows:

|                                         | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-----------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                         | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Opening net book value                  | 32,781,980                           | 16,975,838        | 14,605,983                       | 5,493,990         |
| Additions                               | -                                    | 21,400,000        | -                                | 14,700,000        |
| Repayments                              | (299,892)                            | (5,500,000)       | -                                | (5,500,000)       |
| Deferred financing fees                 | -                                    | (101,993)         | -                                | (94,583)          |
| Amortisation of deferred financing fees | 17,813                               | 8,135             | 16,050                           | 6,576             |
| Closing net book value                  | 32,499,901                           | 32,781,980        | 14,622,033                       | 14,605,983        |

### Details of debentures

- On 14 October 2016, the Company issued 2 unsecured debentures denominated in Thai Baht of which details are as follows:

Series 1 Debenture amount of Baht 2,300 million. The principal will be redeemed on the completion date of the second year from the issuance date which is 14 October 2018. The debenture bears interest at a fixed rate per annum and the interest payment schedule is every six-month.

Series 2 Debenture amount of Baht 3,200 million. The principal will be redeemed on the completion date of the third year from the issuance date which is 14 October 2019. However, debentures can be redeemed before the maturity date by the issuer. The debenture bears interest at a fixed rate per annum and the interest payment schedule is every six-month.

The Company is required to comply with certain procedures and conditions; for example, maintaining debt to equity ratio at the level as specified in the contract.

On 16 October 2018, the Company early redeemed debentures Series 2 amounting to Baht 3,200 million. The Company paid for early redemption fee totalling Baht 6.40 million, included in finance costs in the consolidated and separate statements of comprehensive income for the year ended 31 December 2018.

**23 Debentures, net (Cont'd)****Details of debentures (Cont'd)**

- 2) On 21 April 2017, Amata B.Grimm Power SPV 1 Limited ("ABPSPV1"), an indirect subsidiary, issued the guaranteed debentures denominated in Thai Baht, totalling Baht 11,500 million. Details are as follows:

| Series | Amount<br>(Baht million) | Due Date      | Tenor period<br>(Year) | Interest rate<br>(% per annum) |
|--------|--------------------------|---------------|------------------------|--------------------------------|
| 1      | 1,800                    | 21 April 2020 | 3                      | 2.68                           |
| 2      | 600                      | 21 April 2021 | 4                      | 3.00                           |
| 3      | 1,500                    | 21 April 2022 | 5                      | 3.25                           |
| 4      | 900                      | 21 April 2023 | 6                      | 3.58                           |
| 5      | 900                      | 21 April 2024 | 7                      | 3.76                           |
| 6      | 1,000                    | 21 April 2026 | 9                      | 4.01                           |
| 7      | 1,500                    | 21 April 2027 | 10                     | 4.17                           |
| 8      | 800                      | 21 April 2028 | 11                     | 4.33                           |
| 9      | 1,000                    | 21 April 2029 | 12                     | 4.35                           |
| 10     | 600                      | 21 April 2030 | 13                     | 4.48                           |
| 11     | 900                      | 21 April 2032 | 15                     | 4.79                           |

The debentures' interest payment schedule is semi-annually commencing from 21 October 2017.

The debentures are guaranteed by three subsidiaries being Amata B.Grimm Power 3 Limited, Amata B.Grimm Power (Rayong) 1 Limited and Amata B.Grimm Power (Rayong) 2 Limited. ABPSPV1 will proceed to ensure that the guarantors comply with certain procedures and conditions; for example, maintaining interest bearing debt to equity ratio at the level as specified in the contracts.

- 3) On 31 May 2018, two subsidiaries being B.Grimm BIP Power 1 Limited and B.Grimm BIP Power 2 Limited issued unsecured debentures denominated in Thai Baht amounting to Baht 3,350 million in each subsidiary, totalling Baht 6,700 million. The principal will be redeemed annually for 15 years starting from 31 May 2019. The debentures bear fixed interest at 3.95% per annum and the interest payment schedule is semi-annually. In addition, the subsidiaries are required to comply with certain procedures and conditions; for example, maintaining debt to equity ratio at the level as specified in the contracts.
- 4) On 19 October 2018, the Company issued 4 series of unsecured subordinated debentures denominated in Thai Baht, totalling Baht 9,700 million. Details are as follows:

| Series | Amount<br>(Baht million) | Due Date        | Tenor period<br>(Year) | Interest rate<br>(% per annum) |
|--------|--------------------------|-----------------|------------------------|--------------------------------|
| 1      | 500                      | 19 October 2020 | 2                      | 2.81                           |
| 2      | 2,700                    | 19 October 2021 | 3                      | 3.12                           |
| 3      | 1,500                    | 19 October 2023 | 5                      | 3.49                           |
| 4      | 5,000                    | 19 October 2028 | 10                     | 4.36                           |

The debentures' interest payment schedule is semi-annually commencing from 19 April 2019.

The Company is required to comply with certain procedures and conditions; for example, maintaining debt to equity ratio at the level as specified in the contracts.



## 23 Debentures, net (Cont'd)

### Details of debentures (Cont'd)

- 5) On 20 December 2018, the Company issued 2 series of unsecured debentures (Green bond) denominated in Thai Baht, totalling Baht 5,000 million. Details are as follows:

Series 1 Debenture amount of Baht 1,500 million. The principal will be redeemed on the completion date of the fifth year from the issuance date which is 20 December 2023. The debenture bears interest at a fixed rate of 3.01% per annum

Series 2 Debenture amount of Baht 3,500 million. The principal will be redeemed on the completion date of the seventh year from the issuance date which is 20 December 2025. The debenture bears interest at a fixed rate of 3.39% per annum

The debentures' interest payment schedule is semi-annually commencing from 20 June 2019.

The Company is required to comply with certain procedures and conditions; for example, maintaining debt to equity ratio at the level as specified in the contracts.

Book value and fair value of debentures as at 31 December 2019 are as follows:

|            | Consolidated financial statements |                         | Separate financial statements |                         |
|------------|-----------------------------------|-------------------------|-------------------------------|-------------------------|
|            | Book value<br>Baht '000           | Fair value<br>Baht '000 | Book value<br>Baht '000       | Fair value<br>Baht '000 |
| Debentures | 32,499,901                        | 34,941,550              | 14,622,033                    | 15,624,813              |

Fair value of debentures have been calculated based on future cash flows and discounted by the yield curve of the Thai Bond Market Association at the rates ranging from 1.65% to 3.11%. The fair value are within level 2 of the fair value hierarchy.

The effective interest rates at the statements of financial position date were as follows:

|            | Consolidated financial statements |                     | Separate financial statements |                     |
|------------|-----------------------------------|---------------------|-------------------------------|---------------------|
|            | 2019<br>% per annum               | 2018<br>% per annum | 2019<br>% per annum           | 2018<br>% per annum |
| Debentures | 2.74 - 4.81                       | 2.74 - 4.81         | 2.88 - 4.38                   | 2.88 - 4.38         |

**24 Employee benefit obligations**

|                                                     | Consolidated financial statements |                   | Separate financial statements |                   |
|-----------------------------------------------------|-----------------------------------|-------------------|-------------------------------|-------------------|
|                                                     | 2019<br>Baht '000                 | 2018<br>Baht '000 | 2019<br>Baht '000             | 2018<br>Baht '000 |
| Liabilities in the statements of financial position | 404,718                           | 226,408           | 32,136                        | 18,747            |
| Employment benefits included in operating profit    | 87,462                            | 33,250            | 4,607                         | 7,443             |
| Remeasurement - loss from change in assumptions     | 83,539                            | 18,667            | 8,834                         | 2,441             |

Employee benefit obligations comprise “Retirement benefits” and “Long service awards”.

**Retirement benefits**

The movements of retirement benefits during the year are as follows:

|                                             | Consolidated financial statements |                   | Separate financial statements |                   |
|---------------------------------------------|-----------------------------------|-------------------|-------------------------------|-------------------|
|                                             | 2019<br>Baht '000                 | 2018<br>Baht '000 | 2019<br>Baht '000             | 2018<br>Baht '000 |
| At 1 January                                | 208,397                           | 163,983           | 18,214                        | 8,669             |
| Current service cost                        | 26,841                            | 23,153            | 1,010                         | 6,913             |
| Past service cost                           | 51,386                            | -                 | 3,188                         | -                 |
| Interest expense                            | 6,201                             | 4,419             | 307                           | 314               |
|                                             | 292,825                           | 191,555           | 22,719                        | 15,896            |
| Remeasurements:                             |                                   |                   |                               |                   |
| Loss from change in demographic assumptions | 1,574                             | 2,447             | 27                            | 155               |
| Loss from change in financial assumptions   | 46,530                            | 3,373             | 2,130                         | 527               |
| Experience loss                             | 31,578                            | 11,029            | 6,465                         | 1,636             |
|                                             | 79,682                            | 16,849            | 8,622                         | 2,318             |
|                                             | 372,507                           | 208,404           | 31,341                        | 18,214            |
| Additions from business combination         | 10,589                            | -                 | -                             | -                 |
| Exchange differences                        | (111)                             | (7)               | -                             | -                 |
| Benefit paid                                | (3,108)                           | -                 | -                             | -                 |
| At 31 December                              | 379,877                           | 208,397           | 31,341                        | 18,214            |

During 2019, an amendment bill to the Labour Protection Law became effective. The main amendment is that the compensation for employees who have retired and have more than or equal to 20 years of service has changed from 300 day's pay to 400 day's pay. The effects of the amendment were recognised as past service cost during the year.

## 24 Employee benefit obligations (Cont'd)

The amounts recognised in 'operating profit' in profit or loss are as follows:

|                      | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|----------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                      | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Current service cost | 26,841                               | 23,153            | 1,010                            | 6,913             |
| Past service cost    | 51,386                               | -                 | 3,188                            | -                 |
| Interest expense     | 6,201                                | 4,419             | 307                              | 314               |
| Total charges        | 84,428                               | 27,572            | 4,505                            | 7,227             |

The total charges were included in 'cost of sales and services' and 'administrative expenses' as follows:

|                            | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|----------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                            | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Cost of sales and services | 43,231                               | 12,910            | 4,505                            | 7,227             |
| Administrative expenses    | 41,197                               | 14,662            | -                                | -                 |
|                            | 84,428                               | 27,572            | 4,505                            | 7,227             |

### Long service awards

The movements of long service awards during the year are as follows:

|                                             | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|---------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                             | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| At 1 January                                | 18,011                               | 11,452            | 533                              | 252               |
| Current service cost                        | 2,616                                | 2,393             | 90                               | 206               |
| Past service cost                           | -                                    | 2,946             | -                                | -                 |
| Interest expense                            | 418                                  | 339               | 12                               | 10                |
|                                             | 21,045                               | 17,130            | 635                              | 468               |
| Remeasurements:                             |                                      |                   |                                  |                   |
| Loss from change in demographic assumptions | 323                                  | 78                | 11                               | 3                 |
| Loss from change in financial assumptions   | 839                                  | 161               | 89                               | 5                 |
| Experience loss                             | 2,695                                | 1,579             | 112                              | 115               |
|                                             | 3,857                                | 1,818             | 212                              | 123               |
|                                             | 24,902                               | 18,948            | 847                              | 591               |
| Additions from business combination         | 8,428                                | -                 | -                                | -                 |
| Benefit paid                                | (8,489)                              | (937)             | (52)                             | (58)              |
| At 31 December                              | 24,841                               | 18,011            | 795                              | 533               |

**24 Employee benefit obligations (Cont'd)****Long service awards (Cont'd)**

The amounts recognised in 'operating profit' in profit or loss are as follows:

|                      | <b>Consolidated<br/>financial statements</b> |                           | <b>Separate<br/>financial statements</b> |                           |
|----------------------|----------------------------------------------|---------------------------|------------------------------------------|---------------------------|
|                      | <b>2019<br/>Baht '000</b>                    | <b>2018<br/>Baht '000</b> | <b>2019<br/>Baht '000</b>                | <b>2018<br/>Baht '000</b> |
| Current service cost | 2,616                                        | 2,393                     | 90                                       | 206                       |
| Past service cost    | -                                            | 2,946                     | -                                        | -                         |
| Interest expense     | 418                                          | 339                       | 12                                       | 10                        |
| <b>Total charges</b> | <b>3,034</b>                                 | <b>5,678</b>              | <b>102</b>                               | <b>216</b>                |

The total charges were included in 'cost of sales and services' and 'administrative expenses' as follows:

|                            | <b>Consolidated<br/>financial statements</b> |                           | <b>Separate<br/>financial statements</b> |                           |
|----------------------------|----------------------------------------------|---------------------------|------------------------------------------|---------------------------|
|                            | <b>2019<br/>Baht '000</b>                    | <b>2018<br/>Baht '000</b> | <b>2019<br/>Baht '000</b>                | <b>2018<br/>Baht '000</b> |
| Cost of sales and services | 1,553                                        | 2,659                     | 102                                      | 216                       |
| Administrative expenses    | 1,481                                        | 3,019                     | -                                        | -                         |
|                            | <b>3,034</b>                                 | <b>5,678</b>              | <b>102</b>                               | <b>216</b>                |

The principal actuarial assumptions used were as follows:

|                      | <b>Consolidated and separate<br/>financial statements</b> |                   |
|----------------------|-----------------------------------------------------------|-------------------|
|                      | <b>2019<br/>%</b>                                         | <b>2018<br/>%</b> |
| Discount rate        | 1.9                                                       | 2.9               |
| Salary increase rate | 4.0 - 9.0                                                 | 4.0 - 9.0         |
| Turnover rate        | 0.0 - 5.0                                                 | 0.0 - 10.0        |

## 24 Employee benefit obligations (Cont'd)

Sensitivity analysis for each significant actuarial assumptions used to estimate retirement benefits is as follows:

|                      | 2019                 |                                       |                        |
|----------------------|----------------------|---------------------------------------|------------------------|
|                      | Change in assumption | Impact on defined benefit obligations |                        |
|                      |                      | Increase in assumption                | Decrease in assumption |
| Discount rate        | 1%                   | Decrease by 11%                       | Increase by 14%        |
| Salary increase rate | 1%                   | Increase by 13%                       | Decrease by 11%        |
| Turnover rate        | 20%                  | Decrease by 4%                        | Increase by 4%         |

|                      | 2018                 |                                       |                        |
|----------------------|----------------------|---------------------------------------|------------------------|
|                      | Change in assumption | Impact on defined benefit obligations |                        |
|                      |                      | Increase in assumption                | Decrease in assumption |
| Discount rate        | 1%                   | Decrease by 12%                       | Increase by 14%        |
| Salary increase rate | 1%                   | Increase by 15%                       | Decrease by 12%        |
| Turnover rate        | 20%                  | Decrease by 4%                        | Increase by 5%         |

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligations to significant actuarial assumptions the same method (present value of the defined benefit obligation calculated with the projected unit credit method) has been applied as when calculating the employee benefit obligations recognised in the statements of financial position.

The weighted average duration of the defined benefit obligations is 19.2 years (2018: 19.8 years).

## 25 Share capital

|                     | Authorised share capital |           | Issued and paid-up share capital |           | Share premium on ordinary shares |
|---------------------|--------------------------|-----------|----------------------------------|-----------|----------------------------------|
|                     | Shares '000              | Baht '000 | Shares '000                      | Baht '000 | Baht '000                        |
| At 1 January 2018   | 2,700,000                | 5,400,000 | 2,606,900                        | 5,213,800 | 9,644,040                        |
| At 31 December 2018 | 2,700,000                | 5,400,000 | 2,606,900                        | 5,213,800 | 9,644,040                        |
| At 31 December 2019 | 2,700,000                | 5,400,000 | 2,606,900                        | 5,213,800 | 9,644,040                        |



**26 Subordinated perpetual bond**

On 22 November 2019, the Company issued the subordinated perpetual bond totalling Baht 8,000 million, with an issuance cost of Baht 48.33 million. The bond was recognised as an item of equity. The bond has significant terms and conditions and carries interest rate as per details below:

The subordinated perpetual bond is unguaranteed, unconvertible and will be redeemed when the Company is liquidated or when the Company exercises its right to early redeem as per terms and conditions specified. The Company has the sole right to defer interest payment and accumulated accrued interest without requirement for bondholder's consent and without time limitation.

Subordinated perpetual bond's interest rate is as follows:

| From             | To               | Interest rate                       |
|------------------|------------------|-------------------------------------|
| 22 November 2019 | 22 November 2024 | Fixed rate of 5.00%                 |
| 22 November 2024 | 22 November 2044 | 5-Year Government bond yield +3.86% |
| 22 November 2044 | 22 November 2069 | 5-Year Government bond yield +4.61% |
| 22 November 2069 | 22 November 2119 | 5-Year Government bond yield +5.61% |

As at 31 December 2019, the Company has cumulated interest expense on subordinated perpetual bond which has not been declared and recognised amounting to Baht 43.84 million.

**27 Legal reserve**

Under the Public Companies Act., B.E. 2535, the Company is required to set aside as a legal reserve at least 5 % of its net profit after accumulated deficit brought forward (if any) until the reserve is not less than 10 % of the registered capital. The legal reserve is non-distributable.

During the year ended 31 December 2019, the Company appropriated additional legal reserve amounting to Baht 42.00 million (2018: Baht 96.04 million).

**28 Sales and services income**

|                   | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                   | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Electricity sales | 43,765,663                           | 35,848,167        | 117,234                          | 1,859             |
| Services revenue  | 5,390                                | 8,620             | 261,238                          | 634,835           |
|                   | <u>43,771,053</u>                    | <u>35,856,787</u> | <u>378,472</u>                   | <u>636,694</u>    |

## 29 Other income

|                                                                                                                 | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                                                                                 | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Interest income                                                                                                 | 184,402                              | 138,531           | 767,304                          | 338,534           |
| Insurance claim                                                                                                 | 44,484                               | -                 | -                                | -                 |
| Gain from measurement of fair<br>value of equity interests held<br>before the business combination<br>(Note 36) | -                                    | 35,319            | -                                | -                 |
| Gain from bargain purchase<br>(Note 36)                                                                         | -                                    | 240,287           | -                                | -                 |
| Dividends income                                                                                                | -                                    | -                 | 950,676                          | 1,662,939         |
| Others                                                                                                          | 60,611                               | 45,600            | 1,210                            | 500               |
|                                                                                                                 | <u>289,497</u>                       | <u>459,737</u>    | <u>1,719,190</u>                 | <u>2,001,973</u>  |

## 30 Expenses by nature

The following expenditure items, classified by nature, have been charged in calculation of profit before finance cost and income tax:

|                                                          | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|----------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                          | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Gas purchase                                             | 26,617,956                           | 22,139,070        | -                                | -                 |
| Cost of sales of electricity                             | 1,120,351                            | 1,061,428         | -                                | -                 |
| Electricity supply                                       | 85,029                               | 92,609            | 1,009                            | -                 |
| Raw water                                                | 356,852                              | 299,804           | 40                               | -                 |
| Other costs of sales of electricity                      | 218,376                              | 190,160           | 5,929                            | -                 |
| Staff costs                                              | 1,656,229                            | 1,060,850         | 115,660                          | 87,182            |
| Depreciation of plant and<br>equipment (Note 16)         | 4,159,011                            | 2,974,734         | 43,928                           | 7,382             |
| Amortisation of intangible<br>assets (Note 18)           | 500,929                              | 366,275           | 38,221                           | 22,338            |
| Major repair and maintenance<br>of power plants expenses | 1,162,108                            | 1,049,743         | 36                               | -                 |
| Bank charges                                             | 53,984                               | 34,979            | 4,275                            | 4,428             |
| Consulting fees                                          | 256,854                              | 170,269           | 79,421                           | 61,185            |
| Penalties                                                | 100,960                              | 101,739           | -                                | -                 |
| Plant insurance                                          | 150,013                              | 127,694           | 578                              | 9                 |

**31 Finance costs**

|                                                                                                       | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                                                                       | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Interest on borrowings and debentures                                                                 | 2,704,584                            | 2,424,400         | 614,939                          | 334,269           |
| Interest on long-term borrowings from Amata B.Grimm Power Power Plant Infrastructure Fund (Note 37.2) | 199,319                              | 343,194           | -                                | -                 |
| Gain on exchange rate from financing activities                                                       | (569,337)                            | (89,618)          | (2,349)                          | (558)             |
| Amortisation of deferred financing fees                                                               | 41,035                               | 174,066           | 16,050                           | 9,292             |
| Finance costs from discounted long-term liabilities of power plant construction                       | 220,837                              | -                 | -                                | -                 |
| Others                                                                                                | 33,731                               | 75,519            | 8,294                            | 27,025            |
|                                                                                                       | <u>2,630,169</u>                     | <u>2,927,561</u>  | <u>636,934</u>                   | <u>370,028</u>    |

**32 Income tax**

|                                                | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| <b>Current tax:</b>                            |                                      |                   |                                  |                   |
| Current tax on profits for the year            | 243,586                              | 224,706           | -                                | -                 |
| <b>Deferred tax:</b>                           |                                      |                   |                                  |                   |
| Increase in deferred tax assets (Note 19)      | (9,086)                              | (68,586)          | (911)                            | (1,477)           |
| Increase in deferred tax liabilities (Note 19) | 671                                  | 21,087            | -                                | -                 |
| Total deferred tax                             | <u>(8,415)</u>                       | <u>(47,499)</u>   | <u>(911)</u>                     | <u>(1,477)</u>    |
| Income tax                                     | <u>235,171</u>                       | <u>177,207</u>    | <u>(911)</u>                     | <u>(1,477)</u>    |

## 32 Income tax (Cont'd)

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the basic tax rate of the home country of the Company as follows:

|                                                                  | Consolidated financial statements |                   | Separate financial statements |                   |
|------------------------------------------------------------------|-----------------------------------|-------------------|-------------------------------|-------------------|
|                                                                  | 2019<br>Baht '000                 | 2018<br>Baht '000 | 2019<br>Baht '000             | 2018<br>Baht '000 |
| Profit before tax                                                | 4,212,200                         | 3,152,986         | 839,114                       | 1,919,318         |
| Tax calculated at a tax rates of 8% to 30% (2018: 8% to 24%)     | 853,790                           | 628,862           | 167,823                       | 383,864           |
| Tax effect of:                                                   |                                   |                   |                               |                   |
| Income not subject to tax                                        | (810,047)                         | (477,602)         | (194,455)                     | (332,718)         |
| Expenses not deductible for tax purpose                          | 41,432                            | 19,463            | 12,738                        | 6,407             |
| Expenses double deductible for tax purpose                       | (9,009)                           | (12,456)          | (3,491)                       | (3,022)           |
| Tax losses for which no deferred income tax asset was recognised | 185,651                           | 70,381            | 16,474                        | -                 |
| Utilisation of previously unrecognised tax losses                | (11,732)                          | (69,913)          | -                             | (56,008)          |
| Others                                                           | (14,914)                          | 18,472            | -                             | -                 |
| Tax charge                                                       | 235,171                           | 177,207           | (911)                         | (1,477)           |
| Weighted average applicable tax rate                             | 6%                                | 6%                | -                             | -                 |

The tax charge relating to component of other comprehensive income are as follows:

|                                               | Consolidated financial statements |                         |                        |                         |                         |                        |
|-----------------------------------------------|-----------------------------------|-------------------------|------------------------|-------------------------|-------------------------|------------------------|
|                                               | 2019                              |                         |                        | 2018                    |                         |                        |
|                                               | Before tax<br>Baht '000           | Tax charge<br>Baht '000 | After tax<br>Baht '000 | Before tax<br>Baht '000 | Tax charge<br>Baht '000 | After tax<br>Baht '000 |
| Remeasurement on employee benefit obligations | 83,538                            | (8,597)                 | 74,941                 | 18,667                  | (2,377)                 | 16,290                 |
| Currency translation difference               | 528,261                           | -                       | 528,261                | 130,330                 | -                       | 130,330                |
| Other comprehensive income                    | 611,799                           | (8,597)                 | 603,202                | 148,997                 | (2,377)                 | 146,620                |

|                                               | Separate financial statements |                         |                        |                         |                         |                        |
|-----------------------------------------------|-------------------------------|-------------------------|------------------------|-------------------------|-------------------------|------------------------|
|                                               | 2019                          |                         |                        | 2018                    |                         |                        |
|                                               | Before tax<br>Baht '000       | Tax charge<br>Baht '000 | After tax<br>Baht '000 | Before tax<br>Baht '000 | Tax charge<br>Baht '000 | After tax<br>Baht '000 |
| Remeasurement on employee benefit obligations | 8,834                         | (1,767)                 | 7,067                  | 2,441                   | (488)                   | 1,953                  |
| Other comprehensive income                    | 8,834                         | (1,767)                 | 7,067                  | 2,441                   | (488)                   | 1,953                  |

**33 Earnings per share**

Basic earnings per share is calculated by dividing the net profit attributable to equity holders of the parent for the year by the weighted average number of paid-up ordinary shares in issue during the year.

|                                                                                 | Consolidated<br>financial statements |                  | Separate<br>financial statements |                  |
|---------------------------------------------------------------------------------|--------------------------------------|------------------|----------------------------------|------------------|
|                                                                                 | 2019                                 | 2018             | 2019                             | 2018             |
| Profit attributable to ordinary shareholders (Baht '000)                        | 2,331,153                            | 1,862,806        | 840,025                          | 1,920,795        |
| Less Interest expenses on perpetual debentures, net of tax (Baht '000)          | (43,836)                             | -                | (43,836)                         | -                |
| Profit used to determine earnings per share (Baht '000)                         | <u>2,287,317</u>                     | <u>1,862,806</u> | <u>796,189</u>                   | <u>1,920,795</u> |
| Weighted average number of ordinary shares for earnings per share (shares '000) | <u>2,606,900</u>                     | <u>2,606,900</u> | <u>2,606,900</u>                 | <u>2,606,900</u> |
| Basic earnings per share (Baht)                                                 | <u>0.88</u>                          | <u>0.71</u>      | <u>0.31</u>                      | <u>0.74</u>      |

**34 Dividends****2019**

On 25 April 2019, the Annual General Meeting of Shareholders approved the payment of dividends in respect of the operation results of 2018 for the 2,606,900,000 ordinary shares at Baht 0.17 per share, totalling Baht 443.17 million. These dividends were paid to shareholders on 10 May 2019.

On 13 August 2019, the Board of Directors meeting approved the payment of interim dividends in respect of the operation results of 2019 for the 2,606,900,000 ordinary shares at Baht 0.15 per share, totalling Baht 391.04 million. These dividends were paid to shareholders on 10 September 2019.

**2018**

On 26 April 2018, the Annual General Meeting of Shareholders approved the payment of dividends in respect of the operation results of 2017 for the 2,606,900,000 ordinary shares at Baht 0.30 per share, totalling Baht 782.07 million. These dividends were paid to shareholders on 11 May 2018.

On 10 August 2018, the Board of Directors meeting approved the payment of interim dividends in respect of the operation results of 2018 for the 2,606,900,000 ordinary shares at Baht 0.15 per share, totalling Baht 391.04 million. These dividends were paid to shareholders on 7 September 2018.



## 35 Financial instruments

The principal financial risks faced by the Group are interest rate and exchange rate risks. The Group borrows to finance its operations, which involve payments in foreign currencies at floating interest rates.

The objectives of using derivative financial instruments are to reduce the uncertainty over future cash flows arising from movements in interest rate and exchange rate and to manage the liquidity of cash resources.

Trading for speculative purposes is not allowed. All derivative transactions are subject to prior approval by the respective board of each company in the Group.

### Interest rate and foreign exchange rate risks

In order to manage risks arising from fluctuation in interest rates and currency exchange rates, the Group uses the following derivative financial instruments.

### Interest rate swap contracts

Interest rate swap contracts are used to manage exposure to fluctuation in interest rates on specific transactions. The Group entered into interest rate swap contracts as follows:

| Currency                                 | Long-term borrowings |                 | Notional amount of interest rate swap contracts |                 | Swap interest rates |             |
|------------------------------------------|----------------------|-----------------|-------------------------------------------------|-----------------|---------------------|-------------|
|                                          | 2019<br>Million      | 2018<br>Million | 2019<br>Million                                 | 2018<br>Million | 2019<br>%           | 2018<br>%   |
| Converting floating rates to fixed rates |                      |                 |                                                 |                 |                     |             |
| - Thai Baht                              | 15,684.50            | 16,163.43       | 17,154.66                                       | 19,984.82       | 2.59 - 4.55         | 2.59 - 4.55 |
| - US Dollar                              | 314.95               | 293.67          | 314.04                                          | 337.89          | 2.11 - 6.49         | 1.75 - 6.49 |
| Converting fixed rates to floating rates |                      |                 |                                                 |                 |                     |             |
| - Thai Baht                              | -                    | -               | -                                               | 1,079.24        | -                   | THBFIX      |
| - US Dollar                              | -                    | -               | -                                               | 17.16           | -                   | LIBOR       |

The remaining notional principal amounts of the outstanding interest rate swap contracts for long-term borrowings as at 31 December are as follows:

|                   | Consolidated financial statements |                      |
|-------------------|-----------------------------------|----------------------|
|                   | 2019<br>Million Baht              | 2018<br>Million Baht |
| Within 1 year     | 3,329.81                          | 5,949.36             |
| Later than 1 year | 23,350.22                         | 26,694.67            |
|                   | <u>26,680.03</u>                  | <u>32,644.03</u>     |

**35 Financial instruments (Cont'd)****Forward and cross-currency swap contracts**

Forward and cross-currency swap contracts are used to manage exposure to fluctuation in currency exchange rates and interest rates.

The subsidiaries entered into forward contracts for hedging foreign exchange risk for the payments under construction agreements, long-term service agreements and supply agreements and entered into cross-currency swap contracts for the repayments of long-term borrowings.

As at 31 December, forward and cross-currency swap contracts converted to Thai Baht are as follows:

|              | Consolidated financial statements |                 |                 |                 |
|--------------|-----------------------------------|-----------------|-----------------|-----------------|
|              | Unit local currency               |                 | Unit Baht       |                 |
|              | 2019<br>Million                   | 2018<br>Million | 2019<br>Million | 2018<br>Million |
| US Dollar    | 174.40                            | 177.09          | 5,865.79        | 5,951.89        |
| Japanese Yen | -                                 | 167.72          | -               | 48.89           |

The net fair values of the derivative financial instruments at the date of financial statements are as follows:

|                        | Consolidated financial statements |                      |
|------------------------|-----------------------------------|----------------------|
|                        | 2019<br>Million Baht              | 2018<br>Million Baht |
| Favourable             |                                   |                      |
| - Interest rate swaps  | -                                 | 33.86                |
| - Cross-currency swaps | 719.15                            | 239.97               |
| Unfavourable           |                                   |                      |
| - Interest rate swaps  | (2,600.41)                        | (1,756.90)           |
| - Forward contracts    | -                                 | (0.40)               |
| - Cross-currency swaps | -                                 | (25.44)              |

The valuation techniques of interest rate swaps are calculated as the present value of the estimated future cash flows based on observable yield curve. The valuation techniques of forward and cross-currency swaps contracts are determined using forward exchange rates at the date of financial statements, with the resulting value discounted back to present value. The fair values are within level 2 of the fair value hierarchy.

## 36 Business combination

### 2019

On 13 March 2019, B.Grimm Power Service (Laem Chabang) Limited, an indirect subsidiary, acquired 100% equity interest in GSPP1, for a consideration of Baht 3,300 million. As a result, GSPP1 becomes a subsidiary of the Group. The investment is considered as a business combination under TFRS 3 - Business Combinations.

The following table summarises the consideration paid for acquiring GSPP1 and the amounts of the assets acquired and liabilities assumed recognised at the acquisition date.

#### Consideration paid on 13 March 2019:

|                                                                                                           | Baht '000        |
|-----------------------------------------------------------------------------------------------------------|------------------|
| Cash                                                                                                      | 3,300,000        |
| <b>Recognised amounts of identifiable assets acquired and liabilities assumed on the acquisition date</b> |                  |
| Cash and cash equivalents                                                                                 | 472,157          |
| Trade and other receivables                                                                               | 689,111          |
| Spare parts and supplies                                                                                  | 56,508           |
| Property, plant and equipment                                                                             | 1,976,536        |
| Intangible assets                                                                                         | 12,499           |
| Right in power purchase agreement                                                                         | 225,000          |
| Other current assets                                                                                      | 23,326           |
| Other non-current assets                                                                                  | 2,691            |
| Trade and other payables                                                                                  | (439,125)        |
| Other current liabilities                                                                                 | (42,273)         |
| Employee benefit obligations                                                                              | (19,017)         |
| Deferred tax liabilities                                                                                  | (114,605)        |
| Identifiable net assets                                                                                   | 2,842,808        |
| Goodwill                                                                                                  | 457,192          |
| <b>Net assets from acquisition</b>                                                                        | <b>3,300,000</b> |

The consolidated statement of comprehensive income for the year ended 31 December 2019 included revenue and profit contributed by GSPP1 since the acquisition date amounting to Baht 2,420.68 million and Baht 220.24 million, respectively.

If GSPP1 had been consolidated from 1 January 2019, the consolidated statement of comprehensive income for the year ended 31 December 2019 would have shown revenue of Baht 44,633.26 million and profit of Baht 4,015.51 million.

#### Disposal of interest in a subsidiary without lossing control

On 24 December 2019, B.Grimm Power Service (Laem Chabang) Limited disposed 25% interests held in GSPP1 for a consideration of Baht 825 million. The carrying amount of the non-controlling interests (25% interest) in GSPP1 on the date of disposal was Baht 869.39 million. The Group therefore recognised an increase in non-controlling interests amounting to Baht 869.39 million and a decrease in equity attributable to owners of the parent amounting to Baht 44.39 million.

The effect of changes in the parent's ownership interest in GSPP1 is summarised as follows:

|                                                       | Baht '000 |
|-------------------------------------------------------|-----------|
| Carrying amount of disposed non-controlling interests | 869,385   |
| Consideration received from non-controlling interests | 825,000   |
| Decrease in parent's equity                           | 44,385    |

**36 Business combination (Cont'd)****2018**

On 2 July 2018, the Company acquired an additional 51% ordinary shares of B.Grimm Yanhee Solar Power Limited ("BGYSP") from the joint venture party for a consideration of Baht 600 million. As a result, the Group's interests in BGYSP increased from 49% to 99.99% and the status of investment in BGYSP changed from a joint venture to a subsidiary. Such investment is a step-up acquisition under TFRS 3 - Business Combinations. The Group is required to measure the fair value of 49% equity interests in BGYSP before the business combination on the acquisition date as follows.

|                                                                                              | <b>Baht '000</b> |
|----------------------------------------------------------------------------------------------|------------------|
| Book value of equity interests held before the acquisition                                   | 606,578          |
| Fair value of equity interests held before the acquisition                                   | <u>641,897</u>   |
| Gain from measurement of fair value of equity interests held before the business combination | <u>35,319</u>    |

The following table summarises the consideration paid for BGYSP and the amounts of the assets acquired and liabilities assumed recognised at the acquisition date.

**Consideration paid on 2 July 2018:**

|                                                                                                           | <b>Baht '000</b> |
|-----------------------------------------------------------------------------------------------------------|------------------|
| Cash                                                                                                      | 600,000          |
| Fair value of equity interests in BGYSP held before the business combination                              | <u>641,897</u>   |
| <b>Total consideration</b>                                                                                | <u>1,241,897</u> |
| <b>Recognised amounts of identifiable assets acquired and liabilities assumed on the acquisition date</b> |                  |
| Cash and cash equivalents                                                                                 | 268,573          |
| Trade and other receivables                                                                               | 121,419          |
| Spare parts and supplies                                                                                  | 9,420            |
| Other current assets                                                                                      | 11               |
| Plant and equipment, net                                                                                  | 3,208,226        |
| Intangible assets                                                                                         | 291,701          |
| Right in power purchase agreement                                                                         | 429,301          |
| Other non-current assets                                                                                  | 164,548          |
| Trade and other payables                                                                                  | (21,399)         |
| Other current liabilities                                                                                 | (5,847)          |
| Borrowings                                                                                                | (2,942,449)      |
| Deferred tax liabilities                                                                                  | <u>(41,320)</u>  |
| Identifiable net assets                                                                                   | 1,482,184        |
| Gain from a bargain purchase                                                                              | <u>240,287</u>   |
| <b>Total</b>                                                                                              | <u>1,241,897</u> |

## 36 Business combination (Cont'd)

### 2018 (Cont'd)

The Group recognised a gain from measurement of fair value of 49% equity interests in BGYSP held before the business combination amounting to Baht 35.32 million and a gain from bargain purchase amounting to Baht 240.29 million in other income in the Group's statement of comprehensive income for the year ended 31 December 2018.

The consolidated statement of comprehensive income for the year ended 31 December 2018 included revenue and profit contributed by BGYSP since the acquisition date amounting to Baht 230.67 million and Baht 14.53 million, respectively.

If BGYSP had been consolidated from 1 January 2018, the consolidated statement of comprehensive income for the year ended 31 December 2018 would have shown revenue of Baht 36,818.19 million and profit of Baht 3,057.15 million.

## 37 Related-party transactions

Individuals and entities that directly or indirectly control or are controlled by or are under common controls with the Company, including investment entities, associates, joint ventures and individuals or entities having significant influence over the Company, key management personnel, including directors and officers of the Company and close members of the family of these individuals and entities controlled or jointly controlled by these individuals also constitute related parties.

In considering each possible related-party relationship, attention is directed to the substance of the relationship, and not merely the legal form.

The major shareholders of the Company are the B.Grimm Power (Singapore) PTE. LTD. and Mr. Harald Link who own 33.99% and 24.30% of the Company's shares, respectively. The ultimate controlling party is Mr. Harald Link. The information on the Company's subsidiaries is provided in Note 13.

The following transactions were carried out with related parties:

### 37.1 Revenues and other income

|                                                    | Consolidated financial statements |                   | Separate financial statements |                   |
|----------------------------------------------------|-----------------------------------|-------------------|-------------------------------|-------------------|
|                                                    | 2019<br>Baht '000                 | 2018<br>Baht '000 | 2019<br>Baht '000             | 2018<br>Baht '000 |
| <b>Revenue</b>                                     |                                   |                   |                               |                   |
| Electricity sales:                                 |                                   |                   |                               |                   |
| Company under control of non-controlling interests | 24,072                            | 25,061            | -                             | -                 |
| Service income:                                    |                                   |                   |                               |                   |
| Subsidiaries                                       | -                                 | -                 | 257,238                       | 626,215           |
| Joint ventures                                     | 4,000                             | 8,620             | 4,000                         | 8,620             |
|                                                    | 4,000                             | 8,620             | 261,238                       | 634,835           |
| <b>Other income</b>                                |                                   |                   |                               |                   |
| Interest income:                                   |                                   |                   |                               |                   |
| Subsidiaries                                       | -                                 | -                 | 711,911                       | 293,690           |
| Joint ventures                                     | 4,035                             | 292               | 3,500                         | 292               |
| Other related parties                              | -                                 | 4,809             | -                             | 4,809             |
|                                                    | 4,035                             | 5,101             | 715,411                       | 298,791           |
| <b>Dividend income</b>                             |                                   |                   |                               |                   |
| Subsidiaries                                       | -                                 | -                 | 950,676                       | 1,662,939         |



**37 Related-party transactions (Cont'd)****37.2 Expenses**

|                                           | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|-------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                           | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Purchases of raw water from:              |                                      |                   |                                  |                   |
| Company under control                     |                                      |                   |                                  |                   |
| of non-controlling interests              | 204,479                              | 190,205           | -                                | -                 |
| Non-controlling interests of subsidiaries | 60,101                               | 55,635            | -                                | -                 |
|                                           | <u>264,580</u>                       | <u>245,840</u>    | <u>-</u>                         | <u>-</u>          |
| Interest expense:                         |                                      |                   |                                  |                   |
| Subsidiaries                              | -                                    | -                 | -                                | 404               |
| Associate                                 | 199,319                              | 343,194           | -                                | -                 |
| Other related parties                     | 511                                  | -                 | -                                | -                 |
|                                           | <u>199,830</u>                       | <u>343,194</u>    | <u>-</u>                         | <u>404</u>        |
| Rental and office service:                |                                      |                   |                                  |                   |
| Entities under common control             | 43,228                               | 41,691            | -                                | -                 |

**37.3 Trade and other receivables**

|                                 | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|---------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                 | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| <b>Trade receivables:</b>       |                                      |                   |                                  |                   |
| Subsidiaries                    | -                                    | -                 | 29,265                           | 22,170            |
| Joint ventures                  | 357                                  | 464               | 357                              | 464               |
| Other related parties           | 424                                  | 367               | -                                | -                 |
|                                 | <u>781</u>                           | <u>831</u>        | <u>29,622</u>                    | <u>22,634</u>     |
| <b>Accrued interest income:</b> |                                      |                   |                                  |                   |
| Subsidiaries                    | -                                    | -                 | 1,111,911                        | 524,792           |
| Joint ventures                  | 1,984                                | 292               | 1,449                            | 292               |
|                                 | <u>1,984</u>                         | <u>292</u>        | <u>1,113,360</u>                 | <u>525,084</u>    |
| <b>Dividend receivables:</b>    |                                      |                   |                                  |                   |
| Subsidiaries                    | -                                    | -                 | 441,002                          | 703,358           |
| <b>Other receivables:</b>       |                                      |                   |                                  |                   |
| Subsidiaries                    | -                                    | -                 | 211,620                          | 193,098           |
| Joint ventures                  | 28,477                               | 43,016            | 22,016                           | 43,010            |
| Other related parties           | 4,048                                | 63,994            | -                                | -                 |
|                                 | <u>32,525</u>                        | <u>107,010</u>    | <u>233,636</u>                   | <u>236,108</u>    |

### 37 Related-party transactions (Cont'd)

#### 37.4 Trade and other payables

|                          | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|--------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                          | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| <b>Trade payables:</b>   |                                      |                   |                                  |                   |
| Subsidiaries             | -                                    | -                 | 29,334                           | -                 |
| <b>Other payables:</b>   |                                      |                   |                                  |                   |
| Subsidiaries             | -                                    | -                 | 125,072                          | 368,749           |
| Joint ventures           | 17                                   | 18                | 17                               | 18                |
| Other related parties    | 12,104                               | 12,409            | 485                              | 373               |
|                          | 12,121                               | 12,427            | 125,574                          | 369,140           |
| <b>Accrued interest:</b> |                                      |                   |                                  |                   |
| Associate                | 80,298                               | 207,777           | -                                | -                 |

#### 37.5 Short-term loans to related parties

|                | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|----------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Subsidiaries   | -                                    | -                 | 739,448                          | 7,941,830         |
| Joint ventures | 218,273                              | 18,240            | 132,228                          | 18,240            |
|                | 218,273                              | 18,240            | 871,676                          | 7,960,070         |

The movements of short-term loans to related parties during the year are as follows:

|                                                   | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|---------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                   | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| At 1 January                                      | 18,240                               | 207,000           | 7,960,070                        | 5,087,756         |
| Additions                                         | 2,111,073                            | 18,240            | 8,159,993                        | 4,035,307         |
| Transfer to long-term loans<br>to related parties | -                                    | -                 | (12,500,187)                     | -                 |
| Transfer to long-term loan<br>to others           | -                                    | (179,000)         | -                                | (179,000)         |
| Repayments                                        | (1,911,040)                          | (28,000)          | (2,748,200)                      | (983,993)         |
| At 31 December                                    | 218,273                              | 18,240            | 871,676                          | 7,960,070         |

Short-term loans to related parties are unsecured and denominated in Thai Baht. The loans carry interest rate at fixed rate per annum (2018: MLR minus certain margin per annum). The principles and interests are repayable at call and within 2020.

The carrying amounts of short-term loans to related parties approximate their fair values as the effect of discounted cash flows is insignificant.

**37 Related-party transactions (Cont'd)****37.6 Long-term loans to related parties**

|                     | Separate<br>financial statements |                   |
|---------------------|----------------------------------|-------------------|
|                     | 2019<br>Baht '000                | 2018<br>Baht '000 |
| <b>Subsidiaries</b> |                                  |                   |
| Due within 1 year   | 453,570                          | 237,052           |
| Due over 1 year     | 18,596,979                       | 6,838,814         |
|                     | <u>19,050,549</u>                | <u>7,075,866</u>  |

The movements of long-term loans to related parties for the year ended 31 December are as follows:

|                                                   | Separate<br>financial statements |                   |
|---------------------------------------------------|----------------------------------|-------------------|
|                                                   | 2019<br>Baht '000                | 2018<br>Baht '000 |
| At 1 January                                      | 7,075,866                        | 1,137,948         |
| Additions                                         | 998,383                          | 6,296,317         |
| Transfer from short-term loans to related parties | 12,500,187                       | -                 |
| Repayments                                        | (1,519,485)                      | (358,399)         |
| Exchange differences                              | (4,402)                          | -                 |
| At 31 December                                    | <u>19,050,549</u>                | <u>7,075,866</u>  |

Long-term loans to related parties are unsecured and denominated in Thai Baht and US Dollars. The loans carry interest rate at fixed rate and MLR less certain margin per annum. The principles and interests are repayable from 2020 to 2040.

The fair values are based on discounted cash flows using a discount rate based upon the market borrowing rate at the statements of financial position date. The carrying amounts of long-term loans to related parties approximate their fair values. The fair values are within level 2 of the fair value hierarchy.

**37.7 Short-term borrowing from a related party**

During the fourth quarter of 2018, a subsidiary in Vietnam entered into a short-term borrowing agreement with shareholder, denominated in VND, totalling VND 3,800 million (equivalent to Baht 5.31 million). Such borrowing bears fixed interest rate of 5% per annum. The principle and interest payments are to be paid at call.

During the fourth quarter of 2019, the subsidiary fully repaid the short-term borrowing.

### 37 Related-party transactions (Cont'd)

#### 37.8 Long-term borrowings from related party

|              | Consolidated<br>financial statements |                   |
|--------------|--------------------------------------|-------------------|
|              | 2019<br>Baht '000                    | 2018<br>Baht '000 |
| An associate | 2,384,500                            | 3,558,000         |

On 19 September 2013, the Group enter into the revenue sharing agreement ("the Agreement") with Amata B.Grimm Power Power Plant Infrastructure Fund ("the Fund") to borrow Baht 6,202 million for the purposes of the Group's funding support.

Under the Agreement, the Group commits to transfer the benefits from the electricity generated to the Fund which cover the period from 1 January 2013 to 27 September 2022. The installments and interest payments are to be made every six-month. The Agreement has expiration date on 16 September 2019 for Amata B.Grimm Power 1 Limited and on 27 September 2022 for Amata B.Grimm Power 2 Limited. The interest has been calculated based on operating results and the remaining cash flows of each period of each subsidiary less with the principal repayment of each period which has been set out under the Agreement.

According to the conditions specified in the Agreement, any liabilities obligated by the Group as of the expiration date of the Agreement shall be terminated.

The movements of long-term borrowings from related party during the year ended 31 December are as follows:

|                        | Consolidated<br>financial statements |                   |
|------------------------|--------------------------------------|-------------------|
|                        | 2019<br>Baht '000                    | 2018<br>Baht '000 |
| Opening net book value | 3,558,000                            | 4,085,000         |
| Repayments             | (1,173,500)                          | (527,000)         |
| Closing net book value | 2,384,500                            | 3,558,000         |

Maturity of long-term borrowings from related party are as follows:

|                                              | Consolidated<br>financial statements |                   |
|----------------------------------------------|--------------------------------------|-------------------|
|                                              | 2019<br>Baht '000                    | 2018<br>Baht '000 |
| Within 1 year                                | 608,500                              | 883,000           |
| Later than 1 year but not later than 5 years | 1,776,000                            | 2,675,000         |
|                                              | 2,384,500                            | 3,558,000         |

As at 31 December 2019, the fair value of long-term borrowings from related party is Baht 2,616.85 million (2018: Baht 4,175.22 million) which has been calculated based on estimated future cash outflows discounted with the rate which reflects related risks of the subsidiary, at the rate 5.07% per annum (2018: 4.86% to 5.08% per annum). The fair value is within level 3 of the fair value hierarchy.

**37 Related-party transactions (Cont'd)****37.9 Key management compensation**

Key management includes directors (executive and non-executive) and members of the executive committee. The compensation paid or payable to key management are as follows:

|                                                 | <b>Consolidated<br/>financial statements</b> |                           |
|-------------------------------------------------|----------------------------------------------|---------------------------|
|                                                 | <b>2019<br/>Baht '000</b>                    | <b>2018<br/>Baht '000</b> |
| Salaries and other short-term employee benefits | 109,408                                      | 112,888                   |
| Post-employment benefits                        | 1,332                                        | 8,099                     |
| Other long-term benefits                        | 11                                           | 12                        |
| Share-based payments for key management         | 9,448                                        | 9,448                     |
|                                                 | <b>120,199</b>                               | <b>130,447</b>            |

**38 Share-based payments**

On 16 May 2017, the Group put in place a 'Special Remuneration Scheme' for its directors and employees where participating employees will be granted the right to use their remuneration to subscribe for initial public offering shares (IPO shares) at the IPO share price. This is provided that they enter into an agreement with the Company or its subsidiaries to continue their employment for next four calendar years (the lock-up period). If the employees resign before the lock-up period, they will be forced to sell all of their shares to other parties in the market and return the proceed from sales to the Group.

The movements of the number of shares under the Special Remuneration Scheme during the year are as follows:

|                                                                | <b>Consolidated<br/>financial statements</b> | <b>Separate<br/>financial statements</b> |
|----------------------------------------------------------------|----------------------------------------------|------------------------------------------|
|                                                                | <b>Shares</b>                                | <b>Shares</b>                            |
| At 1 January 2018                                              | 10,516,700                                   | 1,068,100                                |
| Vested                                                         | (90,900)                                     | -                                        |
| Cancellation due to non-compliance with the service conditions | (189,400)                                    | -                                        |
| At 31 December 2018                                            | <b>10,236,400</b>                            | <b>1,068,100</b>                         |
| At 1 January 2019                                              | 10,236,400                                   | 1,068,100                                |
| Vested                                                         | (151,300)                                    | -                                        |
| Cancellation due to non-compliance with the service conditions | (73,200)                                     | -                                        |
| At 31 December 2019                                            | <b>10,011,900</b>                            | <b>1,068,100</b>                         |

The fair value of shares at the grant date determined using the discounted cash flows model was Baht 16.50 per share. The significant input using for the model was the forecasted future free cash flows of the Group.



### 38 Share-based payments (Cont'd)

The principal assumptions used in the discounted cash flow were:

|                | Consolidated<br>financial statements |
|----------------|--------------------------------------|
| Risk free rate | 3 %                                  |
| Risk premium   | 8 %                                  |
| Beta           | 0.79                                 |

The amounts recognised in the financial statements:

| For the year ended 31 December                                       | Consolidated<br>financial statements |                   | Separate<br>financial statements |                   |
|----------------------------------------------------------------------|--------------------------------------|-------------------|----------------------------------|-------------------|
|                                                                      | 2019<br>Baht '000                    | 2018<br>Baht '000 | 2019<br>Baht '000                | 2018<br>Baht '000 |
| Investments in subsidiaries, in the statements of financial position | -                                    | -                 | 16,140                           | 17,763            |
| Share-based payments to employees, included in operating profit      | 46,866                               | 47,237            | 2,650                            | 2,650             |
| Reversed other reserve - share-based payments                        |                                      |                   |                                  |                   |
| - Vested                                                             | (2,421)                              | (2,413)           | -                                | -                 |
| - Cancellation due to non-compliance with the service conditions     | (1,774)                              | (1,418)           | -                                | -                 |

### 39 Commitments and significant agreements

#### 39.1 Capital expenditure commitments

Capital expenditure contracted at the statement of financial position date but not recognised in the financial statements is as follows:

As at 31 December, there were capital commitments expenditure in respect of the power plant construction and purchases of machineries and equipment which have not been recognised as follows:

|                 | Consolidated<br>financial statements |                   |
|-----------------|--------------------------------------|-------------------|
|                 | 2019<br>Baht '000                    | 2018<br>Baht '000 |
| Thai Baht       | 2,145,178                            | 113,400           |
| US Dollar       | 49,255                               | 503,256           |
| Euro            | -                                    | 535               |
| Vietnamese Dong | 5,435,615                            | 32,264,202        |
| Kip             | 667,638                              | 2,291,502         |

**39 Commitments and significant agreements (Cont'd)****39.2 Operating lease commitments - where the Group is the lessee**

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

|                                              | Consolidated financial statements |                   | Separate financial statements |                   |
|----------------------------------------------|-----------------------------------|-------------------|-------------------------------|-------------------|
|                                              | 2019<br>Baht '000                 | 2018<br>Baht '000 | 2019<br>Baht '000             | 2018<br>Baht '000 |
| Not later than 1 year                        | 84,657                            | 97,454            | 8,350                         | 6,932             |
| Later than 1 year but not later than 5 years | 193,994                           | 143,420           | 10,991                        | 10,748            |
| Later than 5 years                           | 950,777                           | 468,149           | -                             | -                 |
|                                              | <u>1,229,428</u>                  | <u>709,023</u>    | <u>19,341</u>                 | <u>17,680</u>     |

**39.3 Letter of guarantee and standby letter of credit**

|                                                         | Currency<br>(Million) | Consolidated financial statements |          | Separate financial statements |        |
|---------------------------------------------------------|-----------------------|-----------------------------------|----------|-------------------------------|--------|
|                                                         |                       | 2019                              | 2018     | 2019                          | 2018   |
| Additional paid-up for ordinary shares                  | THB                   | 119.83                            | 482.71   | 44.83                         | 180.58 |
| Bank guarantee for power plant project bidding          | THB                   | 300.00                            | 300.00   | 300.00                        | 300.00 |
| Bank guarantee to the EGAT according to PPA (Note 39.4) | THB                   | 3,462.56                          | 3,031.19 | 334.12                        | 180.00 |
| Bank guarantee to the PEA                               | THB                   | 93.79                             | 131.19   | 7.20                          | 7.20   |
| Bank guarantee to Electricite Du Cambodge               | USD                   | 0.29                              | -        | -                             | -      |
| Bank guarantee to the War Veterans Organization         | THB                   | 164.38                            | 212.38   | 164.38                        | 212.38 |
| Bank guarantee to the Energy Regulatory Commission      | THB                   | -                                 | 12.00    | -                             | 12.00  |
| Bank guarantee to agricultural cooperatives             | THB                   | 2.20                              | -        | 2.20                          | -      |
| Bank guarantee for power plant construction agreements  | THB                   | 250.00                            | 250.00   | 250.00                        | 250.00 |
| Bank guarantee for power plant construction agreements  | USD                   | 223.53                            | 200.95   | 223.53                        | 200.95 |
| Bank guarantee for other purposes                       | THB                   | 23.38                             | 15.38    | 6.00                          | -      |

## 39 Commitments and significant agreements (Cont'd)

### 39.4 Significant agreements

#### *Power purchase agreements*

#### *Domestic*

As at 31 December 2019, the Group has 43 power purchase agreements ("PPA") (2018: 41 PPA) with the Electricity Generating Authority of Thailand ("EGAT"), the Provincial Electricity Authority ("PEA") and the Metropolitan Electricity Authority ("MEA"). Currently, the Group has commenced the production and distribution of electricity under 39 PPA (2018: 36 PPA). The agreements are summarised as follows:

|                                            | The electricity generating system | Company        | Number of agreement | Production capacity (MW) | The term of the agreements                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------|-----------------------------------|----------------|---------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Production and distribution of electricity | Combined cycle cogeneration       | Subsidiaries   | 16                  | 1,951.4                  | The agreements are for the period of 21 to 25 years commencing from the first commercial operation date ("COD"). According to the PPA, the subsidiaries are required to comply with the conditions set out in the PPA. Furthermore, the subsidiaries are required to provide bank guarantees for the obligation of the agreements. The collateral is to be return to such subsidiaries upon the expiry of the agreements (Note 39.3). |
|                                            | Industrial waste                  | Joint venture  | 1                   | 4                        | The agreement is for the period of 20 years commencing from the first COD. According to the PPA, joint venture is required to comply with the conditions set out in the PPA.                                                                                                                                                                                                                                                          |
|                                            | Solar farms                       | The Company    | 4                   | 18.6                     | The agreements are for the period of 25 years commencing from the first COD. According to the PPA, the Group is required to comply with the conditions set out in the PPA.                                                                                                                                                                                                                                                            |
|                                            |                                   | Subsidiaries   | 12                  | 80                       |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                            |                                   | Joint ventures | 6                   | 46.5                     |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Under development                          | Combined cycle cogeneration       | Subsidiaries   | 2                   | 240                      | The agreements are for the period of 25 years commencing from the first COD. According to the PPA, the subsidiaries are required to comply with the conditions set out in the PPA. Furthermore, the subsidiaries are required to provide bank guarantees for the obligation of the agreements. The collateral is to be return to such subsidiaries upon the expiry of the agreements (Note 39.3).                                     |
|                                            | Wind energy                       | Subsidiaries   | 2                   | 16                       | The agreements are for the period of 5 years and will be automatically renewed for an additional 5 years every time until the contracts are terminated.                                                                                                                                                                                                                                                                               |

**39 Commitments and significant agreements (Cont'd)****39.4 Significant agreements (Cont'd)***Power purchase agreements (Cont'd)**Overseas*

As at 31 December 2019, the Group has 11 PPA (2018: 9 PPA) with the Electricite Du Laos ("EDL"), the Electricite Du Vietnam ("EVN") and Electricite Du Cambodge ("EDC"). Currently, the Group has commenced the production and distribution of electricity under 4 PPA (2018: 1 PPA). The overseas agreements are summarised as follows:

|                                            | The electricity generating system | Company      | Country of incorporation | Number of agreement | Production capacity (MW) | The term of the agreements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------|-----------------------------------|--------------|--------------------------|---------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Production and distribution of electricity | Hydro power                       | Subsidiaries | Lao PDR                  | 2                   | 35.1                     | The subsidiaries were awarded concession agreements by the Government of the Laos People's Democratic Republic ("GOL") to build, own, and operate a Hydropower project ("the Project") to provide generating capacity and distributing electricity to EDL. The concessions period are effective for the period of 50 years commencing from the date of concession agreement. At the end of the concession period, subsidiaries are subjected to transfer all of its right title and interest in the Project to GOL. According to a concession agreement, the overseas subsidiaries entered into PPA with EDL. The PPA is effective for the period of 25 years commencing from the first COD. |
|                                            | Solar farms                       | Subsidiaries | Vietnam                  | 2                   | 677                      | The agreements are for the period of 20 years commencing from the first COD. According to the PPA, subsidiaries are required to comply with the conditions set out in the PPA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Under development                          | Hydro power                       | Subsidiaries | Lao PDR                  | 6                   | 127.5                    | The subsidiaries were awarded concession agreements by the Government of the Laos People's Democratic Republic ("GOL") to build, own, and operate a Hydropower project ("the Project") to provide generating capacity and distributing electricity to EDL. The concessions period are effective for the period of 50 years commencing from the date of concession agreement. At the end of the concession period, subsidiaries are subjected to transfer all of its right title and interest in the Project to GOL. According to a concession agreement, the overseas subsidiaries entered into PPA with EDL. The PPA is effective for the period of 25 years commencing from the first COD. |
|                                            | Solar farms                       | Subsidiaries | Cambodia                 | 1                   | 30                       | The agreements are for the period of 20 years commencing from the first COD. According to the PPA, subsidiaries are required to comply with the conditions set out in the PPA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 39 Commitments and significant agreements (Cont'd)

#### 39.4 Significant agreements (Cont'd)

##### *Gas purchase agreements*

- a) 16 subsidiaries entered into gas purchase agreements with PTT Public Company Limited. The agreements are effective for the periods of 21 and 25 years commencing from the trading dates. The sale quantities and their prices must be complied with the agreements. The agreements can be extended by the parties upon the conditions as specified in the agreements.

##### *Water purchase agreements*

- b) 16 subsidiaries entered into water purchase agreements with the sellers in industrial parks to provide water to be used in the electricity generating system. The agreements are effective for the period of 21 and 25 years and can be extended for another period with the conditions mutually agreed by the parties.

##### *Other agreements*

- c) 11 subsidiaries entered into long-term service agreements for power plant equipment. The agreements are effective for the periods of 8 and 9 years commencing from COD and it can be extended for another period with the conditions as specified in the agreements.

On 27 September 2018, a subsidiary extended period of such agreement from 8 years to 22 years. The extension incurred incremental contract cost amounting to Swedish Krona 270.54 million and Baht 87.44 million.

On 29 June 2019, four subsidiaries extended period of such agreements from 8 years to 15 years and 22 years. The extension incurred incremental contract cost amounting to Swedish Krona 818.62 million and Baht 265.21 million.

On 30 December 2019, a subsidiary extended period of such agreements from 8 years to 15 years. The extension incurred incremental contract cost amounting to Swedish Krona 137.33 million and Baht 44.16 million.

- d) On 18 May 2016, a subsidiary entered into land sale and purchase agreements with 2 sellers ("the Sellers") for the purpose of developing 33 solar farm projects. There are 33 agreements, totalling contracts amount is Baht 8,277.25 million. As at 31 December 2019, the subsidiary has remaining deposit for land purchase under such agreements totalling Baht 450.52 million (2018: Baht 450.52 million). Under the agreements, a subsidiary is entitled to receive the return of deposit in case of the transfer of each land is no longer beneficial to a subsidiary.



### 39 Commitments and significant agreements (Cont'd)

#### 39.4 Significant agreements (Cont'd)

- e) The Company entered into a sponsor support agreement facility to secure borrowing of a subsidiary amounting to US Dollar 29.12 million.
- f) During 2017, the Group entered into joint investment agreements for granting right to sell electricity with the War Veterans Organization of Thailand and the Agricultural Cooperative under the state agencies' and agricultural cooperatives' solar farm projects B.E. 2560 (2017), totalling 7 projects with the total capacity of 30.83 megawatts. Under such agreements, the Group is required to comply with the conditions specified in the agreements.
- g) On 10 December 2018, a direct subsidiary in Lao PDR entered into a share purchase agreement for the 15% additional investment in its subsidiary. The direct subsidiary paid US Dollar 2 million, equivalent to Baht 60.31 million (2018: US Dollar 2 million, equivalent to Baht 64.90 million) (Note 20) as down payment for the investment. The direct subsidiary is entitled to receive the down payment refunded with interest from the seller if the seller fail to comply with conditions specified in the agreement.
- h) On 24 December 2018, two subsidiaries entered into two land purchase agreements from a seller, totalling Baht 387.15 million for future power plant development projects. As at 31 December 2019, the two subsidiaries had made down payment for land purchase, totalling Baht 193.57 million (2018: Baht 193.57 million). The subsidiaries are entitled to receive the down payment refunded if the seller cannot comply with conditions specified in the agreements.
- i) On 1 August 2019, a subsidiary entered into land purchase agreements from a seller. Total contract amount is Baht 16.66 million. As at 31 December 2019, a subsidiary had made a full payment for land purchase which is under the process of ownership transfer.
- j) During 2019, two subsidiaries entered into land purchase agreements from a seller. Total contract amount is Baht 312.00 million for the purpose of future power plant development projects. As at 31 December 2019, the two subsidiaries had made down payment for land purchase, totalling Baht 31.20 million. The subsidiaries are entitled to receive the down payment refunded if the seller cannot comply with conditions specified in the agreements.
- k) On 28 November 2019, a subsidiary entered into land purchase agreements from a seller. Total contract amount is US Dollar 6.5 million (equivalent to Baht 199.82 million) for the purpose of future solar power plant development projects. As at 31 December 2019, a subsidiary made a full payment for land purchase which is under the process of ownership transfer.

#### **40 Promotional privileges**

The Group has been granted promotional privileges by the Office of the Board of Investment (“BOI”) under promotion certificates in respect of electricity and steam generating. The Company and 22 subsidiaries have been granted exemption from certain taxes and duties as detailed in the certificates including exemption from corporate income tax for the period of 8 years from the date of first revenue. As promoted entities, these subsidiaries are required to comply with the terms and conditions specified in the promotion certificates. Five subsidiaries in Lao PDR and two subsidiaries in Vietnam are also granted with promotional privileges from the Investment Promotion Department in Lao PDR and Vietnam for operating business in generating electricity and investing in electric power business. The privileges provide four subsidiaries with exemption from certain taxes and duties as stated in promotion certificates. Privileged period could varies from 3 to 13 years depending on the Investment Promotion Department in Lao PDR, grantor of the right.

#### **41 Events occurring after the reporting date**

On 29 January 2020, Bothong Wind Farm Limited, a direct subsidiary, increased authorised share capital from Baht 300 million to Baht 426 million by issuing new ordinary shares of 12,600,000 shares with a par value of Baht 10 each. The company paid-up the cash to maintain the same proportion of holdings at Baht 2.5 per share, totalling Baht 23.31 million.

## Definitions

Unless otherwise defined in this document, the following terms shall have the following meanings:

|                          |                                                                                             |
|--------------------------|---------------------------------------------------------------------------------------------|
| <b>ABP</b>               | Amata B.Grimm Power Limited                                                                 |
| <b>ABP1</b>              | Amata B.Grimm Power 1 Limited                                                               |
| <b>ABP2</b>              | Amata B.Grimm Power 2 Limited                                                               |
| <b>ABP3</b>              | Amata B.Grimm Power 3 Limited                                                               |
| <b>ABP4</b>              | Amata B.Grimm Power 4 Limited                                                               |
| <b>ABP5</b>              | Amata B.Grimm Power 5 Limited                                                               |
| <b>ABPH</b>              | Amata B.Grimm Power Holding Limited                                                         |
| <b>ABPIF</b>             | Amata B. Grimm Power Plant Infrastructure Fund                                              |
| <b>ABPR1</b>             | Amata B.Grimm Power (Rayong) 1 Limited                                                      |
| <b>ABPR2</b>             | Amata B.Grimm Power (Rayong) 2 Limited                                                      |
| <b>ABPR3</b>             | Amata B.Grimm Power (Rayong) 3 Limited                                                      |
| <b>ABPR4</b>             | Amata B.Grimm Power (Rayong) 4 Limited                                                      |
| <b>ABPR5</b>             | Amata B.Grimm Power (Rayong) 5 Limited                                                      |
| <b>ABPS</b>              | Amata B.Grimm Power Service Limited                                                         |
| <b>ABPSPV1</b>           | Amata B.Grimm Power SPV1 Limited<br>(formerly Amata B.Grimm Power Service (Rayong) Limited) |
| <b>AF</b>                | Availability Factor                                                                         |
| <b>Amata Corporation</b> | Amata Corporation Public Company Limited                                                    |
| <b>AMATA Joint Stock</b> | Amata (Vietnam) Joint Stock Company                                                         |
| <b>APB</b>               | Amata Power (Bien Hoa) Limited                                                              |
| <b>APR</b>               | Amata Power (Rayong) Limited                                                                |
| <b>ASEAN</b>             | Association of Southeast Asian Nations                                                      |
| <b>BGC1</b>              | B.Grimm Power (Chonburi) 1 Limited                                                          |
| <b>BGC2</b>              | B.Grimm Power (Chonburi) 2 Limited                                                          |
| <b>BGGP</b>              | B.Grimm Green Power Limited                                                                 |
| <b>BGLNG</b>             | B.Grimm LNG Limited                                                                         |
| <b>BGP (Cambodia)</b>    | B.Grimm Power (Cambodia) Company Limited                                                    |

|                       |                                                                                |
|-----------------------|--------------------------------------------------------------------------------|
| <b>BGP (Korea)</b>    | B.Grimm Power Korea Company Limited                                            |
| <b>BGP (Lao)</b>      | B.Grimm Power (Lao) Company Limited                                            |
| <b>BGP (Malaysia)</b> | B.Grimm Power (Malaysia) Sdn. Bhd.                                             |
| <b>BGP (Poipet)</b>   | B.Grimm Power (Poipet) Company Limited                                         |
| <b>BGPR1</b>          | B.Grimm Power (Ratchaburi) 1 Limited                                           |
| <b>BGPR2</b>          | B.Grimm Power (Ratchaburi) 2 Limited                                           |
| <b>BGPS</b>           | B.Grimm Power Service Limited                                                  |
| <b>BGPSP</b>          | B.Grimm Solar Power 1 Limited                                                  |
| <b>BGSPS1</b>         | B.Grimm Solar Power (Sakaeo) 1 Limited                                         |
| <b>BGPSS</b>          | B.Grimm Power Smart Solution Limited                                           |
| <b>BGRP1</b>          | B.Grimm Renewable Power 1 Limited                                              |
| <b>BGRP2</b>          | B.Grimm Renewable Power 2 Limited                                              |
| <b>BGSENA</b>         | B.Grimm Sena Solar Power Limited                                               |
| <b>BGSNP</b>          | B.Grimm S. Napa Solar Power Limited                                            |
| <b>BGSPT</b>          | B.Grimm Spectrum Solar Power Limited                                           |
| <b>BGYSP</b>          | B.Grimm Yanhee Solar Power Limited                                             |
| <b>BIP1</b>           | B.Grimm BIP Power 1 Limited                                                    |
| <b>BIP2</b>           | B.Grimm BIP Power 2 Limited                                                    |
| <b>BOI</b>            | Board of Investment                                                            |
| <b>BPB2</b>           | B.Grimm Power (Bowin) 2 Limited                                                |
| <b>BPHL</b>           | B.Grimm Power Holding (Laem Chabang) Limited                                   |
| <b>BPLC Group</b>     | B.Grimm Power (Laem Chabang) Group                                             |
| <b>BPLC1</b>          | B.Grimm Power (Laem Chabang) 1 Limited                                         |
| <b>BPLC2</b>          | B.Grimm Power (Laem Chabang) 2 Limited                                         |
| <b>BPSLC</b>          | B.Grimm Power Service (Laem Chabang) Company Limited                           |
| <b>BPWHA1</b>         | B.Grimm Power (WHA) 1 Company Limited<br>(formerly Bowin Clean Energy Limited) |
| <b>BSPCB</b>          | B.Grimm Solar Power (Chai Badan) Company Limited                               |
| <b>BSPCD</b>          | B.Grimm Solar Power (Chon Daen) Company Limited                                |

|                                          |                                                                                     |
|------------------------------------------|-------------------------------------------------------------------------------------|
| <b>BSP Inc. (Philippines)</b>            | B.Grimm Solar Power INC.                                                            |
| <b>BSPRT</b>                             | B.Grimm Solar Power Rooftop Limited                                                 |
| <b>BTU</b>                               | British thermal units                                                               |
| <b>BTW</b>                               | Bo Thong Wind Farm Limited                                                          |
| <b>DCQ</b>                               | Daily contracted quantity                                                           |
| <b>DEDE</b>                              | Department of Alternative Energy Development and Efficiency                         |
| <b>DIW</b>                               | Department of Industrial Works                                                      |
| <b>DSC</b>                               | Daosavanh Co., Ltd.                                                                 |
| <b>DSV</b>                               | Daosavanh Investment and Construction Group Company Limited                         |
| <b>DTE</b>                               | Dau Tieng Tay Ninh Energy Joint Stock Company                                       |
| <b>DT 1&amp;2</b>                        | Dau Tieng 1&2                                                                       |
| <b>EDC</b>                               | Electricite du Cambodge                                                             |
| <b>EDL</b>                               | Electricity du Laos                                                                 |
| <b>EGAT</b>                              | Electricity Generating Authority of Thailand                                        |
| <b>EIA report</b>                        | Environmental Impact Assessment report                                              |
| <b>Energy Conservation Promotion Act</b> | Energy Conservation Promotion Act B.E. 2535                                         |
| <b>Energy Industry Act</b>               | Energy Industry Act B.E. 2550                                                       |
| <b>Environmental Quality Act</b>         | Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (1992) |
| <b>EPC</b>                               | Engineering, procurement and construction                                           |
| <b>ERC</b>                               | Energy Regulatory Commission of Thailand                                            |
| <b>EU</b>                                | European Union                                                                      |
| <b>EVN</b>                               | Electricity of Vietnam                                                              |
| <b>EY Thailand / EY</b>                  | EY Office Limited                                                                   |
| <b>FiT</b>                               | Feed-in tariff                                                                      |
| <b>FOF</b>                               | Forced outage factor                                                                |
| <b>HRSG</b>                              | Heat recovery steam generator                                                       |
| <b>ICAO</b>                              | International Civil Aviation Organization                                           |
| <b>IEAT</b>                              | Industrial Estate Authority of Thailand                                             |



|                                 |                                                                                                                                                                                              |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IFRS</b>                     | International Financial Reporting Standards                                                                                                                                                  |
| <b>Investment Promotion Act</b> | Investment Promotion Act B.E. 2520                                                                                                                                                           |
| <b>IPP</b>                      | Independent power producer                                                                                                                                                                   |
| <b>IPS</b>                      | Industrial power sector power producer                                                                                                                                                       |
| <b>IPS GSA</b>                  | Industrial power sector gas supply agreement                                                                                                                                                 |
| <b>IUs</b>                      | Industrial users                                                                                                                                                                             |
| <b>IUU</b>                      | Illegal, Unreported and Unregulated Fishing                                                                                                                                                  |
| <b>Law on Enterprises</b>       | Law on Enterprises (No. 46/NA, 26 December 2013) of Lao PDR                                                                                                                                  |
| <b>LIBOR</b>                    | London Interbank Offered Rate which is a loan interest rate that commercial banks with solid financial and credit standing charge each other.<br>The rate is set by the London money market. |
| <b>MEA</b>                      | Metropolitan Electricity Authority                                                                                                                                                           |
| <b>MLR</b>                      | Minimum Lending Rate is a term-loan interest rate that commercial banks charge its large customer with good standing.                                                                        |
| <b>MOF</b>                      | Maintenance Outage Factor                                                                                                                                                                    |
| <b>MWA</b>                      | Metropolitan Waterworks Authority                                                                                                                                                            |
| <b>Nam Che 1</b>                | Nam Che 1 Hydropower Company Limited                                                                                                                                                         |
| <b>Nam Khao</b>                 | Nam Khao Hydropower Company Limited                                                                                                                                                          |
| <b>NEPC</b>                     | National Energy Policy Council                                                                                                                                                               |
| <b>Net ACQ</b>                  | Net annual contracted quantity                                                                                                                                                               |
| <b>O&amp;M</b>                  | Operation & maintenance                                                                                                                                                                      |
| <b>OEM</b>                      | Original equipment manufacturer                                                                                                                                                              |
| <b>ONEP</b>                     | Office of Natural Resources and Environmental Policy and Planning                                                                                                                            |
| <b>PEA</b>                      | Provincial Electricity Authority                                                                                                                                                             |
| <b>Phu Yen TTP</b>              | Phu Yen TTP Joint Stock Company                                                                                                                                                              |
| <b>PIC</b>                      | Progress Interchem (Thailand) Limited                                                                                                                                                        |
| <b>PLC Act</b>                  | Public Limited Companies Act, B.E. 2535 (as amended)                                                                                                                                         |
| <b>POF</b>                      | Planned outage factor                                                                                                                                                                        |

|                                                                      |                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power plant projects under construction or development</b>        | Power plant power plant projects for which PPAs with EGAT, PEA, EDL, or other governmental agencies have been obtained or guaranteed in writing. The estimated capacity, equity proportion and scheduled commercial operation date (SCOD) of these projects may be changed as deemed appropriate for these projects. |
| <b>PPA</b>                                                           | Power Purchase Agreement                                                                                                                                                                                                                                                                                             |
| <b>PTT</b>                                                           | PTT Public Company Limited                                                                                                                                                                                                                                                                                           |
| <b>PV</b>                                                            | Photovoltaic                                                                                                                                                                                                                                                                                                         |
| <b>Ray</b>                                                           | Ray Power Supply Company Limited                                                                                                                                                                                                                                                                                     |
| <b>SCP</b>                                                           | Sisophon Clean Power Company Limited                                                                                                                                                                                                                                                                                 |
| <b>SEC</b>                                                           | the Securities and Exchange Commission                                                                                                                                                                                                                                                                               |
| <b>SEC Act</b>                                                       | Securities and Exchange Act, B.E. 2535 (as amended)                                                                                                                                                                                                                                                                  |
| <b>SET</b>                                                           | Stock Exchange of Thailand                                                                                                                                                                                                                                                                                           |
| <b>Solar WVO and CO-OP</b>                                           | Solar WVO-Cooperatives Projects                                                                                                                                                                                                                                                                                      |
| <b>Solarwa</b>                                                       | Solarwa Company Limited                                                                                                                                                                                                                                                                                              |
| <b>SPP</b>                                                           | Small power producer                                                                                                                                                                                                                                                                                                 |
| <b>SPP1</b>                                                          | Glow SPP1 Company Limited                                                                                                                                                                                                                                                                                            |
| <b>SPP Regulation B.E. 2535 (A.D.1992) (as Amended in 1994)</b>      | Small Power Producer Power Purchase Regulation B.E. 2535 (A.D.1992) (as Amended in 1994)                                                                                                                                                                                                                             |
| <b>SPP Regulation B.E. 2541 (A.D.1998)</b>                           | Small Power Producer Power Purchase Regulation B.E. 2541 (A.D.1998)                                                                                                                                                                                                                                                  |
| <b>SPP Regulation B.E. 2548 (A.D.2005)</b>                           | Small Power Producer Power Purchase Regulation B.E. 2548 (A.D.2005)                                                                                                                                                                                                                                                  |
| <b>SPP Regulation B.E. 2550 (A.D.2007)</b>                           | Small Power Producer Power Purchase Regulation B.E. 2550 (A.D.2007)                                                                                                                                                                                                                                                  |
| <b>SPP Regulation B.E. 2550 (A.D.2007) (as Amended in 2009-2010)</b> | Small Power Producer Power Purchase Regulation B.E. 2550 (A.D.2007) (as Amended in 2009-2010)                                                                                                                                                                                                                        |
| <b>SPP Regulation B.E. 2553 (A.D.2010)</b>                           | Small Power Producer Power Purchase (Firm Contract - Cogeneration System) Regulation B.E. 2553 (A.D.2010)                                                                                                                                                                                                            |

|                                                                     |                                                                                                           |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>SPP Regulation B.E. 2553<br/>(A.D.2010) (as Amended in 2011)</b> | Small Power Producer Power Purchase (Firm Contract - Cogeneration System) Regulation B.E. 2553 (A.D.2010) |
| <b>SSC</b>                                                          | Significant safety concerns                                                                               |
| <b>SVG</b>                                                          | SV Group Company Limited                                                                                  |
| <b>TFRS</b>                                                         | Thai Financial Reporting Standard                                                                         |
| <b>Thai Wind</b>                                                    | Thai Wind Power Limited                                                                                   |
| <b>THBFIX</b>                                                       | Thai Baht Interest Rate Fixing                                                                            |
| <b>the Company / B.Grimm Power</b>                                  | B.Grimm Power Public Company Limited                                                                      |
| <b>The Group</b>                                                    | B.Grimm Power Public Company Limited and its subsidiaries and associates                                  |
| <b>TPS</b>                                                          | TPS Commercial Company Limited                                                                            |
| <b>TWP</b>                                                          | Thai Wind Power (Mukdahan) Limited                                                                        |
| <b>VSPP</b>                                                         | Very small power producer                                                                                 |
| <b>VTs</b>                                                          | Viet Thai Solar Joint Stock Company                                                                       |
| <b>Wood Group Heavy Industrial<br/>Turbines (Thailand)</b>          | Wood Group Heavy Industrial Turbines (Thailand) Company Limited                                           |
| <b>XXHP</b>                                                         | Xenamnoy and Xekatam Hydro Power Company Limited                                                          |
| <b>Yanhee Solar</b>                                                 | Yanhee Solar Power Limited                                                                                |

Investors can obtain further information  
from the Company's Annual Registration Statement (Form 56-1) on  
[www.sec.or.th](http://www.sec.or.th) or <https://investor.bgrimpower.com/home.html>



**B.GRIMM**

**SINCE 1878**

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