

Annual Registration Statements  
(56-1 One Report)

# 2021



NATIONAL POWER SUPPLY  
PUBLIC COMPANY LIMITED



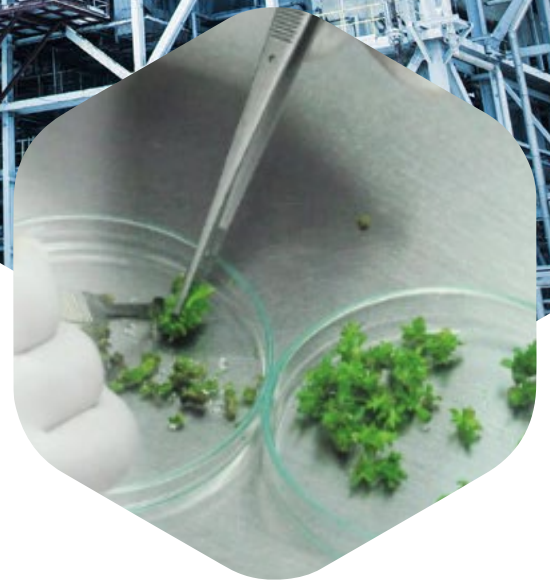


Grow Our Growth  
from “growable energy”  
our core strength as Thailand’s leading  
producers of biomass energy

Grow Our Growth by expanding in-depth expertise  
to various kinds of “clean energy”  
that can be renewable for infinite use  
and together helps sustaining our future

Grow Our Growth with competency enhancement,  
while staying committed  
to benefit all the stakeholders





## Grow Our Growth from “growable energy”

As one of Thailand’s leading producers of biomass energy with total capability of 398 megawatt from its 9 biomass power plants,



NPS has initiated a unique concept of “Growing the Power” to promote alternative renewable energy that can be generated from various kinds of agricultural waste and agricultural crops with its long-term expertise in efficiency and effective biomass fuels management.

## Grow Our Growth by expanding in-depth expertise to various kinds of “clean energy”

that can be renewable for  
infinite use and together helps  
sustaining our future

### Clean Energy from Natural Gas

through joint-ventured  
Independent Power Producer (IPP)  
project with production capability  
of 540 megawatt

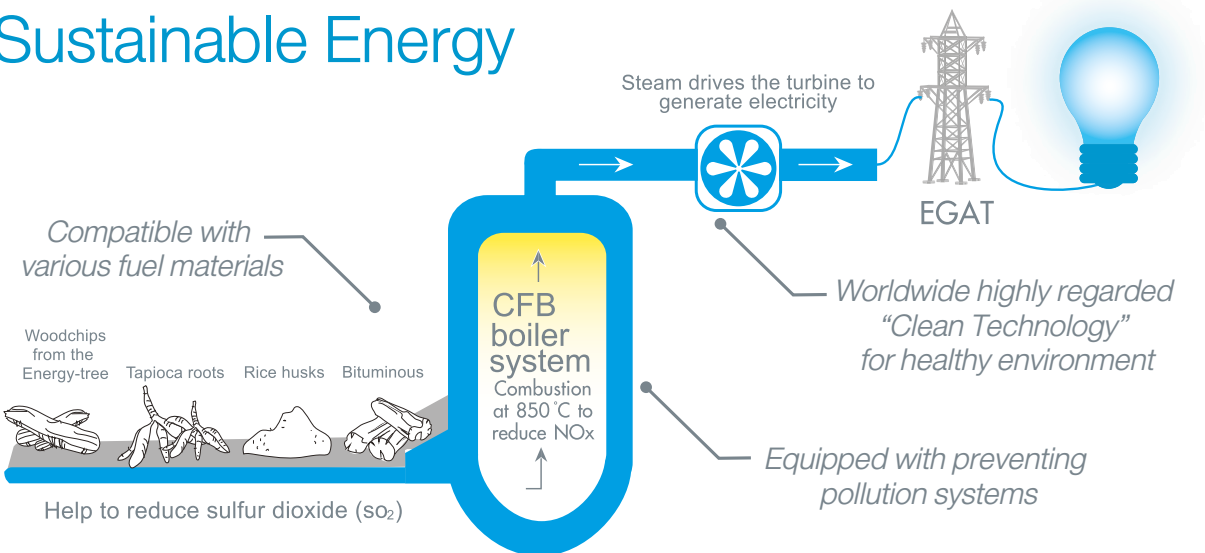
### Clean Energy from Plant

materials converted into  
Ethanol products through our  
ethanal business unit  
with production capability  
of 500,000 liters per day





# Clean Energy, Sustainable Energy





## Grow Our Growth with competency enhancement,

*while staying committed to benefit all the stakeholders*

With more than 25 years of accumulated expertise in power generation, NPS has increased its competency for business growth significantly and continually. Under the approaches of proactive management, NPS has committed to bring out the best net output; not only with maximum utilization of resources but also expertly control for least operational mistakes.

We keep playing our part to the best of our ability. As we realize that our success means for power stability of the country, be a part to talk care of the world by providing industrial sector with clean energy, **supporting the development of local communities through the Power Development Fund and returning all the trust of the stakeholders with sharable sustainable growth.**





# CONTENT

## 07 Definitions

### Part 1 Business Operations and Performance

#### 12 1 Structure and Performance

#### 60 2 Risk Management

#### 76 3 Driving the Business towards Sustainability

#### 83 4 Management Discussion and Analysis

#### 100 5 General Information and Other Important Information

### Part 2 Corporate Governance

#### 113 6 Corporate Governance Policy

#### 117 7 Corporate Governance Structure and Key Information about the Board, Sub-committees, Management, Employees, and Others

#### 128 8 Highlights of Corporate Governance

#### 132 9 Internal Control and Connected Transactions

## 158 Part 3 Financial Statements

## 237 Part 4 Certification of Information and Data Accuracy

## 239 Attachment





# Definitions

Unless the context otherwise provides, the following terms are defined as follows:

Term	Definition
304IP	: 304 Industrial Park Company Limited
304IP2	: 304 Industrial Park 2 Company Limited
304IP7	: 304 Industrial Park 7 Company Limited
AA	: Double A (1991) Public Company Limited
AAE	: Double A ethanol Company Limited
AGF	: Agro Fiber Co.,Ltd.
AL	: Ash Leaching Company Limited
Alizay 2	: Alizay 2 Shipping S.A
APM3	: Advance Paper Mill 3 Company Limited
ApulpM3	: Advance Pulp Mill 3 Company Limited
ASTM	: American Society for the Testing of Materials
BECO	: 304 Industrial Park 18 Company Limited (Formerly Biomass Electricity Company Limited)
BPG	: Burapa Power Generation Co., Ltd. (Formerly IPP IP2 Company Limited)
BPH	: Burapa Power Holding Co., Ltd.
Capacity PPA	: The contracted capacity specified in a long-term power purchase agreement
Cape Shipping	: NPS Cape Shipping S.A.
CFB Boiler	: Circulating Fluidized Bed Boiler
COD	: Commercial Operation Date
CP	: Capacity Payment
CPI	: Consumer Price Index
CHP1	: CHP1 Company Limited
CHP 3	: CHP3 Company Limited
CHP 5	: CHP5 Company Limited
CHP 7	: CHP7 Company Limited
IRC	: Integrated Research Center Company Limited (Formerly D.A. Research Center Company Limited)
IWS	: Industrial Water Supply Co.,Ltd.

Term	Definition
DSCR	: Debt Service Coverage Ratio
E85	: E85 Company Limited (Formerly Double A ethanol Company Limited)
EASTW	: Eastern Water Resources Development and Management Public Company Limited
EGCO	: Electricity Generating Public Company Limited
EGG	: Equivalent Gross Generation
EIA	: Environmental Impact Assessment
EP	: Energy Payment
FG	: Future Greenery Company Limited (Formerly National Power Supply PP9 Company Limited)
FMO	: Force Maintenance Outage
Ft	: Fuel Transfer Charge
GFB	: Green Fiber Company Limited
Gross Power Output	: Electricity Production Capacity
Gulf	: Gulf Energy Development Public Company Limited
IPP	: Independent Power Producer or a large private sector Power Plant of EGAT with more than 90 megawatts electricity
IPP IP2	: IPP IP2 Company Limited
IPP IP7	: IPP IP7 Company Limited
ITS5	: Inter Stevedoring 5 Company Limited (Formerly Inter Stevedoring 2 Company Limited)
JPU	: Japanese Power Utility Index
KN	: Khan-na Company Limited
KPI	: Key Performance Indicator
LP	: Low Pressure
MCF	: Monthly Capacity Factor
MP	: Medium Pressure
MW	: Megawatt
MWh	: Megawatt-Hour
NFPA	: National Fire Protection Association
NPP11	: National Power Plant 11 Company Limited
NPP12	: National Power Plant 12 Company Limited
NPP2	: National Power Plant 2 Company Limited
NPP3	: National Power Plant 3 Company Limited



Term	Definition
NPP5	: National Power Plant 5 Company Limited
NPP5A	: National Power Plant 5A Company Limited
NPS Cape	: NPS Cape Company Limited
NPS IPP	: National Power Supply IPP Company Limited
NPS OS	: NPS Ocean Star Company Limited
NPS Solar Rooftop	: NPS Solar Rooftop Company Limited (Formerly NPS O&M Company Limited)
NS304	: Namsai 304 Company Limited
OC	: Ocean Cape Company Limited
OSH	: Ocean Star Holding Company Limited
OSHA	: Occupational Safety and Health Administration
PMO	: Plant Maintenance Outage
PP11	: Power Plant 11
PP2	: Power Plant2
PP3	: Power Plant3
PP4	: Power Plant4
PP5	: Power Plant5
PP5A	: Power Plant5A
PP6	: Power Plant6
PP7	: Power Plant7 or National Power Supply Phase 1
PP8	: Power Plant 8 or National Power Supply Phase 2
PPA	: Power Purchase Agreement
PT Utami	: PT. Utami Jaya Mulia
PR2020	: Power Root 2020 Co., Ltd.
SCOD	: Scheduled Commercial Operation Date
SHEQ	: Safety Health Environment and Quality Control
SNB	: SNB Agriproducts Limited
SNST	: Sonish Starch Technology Company Limited
SPP	: Small Power Producer with the amount of 10-90 megawatts electricity
SHEQ MS	: Safety, Security, Health and Environment Quality Management System
VSPP	: Very Small Power Producer with the amount of less than 10 megawatts electricity
ERC	: Energy Regulatory Commission

Term	Definition
EPPO	: Energy Policy and Planning Office
PWA	: Provincial Waterworks Authority
MEA	: Metropolitan Electricity Authority
EGAT	: Electricity Generating Authority of Thailand
PEA	Provincial Electricity Authority
SEC	The Securities and Exchange Commission, Thailand
ConnectedGroups	Persons or companies that are connected with executives, directors, major shareholders or an authorized person with the group of companies
The group of company	: The company, subsidiaries and/or associates depending on the case
304 Industrial Park, Prachinburi Province	: 304 Industrial Park, Tha Tum Subdistrict, Si Maha Phot District Prachinburi Province
304 Industrial Park 2, Chachoengsao Province	: 304 Industrial Park 2, Khao Hin Son Subdistrict, Phanom Sarakham District Chachoengsao Province
PTT	: PTT Public Company Limited
Industrial customers	: The customers whose establishments are located in 304 Industrial Park, Prachinburi Province and 304 Industrial Park 2, Chachoengsao Province
ONEP	: Office of Natural Resources and Environmental Policy and Planning



A person in a dark suit is holding a tablet. The background is a blue-tinted image with various data visualization elements. There are four circular gauges showing percentages: 29%, 58%, 64%, and 85%. A line graph with two upward-trending arrows is overlaid on the right side. In the bottom right corner, there are several hexagonal icons: a padlock, a classical building, and a shopping cart. The overall theme is business analytics and performance.

29%

58%

64%

85%

# Part 1

---

Business Operation and  
Performance

# 1. Structure and Performance

## 1.1 Policy and Business Overview

### 1.1.1 Vision, Mission, Objectives and Strategy

National Power Supply Public Company Limited (“NPS” or “the Company”) aspires to be the leader in sustainable power generation by researching & developing – and growing – the ‘Ton Palang Ngan’ (Energy-Tree), which is suitable for use as a renewable fuel, as well as sourcing other energy crops to create new high-potential green fuels. Rather than relying on non-renewable fuels like oil and natural gas, which are rapidly becoming depleted, NPS has focused on innovative sources of sustainable renewable energy to supply the future demands of the Thai people, foster synergies between the agricultural and energy sectors, and generate income for our nation’s farmers through new careers, always adhering to our business philosophy of “Growing the Power, Sustaining the Future”.

Pursuant to NPS’ goal of becoming a fully integrated power producer by growing the fuel required to generate electricity, the course of our business has developed continuously and sustainably alongside our commitment to the community, society, and the environment – our Corporate Social Responsibility, or CSR.

Toward this goal, NPS has adopted primary strategies that guide all of our operations, including:

1. Fuel sourcing and developing strategy – sourcing and developing fuel supplies from various locations to mitigate the risk of unavailability of fuel supplies.
2. Raw material improvement strategy – researching & developing raw materials to maximize their heating value for optimal power generation.
3. Fuel-mixing strategy – mixing various fuel supplies to create added value and manage costs.
4. Technology improvement strategy – continually improving technologies to generate power at maximum capacity and efficiency.

### Business Objectives

NPS’ goal is to be a fully integrated power producer with operations that range from the generation and distribution of electricity and steam to related businesses that support electricity generation such as marine fuel transport. NPS also has a policy to expand its investments in other projects related to fuel, renewable energy, and the promotion of Energy-Tree cultivation, in order to create sustainable long-term added value for shareholders. NPS intends to be the leader in generating electricity through the effective use of a mixture of biomass fuel and



waste. In addition, NPS aims to continue to grow this renewable energy sustainably, develop effective production methods, improve services, and build strong long-term relationships with its customers. To accomplish this, NPS adopted the following key business objectives:

- Become the leader in generating and distributing electricity and steam through the maintenance of a stable system using a mixture of fuel and waste.
- Encourage, supervise and maintain continuously sufficient electricity and steam, produced from effective clean technology, to support the factories at 304 Industrial Park, Prachinburi, and 304 Industrial Park 2, Chachoengsao.
- Create a culture of self-regulation to assure the proper balance of the economy, society and the environment in the Company's policies.

### 1.1.2 Development of the Company

The Company was registered as a juristic person with the Ministry of Commerce on July 7, 1995 with initial registered capital of Baht 1 Million to produce electricity and steam for industry as an operator of co-generation power plants with steam turbines, and converted to a public limited company on May 26, 2010. Throughout all of the past years, the Company has invested in additional power businesses and integrated supporting businesses such as downstream and logistics businesses, as well as other related energy businesses such as ethanol production. These businesses are operated by the management of the Company's subsidiaries and associate, which were incorporated by the Company for each project. The Company has continually increased its capital in order to support the expansion of these businesses. As of December 31, 2020, the Company had registered capital of Baht 10,000.00 Million, of which Baht 9,354.04 Million is issued and paid up.

The key events in the development of the Company related to change of control and nature of business during the past three years were as follows:

- |      |  |
|------|--|
| 2019 | <ul style="list-style-type: none"><li>- Board of Director Meeting No. 1/2019 organized on January 24, 2019. The board had resolved to sell SNB common stock to My Green City Holding Company Limited. This was accomplished on February 12<sup>th</sup>, 2019 which makes the company accountable for 51% of all total capital. Therefore, SNB is no more a subsidiary of the Company.</li><li>- At the Board of Management Meeting No. 5/2019 held on September 10<sup>th</sup>, 2019, the resolution was to appoint the committee of business development.</li></ul>   |
| 2020 | <ul style="list-style-type: none"><li>- 2020 – The Company sold 12,075,000 shares of BPH common stocks to Gulf Energy Development Public Company Limited (“GULF”) worth THB 120.75 Million. At the Board of Director Meeting No.4/2019 held on May 24<sup>th</sup>, 2019. The resolution after the complete transactions, the company and GULF had the ownership of BPH shares of 65% and 35% respectively.</li><li>- The company had done the product extension on Ethanol or E85 to produce pharmaceutical grade sanitizer. The products have been approved and certified by Food and Drug Administration.</li></ul> |

2020

- NPS company has established five subsidiaries which include Lan Sal Community Power Plant Company Limited (“LSCP”), Lam Sonthi Community Power Company Limited (“LSTCP”), Phanom Sarakham Biogas Community Power Plant Company Limited (“PSCP”), Tha Toom Biogas Community Power Plant (“TBCP”), Tha Toom Community and Power Plant Company Limited (“TTCP”). The purpose is to engage in Community Power Plant Project in accordance with Ministry of Energy’s policy.
- The Company acquired 20,000 shares of Power Route 2020 Company Limited (“PR2020”) from Trade Material 2014 Company Limited worth of THB 2.00 Million. The Board of Director Meeting No.4/2020 held on April 20<sup>th</sup> , 2020. The resolution after the complete transactions is NPS owns 40% of PR2020 shares.
- On August 31<sup>st</sup>, 2020, Double A (1991) Public Company Limited (“AA”) 26% shareholder of the company signed the common share trading agreement with Sinsukjai Company Limited (“SSJ”) which formerly known as Double A Holding (Thailand) Company Limited (“DAHTH”). Meantime, AA also transferred 18% shares to SSJ. Later, on October 30<sup>th</sup>, 2020, AA transferred the remaining shares with the amount of 8% to SSJ which make the SSJ to become main shareholders.
- The company sold 209,999,980 of NPP3 common stock which equivalent to 99.99% of issued and paid-up capital of NPP5 to restructure NPS’s subsidiaries. With THB 5.4 per share values of the NPP3, a total transaction made was THB 1,137.43 Million. All the transaction was completed.
- The Extraordinary General Meeting held on September 16, 2020, concluded to reduce certain cost of 66,720,000 shares or THB 667 Million.

2021

- NS304, a subsidiary, acquired Industrial Water Supply Company Limited (“IWS”) ‘s common shares of 99,990 shares or 99.99% of its total issued and paid-up capital, amount to a total of THB 992,922.66.
- To gain competitiveness, Company restructures its organization by sale of 25,400,000 KN common shares to Paper Tree Holding Company Limited (“PTH”), at a price of THB 10 per share or 20.31% of total capital amounting to THB 1 Million.
- At Board of Director Meeting, the board had resolved to purchase all common stocks of Biomass Energie d’Aizay (“BEA”) from connected transaction (DA Alizay SAS (“DA Alizay”)) by making the transaction to purchase all 200,000 common stocks of BEA from DA Alizay at a value of 51.5 million Euro at the general shareholder meeting.



## 1.2 Nature of business

### 1.2.1 Revenue Structure

The Company's main source of is sales of electricity, steam and water from the power business, while 10-25% of revenue comes from other business groups, including logistics, which supports the core business operations of group companies and provides services to external customers in the event of insufficient production capacity, in order to maximize revenue and manage costs. Revenue structure by types of products and services in 2019, 2020 and 2021 were as follows

Revenue	Consolidated financial statements					
	2019		2020		2021	
	Million Baht	%	Million Baht	%	Million Baht	%
Sales of electricity, steam and water	13,094.50	85.79	12,539.93	79.65	13,277.92	84.82
Sales of ethanol	1,725.30	11.30	2,841.97	18.05	1,877.93	12.00
Sales of other goods <sup>(1)</sup>	225.79	1.48	172.74	1.10	392.60	2.51
Service income <sup>(2)</sup>	85.21	0.56	62.67	0.40	99.75	0.64
Other income <sup>(3)</sup>	132.50	0.87	127.43	0.81	5.35	0.03
<b>Total Revenues</b>	<b>15,263.29</b>	<b>100.00</b>	<b>15,744.75</b>	<b>100.00</b>	<b>15,653.54</b>	<b>100.00</b>

Notes: <sup>(1)</sup> Sales of other goods was comprised of tapioca starch, chemicals and etc.

<sup>(2)</sup> Service incomes was comprised of revenue from research and development, offshore floating crane services and etc

<sup>(3)</sup> Other income was comprised of profit from disposal of investments in subsidiaries, profit from disposal of fixed assets and others.

Revenue structure by customer type in 2019, 2020 and 2021 were as follows:

Customer	Consolidated financial statements					
	2019		2020		2021	
	Million Baht	%	Million Baht	%	Million Baht	%
EGAT	5,488.36	35.96	5,013.46	31.84	4,895.84	31.28
AA and related parties	3,404.15	22.30	3,421.68	21.73	3,701.77	23.65
Industrial Customers <sup>(1)</sup>	4,358.88	28.56	4,347.91	27.62	4,853.56	31.01
Others <sup>(2)</sup>	2,011.91	13.18	2,961.71	18.81	2,202.37	14.07
<b>Total</b>	<b>15,263.29</b>	<b>100.00</b>	<b>15,744.75</b>	<b>100.00</b>	<b>15,653.54</b>	<b>100.00</b>

Notes: <sup>(1)</sup> Industrial customers are third parties located at 304 Industrial Park Prachinburi and 304 Industrial Park 2 Chachoengsao.

<sup>(2)</sup> Others are customers located outside of 304 Industrial Park Prachinburi and 304 Industrial Park 2 Chachoengsao.

For the electricity, steam and water revenues of the company can be separated as follows

Company	Operator	2019				2020				2021			
		Electricity		Steam and water		Electricity		Steam and water		Electricity		Steam and water	
		Million Baht	%	Million Baht	%	Million Baht	%	Million Baht	%	Million Baht	%	Million Baht	%
NPS	PP7, PP8	7,316.14	65.78	413.51	20.97	7,286.48	67.15	250.94	14.86	7,334.66	64.87	286.52	14.53
NPP2	PP2	253.04	2.28	0.34	0.02	101.75	0.94	0.58	0.03	5.35	0.05	0.82	0.04
NPP3	PP3, PP4	1,317.79	11.85	174.20	8.83	1,100.06	10.14	156.81	9.28	1,230.18	10.88	169.19	8.58
NPP5	PP5, PP6	1,002.08	9.01	365.83	18.55	880.42	8.11	307.65	18.22	1,167.89	10.33	216.94	11.00
NPP5	PP11	621.68	5.59	380.50	19.29	703.85	6.49	331.08	19.60	717.18	6.34	283.37	14.37
NPP5A	PP5A	611.45	5.50	250.05	12.68	778.51	7.17	270.61	16.02	851.35	7.53	607.18	30.80
NS304	-	-	-	387.91	19.67	-	-	371.19	21.98	-	-	407.29	20.66
<b>Total</b>		<b>11,319.13</b>	<b>11,122.17</b>	<b>100.00</b>	<b>1,972.32</b>	<b>100.00</b>	<b>0,851.07</b>	<b>100.00</b>	<b>1,688.86</b>	<b>11,306.60</b>	<b>100.00</b>	<b>1,971.31</b>	<b>100.00</b>

In terms of revenue from sales of electricity, it can be divided according to customer groups as follows:

Company	Operator	2019				2020				2021				PPA Contract end year with EGAT
		EGAT		Others		EGAT		Others		EGAT		Others		
		Million Baht	%	Million Baht	%	Million Baht	%	Million Baht	%	Million Baht	%	Million Baht	%	
NPS <sup>(1)</sup>	PP7	1,252.15	22.81	4,685.00	83.16	1,326.02	26.45	4,741.30	81.22	1,093.76	22.34	5,172.21	80.68	2024
NPS <sup>(1)</sup>	PP8	1,379.00	25.13	-	-	1,219.15	24.32	-	-	1,068.69	21.83	-	-	2024
NPP2 <sup>(2)</sup>	PP2	248.07	4.52	4.97	0.09	95.80	1.91	5.95	0.10	-	-	5.35	0.08	2020 <sup>(1)</sup>
NPP3	PP3, PP4	985.39	17.95	332.40	5.90	788.21	15.72	311.85	5.34	848.32	17.33	381.86	5.96	2024
NPP5	PP5, PP6	1,002.08	18.26	-	-	880.42	17.56	-	-	1,167.89	23.85	-	-	2027
NPP5	PP11	621.68	11.33	-	-	703.85	14.04	-	-	717.18	14.65	-	-	2027
NPP5A	PP5A	-	-	611.45	10.85	-	-	778.51	13.34	-	-	851.35	13.28	-
<b>Total</b>		<b>5,407.12</b>	<b>5,488.36</b>	<b>100.00</b>	<b>5,633.82</b>	<b>100.00</b>	<b>5,013.46</b>	<b>100.00</b>	<b>5,837.61</b>	<b>4,895.84</b>	<b>100</b>	<b>6,410.76</b>	<b>100</b>	

Notes: <sup>(1)</sup> electricity at that the company distributed to the customers, mostly the electricity is purchased from nearby subsidiaries that do not have a electricity distribution license and the electrical system business in 304 Industrial Park, Prachinburi Province.

<sup>(2)</sup> NPP2 has temporarily stopped operating the PP2 power plant since the long-term power purchase agreement between NPP2 and EGAT ended on May 6, 2020. NPP2 has submitted a letter to the Minister of Energy to request for the renewal of power purchase agreement and the Biomass Electricity Association of which NPP2 is a member has also submitted a letter to the Minister of Energy regarding a guideline for the renewal of the long-term power purchase agreement of small biomass power plant operators with EGAT. Too. The aforementioned issue is still being considered by the government agencies. NPP2 continues to maintain the machinery inside the power plant in a condition that is ready for production machinery again if it receives an acceptance letter for the renewal of the said contract from Government agencies, including NPP2, are in the process of procuring additional industrial customers as an alternative to returning to operations.

From the above revenue structure table, it can be seen that in 2019, 2020 and 2021, most of the Group's income it comes from the sale of electricity, steam and water. The main customers of the Group include EGAT, AA and related companies, and industrial customers. Almost half of the revenue from electricity sales comes from the sale of electricity to EGAT, which is in accordance with the power purchase agreement between the Group and EGAT.

## 1.2.2 Products and Services

The Company operates cogeneration power plants with steam turbines. The main sources of revenue are selling electricity, steam and water, and producing and selling steam for industrial use. In addition, the Company has integrated supporting businesses that benefit and support its main business and have the potential to grow and generate revenue in the future. The details of the Company's products and services follow.

### 1.2.2.1 Electricity and Steam

The Company currently has 11 operating power plants, capable of generating both electricity and steam, with a combined installed capacity of 736.05 MW and 2,486.80 tons of steam per hour. The details of the power plants are as follows:

Name of Power Plant	Operator	Type of Fuel	Installed Capacity	
			Electricity (MW)	Steam (Tons/Hour)
PP2 <sup>(1)</sup>	NPP2	other biomass fuel <sup>(2)</sup>	10.40	50.00
PP3	NPP3	other biomass fuel <sup>(2)</sup>	10.40	50.00
PP4	NPP3	other biomass fuel <sup>(2)</sup>	37.15	180.00
PP5	NPP5	other biomass fuel <sup>(2)</sup>	37.15	180.00
PP6	NPP5	black liquor	37.15	180.00
PP7	The company	coal and other biomass <sup>(2)</sup>	164.00	482.40
PP8	The company	coal and other biomass <sup>(2)</sup>	164.00	482.40
PP11	NPP5	black liquor	32.90	198.00
PP5A	NPP5A	other biomass fuel <sup>(2)</sup>	98.00	300.00
Turbine 9.9 MW	The company	Steam from the other power plant	9.90	-
PP9	FG	other biomass fuel <sup>(2)</sup>	135.00	384.00
Total			736.05	2,486.80

Notes : <sup>(1)</sup> Regarding the long-term Power Purchase Agreement between NPP2 and EGAT that is terminating on May 6, 2020, PP2 Power Plant operation has temporarily ceased. NPP2 had proposed Energy Regulation Commission to extend the contract. As well as NPP2, a member of Biomass Energy Entrepreneur Club, has proposed a solution to renew an agreement with the Ministry of Energy which currently under reviewing. Meanwhile, NPP2 always maintains the machine and engine in preparation to run the machine after the propose get approve and be able to meet the demand from new industrial customers.

<sup>(2)</sup> Other biomass fuel means biomass fuel other than black liquor such as woodchips, bark, rice husk, and others



- **Permit**

The company and its six subsidiaries, namely NPP2, NPP3, NPP5, NPP5A, FG and E85, are permitted to operate electricity generating business under the Energy Business Act B.E. 2007

Company	Permit type	Age	Time allowed
NPS	Power Generation License (size 380,700 kV amperes and exceeds 150 megawatts)	15 Years	20 August 2009 to 19 August 2024
	Electricity distribution license	13 Years 10 Months	29 October 2010 to 19 August 2024
	Power Distribution System License	13 Years 10 Months	29 October 2010 to 19 August 2024
NPS	Power Generation License (9.9 megawatt project) (12,375 kV ampere and not exceed 10 megawatts)	10 Years	4 June 2014 to 3 June 2024
	Electricity distribution license (9.9 megawatt project)	5 Years	3 March 2020 to 2 March 2025
	Power Distribution System License (9.9 megawatt project)	5 Years	3 March 2020 to 2 March 2025
NPP2	Power Generation License (13,000 kilovolt amperes) And more than 10 but not exceed 150 megawatts)	12 Years 2 Months	13 March 2012 to 11 May 2024
	Electricity distribution license	12 Years 2 Months	13 March 2012 to 11 May 2024
	Power Distribution System License	12 Years 2 Months	13 March 2012 to 11 May 2024
NPP3	Power Generation License (13,000 kilovolt amperes) and more than 10 but not not exceed 150 megawatts)	12 Years 7 Months	20 March 2012 to 16 October 2024
	Power Generation License (size 43,338.28 kV amperes and more than 10 but not exceed 150 megawatts)	12 Years 7 Months	20 March 2012 to 16 October 2024
	Electricity distribution license	12 Years 7 Months	20 March 2012 to 16 October 2024
	Power Distribution System License	12 Years 7 Months	20 March 2012 to 16 October 2024
NPP5	Power Generation License (size 87,900 kilovolt-amperes and more than 10 but not exceed 150 megawatts)	19 Years 3 Months	1 April 2010 to 24 June 2029
	Electricity distribution license	18 Years 8 Months	29 October 2010 to 24 June 2029
	Power Distribution System License	18 Years 8 Months	29 October 2010 to 24 June 2029
	Power Generation License (size 41,125 kV amperes and more than 10 but not exceed 150 megawatts)	19 Years 6 Months	25 December 2009 to 24 June 2029
NPP5A	Power Generation License (size 115,294.12 kV amperes and more than 10 but not exceed 150 megawatts)	10 Years	31 March 2015 to 30 March 2025
	Electricity distribution license	5 Years	31 March 2015 to 30 March 2025
	Power Distribution System License	5 Years	31 March 2015 to 30 March 2025

Company	Permit type	Age	Time allowed
FG	Power Generation License (size 158,823 kV amperes and more than 10 but not exceed 150 megawatts)	10 Years	31 March 2016 to 30 March 2026
E85	Power Generation License (Lan Sak Branch) (size 1,025 kV ampere and less than 10 megawatts)	10 Years	25 September 2015 to 24 September 2025
	Power Generation License (Lam Sonthi Branch) (size 1,025 kV ampere and less than 10 megawatts)	10 Years	20 October 2015 to 19 October 2025

## Incentives

The group of companies in the power plant business receives benefits from the investment which has been approved by the Board of Investment Under the Investment Promotion Act B.E. 2520. The group of companies must comply with the terms and conditions that specified in the investment promotion certificate as the following:

Company	Number	Date	Incentives Under The Investment Promotion Act <sup>(1)</sup>
NPS	1828/2539 4983/2541(2-1828/2559) 6504/2541(3-1828/2559) 5363/2542(4-1828/2559) 4749/2543(5-1828/2559) 4008/2549(6-1828/2559)	November 28, 1996 May 15, 1998 November 27, 1998 August 27, 1999 April 5, 2000 January 17, 2006	For investment in the business of producing electricity, steam and water for the industry, category 7.1: Production of electric power or steam, and category 7.2: Water supply or water for the industry - Permit to own land - Exemption of import duties on machinery - Additional 25 Percent deduction of the cost of installation or construction of facilities - Permit to take out or remit money abroad in foreign currency
NPS	1219/2540 4982/2541(2-1219/2540) 4549/2542(3-1219/2540) 5362/2542(4-1219/2540) 4009/2549(6-1219/2540)	April 3, 1997 May 15, 1998 April 5, 1999 August 27, 1999 January 17, 2006	For investment in the business of producing electricity, steam and water for the industry, category 7.1: Production of electric power or steam, and category 7.2: Water supply or water for the industry - Permit to own land - Exemption of import duties on machinery
NPS	1120(9)/2551	February 6, 2008	For investment in the business of producing steam from biomass fuel category 7.1: Utilities and basic services - Exemption of import duties on machinery - Double deduction from the costs of transportation, electricity and water supply - Additional 25 Percent deduction of the cost of installation or construction of facilities - Permit to take out or remit money abroad in foreign currency
NPS	1752(2)/2557	23 June 2014	For investment in electricity generation from steam, category 7.1: Utilities and basic services - Exemption of import duties on machinery - Exemption of corporate income tax on the netprofit and dividends derived from the promote activity - A 50 percent reduction of the corporate income tax - Double deduction from the costs of transportation, electricity and water supply - Additional 25 Percent deduction of the cost of installation or construction of facilities - Permit to take out or remit money abroad in foreign currency

Company	Number	Date	Incentives Under The Investment Promotion Act <sup>(1)</sup>
FG	1987(9)/Aor./2556	9 July 2013	<p>For investment in electricity generation from steam, category 7.1: Utilities and basic services</p> <ul style="list-style-type: none"> <li>- Permit to own land</li> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>
NPP5A	2365(9)/Aor./2553	December 14, 2010	<p>For investment in the business of producing steam from biomass fuel category 7.1: Utilities and basic services</p> <ul style="list-style-type: none"> <li>- Permit to own land</li> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>
NPP5A	2641(1)/2556	November 19, 2013	<p>For investment in the business of producing steam from biomass fuel, category 7.1: Utilities and basic services</p> <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> </ul>
NPP5A (Project 1-8)	59-1543-0-00-2-0 to 59-1550-0-00-2-0	November 24, 2016	<p>For investment in solar power generation business Installed on the roof, category 7.1: Public utilities and basic services</p> <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> </ul>
NPP5 (PP5)	1113/Aor./2553	February 5, 2010	<p>For investment in the business of producing electricity, steam, clean water and ash, category 7.1: Electricity or steam generation, and category 7.2: Water supply or water for industry.</p> <ul style="list-style-type: none"> <li>- Permit to own land</li> <li>- Exemption of import duties on machinery</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>



Company	Number	Date	Incentives Under The Investment Promotion Act <sup>(1)</sup>
NPP5 (PP6)	9018(2)/2554	March 31, 2011	For investment in power generation and steam business, category 7.1: utilities and basic services <ul style="list-style-type: none"> <li>- Permit to own land</li> <li>- Exemption of import duties on machinery</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>
NPP5 (ASHL)	62-0183-0-00-2-2	February 15, 2019	For investment in the business of producing sodium sulfate from ashes, category 7.27: Recycling of unwanted materials <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> </ul>
NPP5 (PP11)	62-0184-0-00-0-2	February 15, 2019	For investment in power generation business Industrial steam and water, category 7.1: Public utilities and basic services <ul style="list-style-type: none"> <li>- Permit to own land</li> <li>- Exemption of import duties on machinery</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>
NPP12	61-0558-0-00-3-0	May 10, 2018	For investment in the business of producing electricity from black rubber oil, steam and chemicals for pulp production, category 6.2: Business of manufacturing chemical products for industrial purposes and category 7.1: Business of utilities and basic services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> </ul>
CHP1	59-1120-00-1-0	August 30, 2016	For investment in the business of generating electricity from natural gas and steam, category 7.1: utilities and basic services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> </ul>
CHP1	60-0900-0-00-1-0	August 17, 2017	For investment in the business of generating electricity from natural gas and steam, category 7.1: utilities and basic services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 Percent deduction of the cost of installation or construction of facilities</li> </ul>

Company	Number	Date	Incentives Under The Investment Promotion Act <sup>(1)</sup>
BPG	64-1097-0-00-1-0	October 20, 2021	For investment in power generation business with COGENERATION, category 7.1.1: Electricity or steam generation business - Exemption of import duties on machinery - Exemption of corporate income tax on the netprofit and dividends derived from the promote activity
NPS Solar	64-1248-1-00-1-0	November 18, 2021	For investment in the business of generating electricity from solar energy, category 7.1.7.2: Generating electricity business or electricity and steam from renewable energy, except waste or waste fuel - Exemption of import duties on machinery - Exemption of corporate income tax on the netprofit and dividends derived from the promote activity

Note: <sup>(1)</sup> All investment promotion certificates are permitted to bring foreigners who are skilled workers, expertise, spouse and dependent persons to entering the Kingdom for a period of time to stay as the board deems appropriate. Permitting to bring foreigners who are skilled workers or expertise to work in their positions and specifying the time period approved by the Board throughout the period as long as they are permitted to stay in the Kingdom.

### 1.2.2.2 Other Product and Services

Other products and services account for 10 -25 % of total revenue. Sales of water and service income from logistics and other business groups that support the Company's main business are in the form of sales and service to external customers at times of excess capacity to maximize revenue and manage costs efficiently.

#### 1. Water for Industrial Use

The Company procures and sells water for industrial use at 304 Industrial Park, Prachinburi and 304 Industrial Park 2, Chachoengsao. The Company's subsidiary, NS304, owns 3 water treatment plants with a production capacity of 180,000.00, at 304 Industrial Park, Prachinburi, and NPP3 owns a water treatment plant with a production capacity of 24,000.00 cubic meters per day at 304 Industrial Park 2, Chachoengsao. At 304 Industrial Park, Prachinburi, the Company manages raw water and water for industrial use by pumping overflowing water around the reservoir and raw water from the nearby river into the reservoir, pumping the stored raw water into the water treatment plants, while at 304 Industrial Park 2, Chachoengsao, the Company provides raw water by pumping water in accordance with a water pumping license from the Royal Irrigation Department. Thus, processed water for industrial use is sold to the Company group and customers at 304 Industrial Park, Prachinburi at a price referent to that of the Provincial Waterworks Authority ("PWA") and to customers at 304 Industrial Park 2, Chachoengsao at a price referent to the contracted price.

#### 2. Service Business

Service businesses include:

##### 1) Research and development service

IRC, a subsidiary, established to research and develop the whole cycle of electricity generation from developing plants that use in production, managing waste, and improving efficiency in water production to use in the plant and power plant manufacture. Further, production process efficiency is enhanced by research related to fuel management, stability in generating electricity and energy system which will lead to suitably methods and better solution. In addition, the company has labs that certified by government in accordance with laws that will support both internal and external company group.

## **2) Floating crane services for offshore cargo handling**

NPP3 is a subsidiary that offer ship to ship and floating storage business. This business was transferred from ITS5 where NPP3 owns M.V. Inter Stevedoring 8, located in Sri Racha, Chon Buri. The vessel has four cranes and four grabs that can be used to transfer merchandise up to two million ton per year depending on type of the merchandise.

## **3. Ethanol**

The Company produces ethanol from cassava, which helps support Thai farmers. Ethanol can also be used in the production of various grades of gasohol, including E10, E20 and E85. The current installed capacity from Production Line 1 is 250,000liters per day, commenced commercial operations in August 2012. Production Line 2, with a capacity of 250,000 liters per day, commenced commercial operations in March 2016. The Company sells ethanol to petroleum traders in accordance with section 7 of The Petroleum Trade ACT B.E. 2543, including PTT and Bangchak.

## **4. Tapioca Starch and Biogas**

The Company produces tapioca starch and biogas with an installed capacity of 150.00 tons/day of tapioca starch, 120.00 tons/day of modified tapioca starch. The major customers for tapioca starch are in the paper and food sectors. In addition, SNST produces biogas with total capacity of 12,400 m3/day, used as fuel for power generation and sells to AA

- **Incentives**

Group companies in businesses other than power business receive investment incentives which has been approved by the Board of Investment Under the Investment Promotion Act 1977, the Group of Companies must comply with the conditions that specified in the Investment Promotion Certificate by the investment promotion certificate as follows:



Company	Number	Date	Incentives Under The Investment Promotion Act <sup>(1)</sup>
E85	1043(9)/2551	January 16, 2008	For investments in the production of ethanol (99.5%) or pharmaceutical alcohol grade with a concentration of not less than 70% and biogasm, category 1.26: Production of alcohol or fuel from agricultural products, including scraps or waste or waste <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Reduction of import duties for raw or essential materials</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 percent deduction of the cost of installation or construction of facilities</li> <li>- Exemption of import duty on raw or essential materials imported for use in production for export</li> </ul>
E85	2091(1)/2557	September 4, 2014	For investment in biogas power generation business, category 7.1: Utilities and basic services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 percent deduction of the cost of installation or construction of facilities</li> </ul>
E85	2092(1)/2557	September 4, 2014	For investment in biogas power generation business, category 7.1: Utilities and basic services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 percent deduction of the cost of installation or construction of facilities</li> </ul>
NS304	2193(2)/2548	December 26, 2005	For investment in tap water production business, category 7.1: Public utilities and basic services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 percent deduction of the cost of installation or construction of facilities</li> </ul>
NS304	2206/Aor./2549	December 25, 2006	For investment in water supply and/or industrial water production business, category 7.2: Water supply or industrial water <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>
NS304	58-2006-0-00-1-0	August 10, 2015	For investment in industrial water production business, category 7.1: Public utilities and basic services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 percent deduction of the cost of installation or construction of facilities</li> </ul>

Company	Number	Date	Incentives Under The Investment Promotion Act <sup>(1)</sup>
IRC	1794(4)/2550	August 10, 2007	For investment in business Research and development of products and production processes in various industries, category 7.12: Research and development and 7.13 scientific testing services <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- Additional 25 percent deduction of the cost of installation or construction of facilities</li> </ul>
IRC	61-0229-1-00-2-0	March 2, 2018	For investment in research and product development and production processes in various industries, research and development activities <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of import duties on materials imported for R&amp;D purpose</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>
SNST	1030/Aor./2542 5812/2546 1030/Aor./2542 5812/2546 (2-1030/Aor./2542)	January 27, 1999 June 18, 2003	For investment in the production of instant tapioca starch and cassava pellets, category 1.2: processing or transforming agricultural products <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of import duty on raw or essential materials imported for use in production for export</li> <li>- Permit to take out or remit money abroad in foreign currency</li> </ul>
SNST	1462(2)/2550	May 8, 2007	For investment in processed starch manufacturing business, category 1.15: Production of dextrin or modified starch <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> </ul>
SNST	1153(1)/2556	January 31, 2013	For investment in biogas production, category 1.18: Alcohol production business or fuel from agricultural products including scrap or garbage or waste <ul style="list-style-type: none"> <li>- Exemption of import duties on machinery</li> <li>- Exemption of corporate income tax on the netprofit and dividends derived from the promote activity</li> <li>- A 50 percent reduction of the corporate income tax</li> <li>- Double deduction from the costs of transportation, electricity and water supply</li> <li>- Additional 25 percent deduction of the cost of installation or construction of facilities</li> </ul>

Note: <sup>(1)</sup>All investment promotion certificates are permitted to bring foreigners who are skilled workers or experts. Spouse and dependent persons of both types of persons entering the Kingdom in an amount and for a period of time to stay in the Kingdom as the Board deems appropriate. and is permitted to bring foreigners who are skilled workers or experts to work in their positions and specifying a period of time approved by the Board throughout the period as long as they are permitted to stay in the Kingdom.

### 1.2.3 Market conditions and competition

#### 1.2.3.1 Marketing Strategies

Marketing is an important part of operations, and the Company emphasizes developing and maintaining good relationships with current customers and searching for new customers in order to expand its business. As the Company's business is primarily to generate electricity and steam for industrial use, all of the Company's customers are large. Therefore, it is important to continuously perform in accordance with the conditions in the long-term agreements between the Company and its customers, and to cooperate in solving any problems that may arise. As a result, the Company has earned the trust of its customers for the long term.

The Company's key marketing strategies include product, price, place and promotion, as follows:

##### 1) Product

The Company has product-specific strategies for its products, which include electricity and steam. A prudent policy for determining the selling point for electricity is arrived at by management, emphasizing stability in generating and distributing electricity to customers, which assures them of the quality of the Company's services. For steam, the Company's marketing strategy emphasizes product innovation by proposing the optimal product to meet the customer's needs, further emphasizing the Company's ability to control the steam production process through technology, for example, allowing it to adjust production to various pressure levels with control valves on the turbine. As a result, the Company can produce more steam with the same energy, and enhance its competitive advantage to respond to customer demand.

##### 2) Price

The Company uses pricing strategies that are competitive and appropriate to each type of customer by specifying the price in writing in long-term power purchase agreements as follows:

###### 2.1) Electricity:

- EGAT: The selling price to EGAT will be in the Power Purchase Agreement for SPPs, which EGAT determines and then pays two types of compensation – CP and EP.
- AA: The selling price to AA will be in the Power Purchase Agreement, which refers to the PEA rate – CP, EP, and Ft.
- Industrial Customers: The selling price to each customer in the industrial parks might differ in the details, but the core structure of the agreement is similar in that it refers to the PEA rate as in the case of AA.

###### 2.2) Steam

For steam products, the Company establishes the selling price in the long-term agreement by referring to the price of oil, natural gas, or coal and the Consumer Price Index (CPI).

##### 3) Place

The Company's strategies on place (distribution channels) are based on consideration of the various types of customers and product. In selling electricity to EGAT, the Company uses a strategy of expanding distribution channels. EGAT is the state enterprise responsible for the electricity operations of the country, and not only the largest producer of electricity, but also the sole wholesale buyer of electricity and controller of the country's electricity distribution system. Thus, the Company can expand its distribution channels through EGAT's projects, which are supported by the government. For selling electricity and steam to AA and customers at 304 Industrial Park, the Company has a distribution strategy that gives it a competitive advantage insofar as location since its customers are located near the Company's power plants.

#### 4) Promotion

The Company's strategies on promotion are based on public relations, which is intended to build good relationships with current customers as well as find new customers through a positive image and prestige. The Company might also consider discounts on sales to related customers for advance payment, allowing the Company to manage its working capital more effectively.

#### 1.2.3.2 Customer

The Company sells electricity to EGAT, AA, and industrial customers at 304 Industrial Park, Prachinburi, and 304 Industrial Park 2, Chachoengsao, under power purchase agreements between the Company and customers. The electricity sold to EGAT is delivered to EGAT's main system to be sold to consumers in the household and business sectors. Electricity sold to AA is delivered directly to the grid system owned by AA for use by AA's business group. Electricity sold to industrial customers is delivered to the grid system of each industrial park for use in the production process and operations of several industries. The Company sells steam to AA and industrial customers at 304 Industrial Park, Prachinburi, and 304 Industrial Park 2, Chachoengsao.

The details of the power purchase agreement and steam are as follows:

##### Power purchase agreement

##### 1) EGAT

At present, the group of companies produces and distributes the electricity to EGAT under long-term power purchase agreements with the total of 7 issues, representing 844.00 megawatts of electricity according to the contract, which can be summarized as follows:

Company	Execution date	Commercial Operation Date (COD)	Contract terminate date	Contract period (Years)	Contracted Capacity
(MW)	January 6, 1998	March 12, 1999	March 11, 2024	25	90.00
NPS	January 6, 1998	July 12, 1999	July 11, 2024	25	90.00
NPP2	April 16, 1999	May 7, 1999	May 6, 2020 <sup>(1)</sup>	21	8.00
NPP3	April 16, 1999	April 21, 1999	December 15, 2024	26	41.00
NPP5	September 22, 2003	November 4, 2003	October 15, 2027	24	50.00
NPP5	September 22, 2003	December 1, 2003	October 15, 2027	24	25.00
BPG	July 12, 2019	Within November 1, 2027	N.A.	25	540.00
Total					844.00

Note: <sup>(1)</sup> NPP2 submitted a letter to NEPC requesting a renewal of the long-term power purchase agreement with EGAT, which is currently under consideration by the NEPC. It is pending the clarification of the community power plant project and the consideration of government agencies regarding the extension of the long-term power purchase agreement with EGAT for the biomass power plant operator according to the proposal of the Operators Club. However, if NPP2 is not approved to extend the power purchase agreement before the contract expiration date, NPP2 will need to terminate the PP2 power plant operation at the end of the contract.



Under the power purchase agreement between the Group and EGAT, the Group is responsible for supplying source of funds, construction, operation of power plants as well as the maintenance of power plants in accordance with the requirements. Technical details as specified in the written contract, while EGAT is responsible for the payment of electricity to the Group. Generally, in the Power Purchase Agreement between the Power Producer and EGAT, there will be standard terms and conditions for each producer. EGAT has the following details:

#### Compensation Payment

EGAT will pay remuneration to the group on a monthly basis in accordance with the amount of electricity. The group actually produces and sells to EGAT, which is divided into two parts which are CP fee and EP fee. The CP value will change according to the exchange rate between baht and USD each month. The EP value will change according to the fuel price each month. The type of fuel used to determine the EP will vary from contract to contract in the event that EGAT is unable to purchase electricity. If the group of companies unable to deliver electricity to EGAT at the amount specified in the contract, EGAT has the right to request that the group deliver the aforesaid lack of electricity within any year of the next two years after the incident and it must be the year that EGAT has fully purchased electricity at the minimum amount specified in the completed contract. On the condition that the company is unable to sell the specified amount of electricity in the contract for a continuous period of 18 months.

#### Breach of contract

- In case of payment default, either party fails to pay for the undisputed amount within the specified period.
- The group is unable to sell electricity to EGAT except in the case there is a contractual excuse about the distribution of electricity or because of EGAT's fault for more than 15 consecutive days.
- The group of companies is unable to comply with important conditions.
- The group is unable to comply with important conditions regarding power quality standards as stipulated under the SPP Grid Code.

#### Technical contract and others

In the event that a legal change causes the group of companies need to improve the power plant in a significant way or need to modify and improve in other parts which involves generating electricity or maintaining a power plant and may affect the expenses or income of the group of companies. Significantly, the group is required to present reasonable details of the costs of such revision upon request from EGAT in order for EGAT to collect various information. The term "legal change" shall mean any of the following events: occurring after the date of signing the power purchase agreement which is a result of the actions of government agencies, including

- Changes or amendments to existing laws

- New legislation
- Changes in the nature of enforcement or interpretation of the law including the interpretation of various environmental standards

The term “law” shall include: issuing regulations by government agencies, whether in the form of statutes, decrees, royal decrees, codes of laws, ordinances, local regulations and treaties or other forms which have similar characteristics including various types of secondary laws such as ministerial regulations, ministry announcements, rules, announcements, regulations, orders and requirements of various government agencies, including the SPP Grid Code.

## 2) AA

At present, the group of companies has 6 power purchase agreements with AA, details of which are as follows:

Company	Execution date	Contract terminate date	Contract period (Years)	Contracted Capacity
NPS	November 30, 2009	November 30, 2024	5 years from the date of receiving the energy industry license (When the contract expires If there is no cancellation, the contract will be valid for an additional period of 5 years each)	18.00
NPS	August 27, 2014	March 2, 2025	5 years from the date of receiving the power distribution system license and power distribution license (When the contract expires, if there is no cancellation, the contract will be valid for an additional period of 5 years each)	9.90
NPS	May 15, 2019	May 14, 2024	5 years from the date of signing the contract (When the contract expires, if there is no termination of the contract will be valid for an additional 1 year)	11.80
NPP3	August 1, 2011	when termination of the contract	1 year (When the contract expires, if there is no termination, the contract will continue for an additional period of 1 year each)	3.42
NPP5	December 1, 2009	November 5, 2028	18 years 11 months	24.00
NPP5A	September 20, 2013	June 30, 2023	9 years 9 months	60.00
Total				127.12

However, although the power purchase agreement between the company and AA is valid for only 5 years, the contract includes determining the duration of the contract that if either party does not express its intent in writing that it does not wish will renew the contract for a period of not less than 30 days in advance, it will be deemed that the parties agree that this contract will continue to be effective for 1 year or 5 years each depending on the conditions of each contract. For the payment of AA's remuneration to the group, it has been specified to pay the rate monthly electricity bill per meter as announced by PEA, which is structured as follows:

- CP Value: calculated from the period of peak power demand during the invoice cycle. The rate will be adjusted according to the reference to the electricity tariff of PEA and deducted with the discount according to the agreement with each customer. The customer is required to pay CP monthly according to the pre-agreed formula and stipulated in the contract electricity trading
- EP Value: calculated from the actual electricity consumption each month, which will be adjusted according to the reference to the rate of PEA and deducted with the discounts according to the agreement with each customer. The unit is kilowatt-hour.
- Ft Fee: an electric power fine to cover the main costs of generating electricity which are the cost of fuel and electricity purchase costs that are beyond PEA's control. The Ft is in baht per kilowatt-hour which is determined and announced by the Energy Regulatory Commission.

In addition, in the event that AA defaults on payment at the time specified in the contract, AA must pay interest to the company and NPP5 at the rate of 7.5% per annum or NPP3 at the rate of 15% per annum, or as the case may be based on the outstanding amount that appears on the invoice from the date of default until the payment is complete.

### 3) Industrial Customers

The group sells electricity to industrial customers in two industrial zones, namely 304 Industrial Park, Prachinburi Province and 304 Industrial Park 2, Chachoengsao Province. The details of the power purchase agreement at the group to the customers in that industry prescribes that the electricity tariff is based on the announcement of PEA. Previously, the company sold electricity to industrial customers in 304 Industrial Park, Prachinburi Province through BECO, which is a subsidiary that holds a license to operate energy businesses in the type of electricity distribution and system business. Electricity supplier in the industrial area later, on September 2011, BECO transferred the license to the company. Therefore, the company entered into a power purchase agreement with each industrial customer in the industrial area directly. As for the 304 Industrial Park, 2, Chachoengsao Province, NPP3, a subsidiary that has a power plant in the aforementioned industrial area, is a distributor of electricity to industrial customers in the same area operates in many businesses.

#### **Steam purchase agreement**

At present, the group of companies Selling low and medium pressure steam to AA, related companies and other companies, including industrial customers. The details of the contract are as follows:

Counter-parties	Parties	Execution date	Contract terminate date	Contract period	Contract minimum quantity (Ton per Year)	
					LP	MP
NPS	AA	February 10, 1997	March 11, 2023	25 years from the date of commencement of commercial production	553,632	35,040
NPS	APM3	June 1, 2016	March 31, 2023	6 years 10 months	320,000	32,000
NPP3	AA	August 1, 2011	When termination of the contract	1 year (When the contract expires If there is no cancellation The contract will continue for an additional period of 1 year each)	61,700	–
NPP3	GFB	December 1, 2018	November 30, 2023	5 ปี	15 tons per hour	5 tons per hour
NPP3	AGF	January 1, 2019	December 31, 2023	5 years	1.8 tons per hour	–
NPP3	THH Molyprocessing Company Limited.	March 1, 2014	When termination of the contract	1 year (When the contract expires If there is no cancellation The contract will continue for an additional period of 1 year each)	2,500	–
NPP5	AA	June 26, 2009	November 4, 2028	19 years 5 months	–	200,000
NPP5	AA	June 26, 2009	December 1, 2028	19 years 6 months	507,500	
NPP5	APM3	February 1, 2012	30 June 2022	10 years (From the effective date of the contract, which is July 1, 2012)	374,000	40,000
NPP5A	Sunsine Biotech International Co.,Ltd.	March 1, 2013	February 28, 2021	8 years	–	40-45 tons per hour
NPP5A	AA	April 1, 2012	July 6, 2022	10 years (From the effective date of the contract, which is July 7, 2012)	610,000	

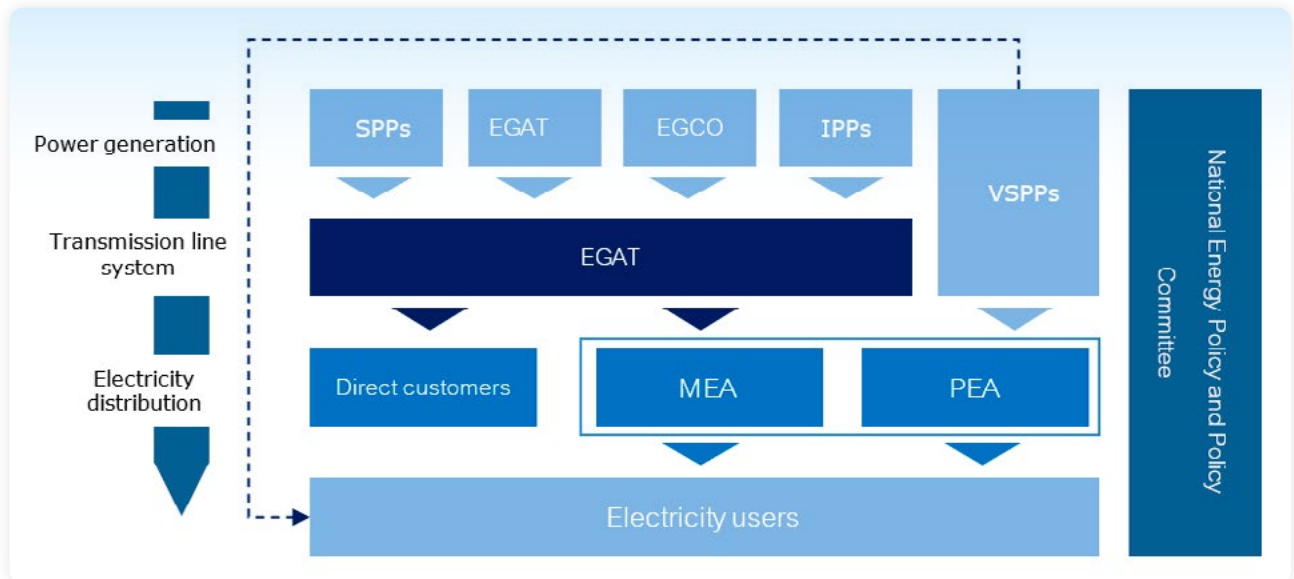
The steam purchase agreements between NPP5 and AA, and between NPP5A and AA, specify the minimum amount of steam to be traded between them as the sum of low-pressure and medium-pressure steam. For the payment of remuneration to the group, the steam purchase agreement states that the steam tariff is based on the oil price or the natural gas price or the coal price and consumer price index. However, if either party



does not pay any debt to be bound to be paid under the said contract that party must pay interest to the other party at the rate of 7.5% to 15% per annum of the outstanding amount from the due date until the date of payment in full, depending on the conditions in the contract

### 1.2.3.3 Competition conditions

EGAT produces and sells electricity to the people and to MEA, PEA and other electric power users as required by law including to the countries nearby. Also, perform various actions related to energy as well as other tasks which promotes EGAT's business. The main policy is to produce enough electricity. The power system must be stable and reliable. The price of the electricity has to be in the appropriated level. EGAT manages and plans the power generation in accordance with the Power Development Plan of Thailand (PDP). This includes the production itself and purchasing power from large private power producers (IPP) and small private power producers (SPPs), as well as negotiating power purchases with neighboring countries.

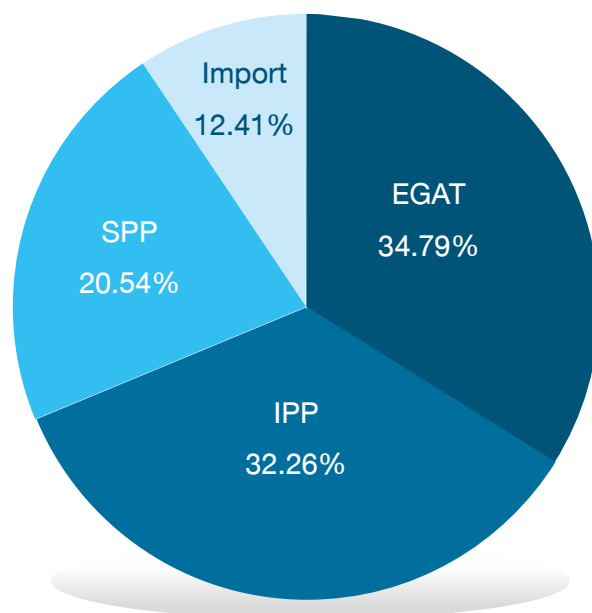


Source: EPPO

Currently, Thailand has a large number of private power plant operators in the country, so the relatively few dependencies from abroad. As of the end of August 2021, the installed production capacity in the part that is purchased from abroad is only 12.41 percent of the total installed power generation capacity of 46,102.37 megawatts. The Electricity Generating Authority of Thailand is the main power producer of the country which has installed power generation capacity at 34.79 percent, followed by large private power producers with 32.26 percent of installed power generation, and small power producers. The proportion of installed electricity production is 20.54 percent.

The installed capacity is classified by power generation operators.

At the end of August 2021, a total of 46,102.37 megawatts



Source: Division of Information, Corporate Communications Department Electricity Generating Authority of Thailand

### Competition among large private power producers

EGAT will purchase electricity from a large private power producer with an offer volume of more than 90.00 megawatts through an open auction method. There is an evaluation and selection committee of proposals from private power producers to supervise the evaluation and selection of proposals from private power producers. EGAT is the purchaser of electricity generated from all IPP power plants under the 25-year power purchase agreement.

However, the group does not have any power plants in the large private power producers to start commercial production but the group of companies in the process of developing the Burapha Power Project which passed the auction of the IPP power plant from the EPPO in 2007 with a contracted volume of 540.00 megawatts of electricity. Currently, the project has been approved by the NEPC. At the meeting No. 1/2019 (the 16th time) on January 24, 2019, it was agreed that the ERC proceeded in accordance with the guidelines of the CGPC. In which the Election Commission, at its meeting No. 3/2019 (the 77th time) on February 25, 2019, resolved to authorize the ERC to negotiate with the company in the proposal of the purchase price of electricity in the case of changing fuel from coal to natural gas on July 12, 2019, the group of companies has already signed a Power Purchase Agreement (PPA) with EGAT.

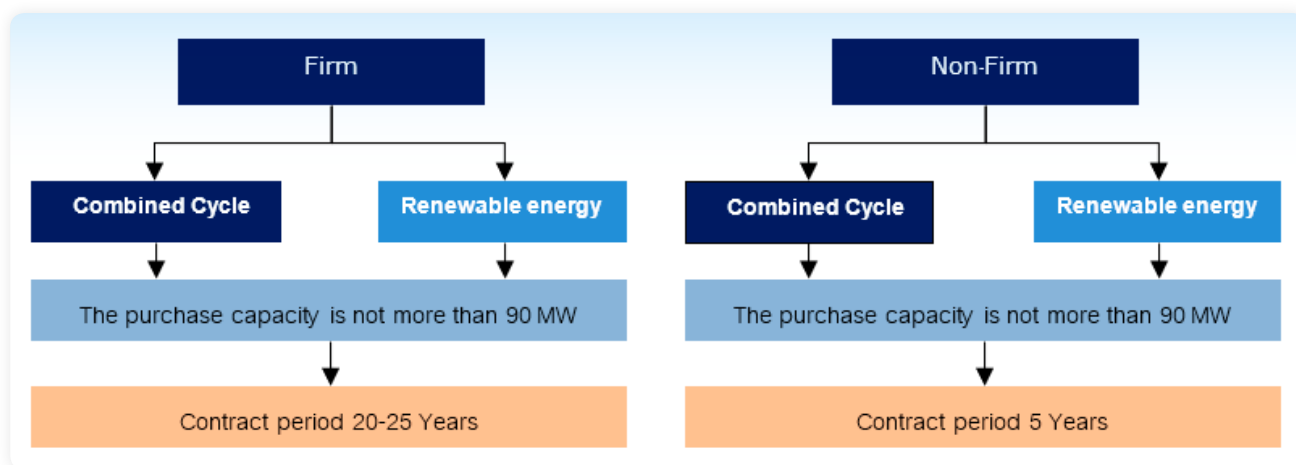
As of the end of August 2021, there are projects of large private power producers contracting with EGAT and supplying electricity. A total of 12 users have entered the commercial system with the following details:

No.	Power plant	Installed capacity (Megawatts)	Fuel
1.	Khanom Electricity Generating Company Limited.		
	- Combined Cycle Power Plant (Unit 2)	930	Natural gas/Diesel oil
2.	Ratch Group Public Company Limited.		
	- Thermal power plant	1,440.00	Natural gas/Fuel oil
	- Combined Cycle Power Plant (Unit 1)	685	Natural gas/Diesel oil
	- Combined Cycle Power Plant (Unit 2)	675	Natural gas/Diesel oil
	- Combined Cycle Power Plant (Unit 3)	681	Natural gas/Diesel oil
3.	Global Power Synergy Public Company Limited	700	Natural gas/Diesel oil
4.	Glow IPP Company Limited	713	Natural gas
5.	Eastern Power and Electric Company Limited	350	Natural gas/Diesel oil
6.	BLCP Company Limited	1,346.50	Bituminous coal
7.	Gulf Power Generation Company Limited	1,468.00	Natural gas/Diesel oil
8.	Ratchaburi Power Company Limited	1,400.00	Natural gas/Diesel oil
9.	Gheco One Company Limited	660	Bituminous coal
10.	Gulf JP NS Company Limited		
	- Gulf JP NS Company Limited Project 1	800	Natural gas/Diesel oil
	- Gulf JP NS Company Limited Project 2	800	Natural gas/Diesel oil
11.	Gulf JP UT Company Limited		
	- Gulf JP UT Company Limited Project 1	800	Natural gas/Diesel oil
	- Gulf JP UT Company Limited Project 2	800	Natural gas/Diesel oil
12.	Gulf SRC Company Limited Unit 1	625	Natural gas/Diesel oil
Total		14,873.50	

Source: Division of Information Communications Department, Electricity Generating Authority of Thailand

## 1) Competition among Small Power Producers (SPP)

EGAT will purchase electricity from small private power producers that generate electricity for use in the factories own or sell to customers nearby. The volume of electricity offered for sale is between 10.00 - 90.00 megawatts by using the combined heat and power generation system. Cogeneration, which mainly uses natural gas, coal or renewable energy such as agricultural waste, waste, biogas or solar energy come as fuel. This will make the use of domestic resources more efficient. As for power purchase agreements from small power producers, it can be divided into two types, namely, firm contracts, which are power purchase agreements with contract periods ranging from 20-25 years with CP payment. Non-firm contracts are Make a power purchase agreement with a contract term of not more than 5 years and pay only the EP fee.



Source: EPPO

As of the end of December 2021, the number of small power producer projects in Thailand. The details can be summarized as follows:

Status	Project	Installed capacity (Megawatts)	Contract power (megawatts)
Requested but not yet accepted	0	0.00	0.00
Accepted purchase but hasn't signed the PPA yet.	8	204.00	161.77
PPA signed but still not COD	14	689.14	447.77
COD	156	13,771.52	9,470.95

Source: Energy Regulatory Commission

The group has a total of 11 commercial power plants with a total installed capacity of 736.05 megawatts or 7.39 percent of the installed capacity of power plants with commercial firm contracts and has a total amount of electricity under firm contracts totaling 304.00 megawatts, operated by the Company NPP2, NPP3 and NPP5 in an accounting for 4.53% of the contracted electric power of power plants with firm contracts that commenced commercial operation. The details of the SPP contract type Firm and Non-Firm as of December 31, 2021 can be summarized as follows:



Type	Status	Installed capacity (Megawatts)	Contract power (megawatts)
Firm	Started commercial operation	9,952.92	6,714.60
	Commercial operations have not yet begun.	833.60	570.00
Non-Firm	Started commercial operation	3,818.60	2,756.35
	Commercial operations have not yet begun.	59.54	39.54

Source: Energy Regulatory Commission

Sales of electricity and steam to customers of the company group that is in accordance with the conditions under the long-term contract. This is mainly a contract with AA, a related company and industrial customers in the industrial park which are 304 Industrial Park, Tha Tum Subdistrict, Si Maha Phot District Prachinburi Province and 304 Industrial Park 2, Khao Hin Son Subdistrict Phanom Sarakham District Chachoengsao Province which the company group is the only private power producer in the industrial zone. Therefore, the group of companies therefore assessed that competition in the business that the group of companies perform at the level relatively low.

In addition, the group of companies has always developed competitive potential in terms of quality and service by defining operational policies in various fields such as stabilization in electricity generation and delivery improvement and development of transmission lines production cost management procurement of fuel raw materials development of production technology systems and personnel development in the organization to support both the domestic electricity demand that increasingly and continuously growing the country's economy especially the official opening of the ASEAN Community in 2015, which is a factor that affects the Group's electricity generating business tends to expand increase in the future

## 1.2.4 Procurement of Products

### 1.2.4.1 Production

The Company's power plants have a combined installed capacity of 726.05 MW and 2,486.80 tons of steam per hour. The major customers of the Company are EGAT, AA, and the customers in 304 Industrial Park, Prachinburi, and 304 Industrial Park 2, Chachoengsao. The Company sells electricity to EGAT under long-term Power Purchase Agreements ("PPAs") between the Company and EGAT. Excess capacity is sold to other customers. The Company has a policy to comply with international standards of quality, production and social responsibility, including ISO 9001, ISO 14001, TIS 18001, OHSAS 18001, and CSR-DIW, as well as relevant laws. The Company monitors and evaluates utilized capacity with the Capacity Factor, one of the factors power plants use for evaluating production potential. This factor reflects the capacity of a power plant to operate continuously, which affects revenue generation. In other words, if a power plant can operate at maximum capacity, the generated electricity will be stable and distributed to customers according to the power purchase

agreements; as a result, the Company maintains a stable profit margin.

- *Gross Power Output*: the amount of electricity a generator produces over actual operating hours.
- *Output Factor*: The ratio of the amount of electricity a generator produces over actual operating hours to the amount of electricity a generator can produce at installed capacity over actual operating hours. Thus, output factor is affected by unforeseen incidents, for example, a clogged fuel burner system or damaged machinery.

Capacity Factor	Unit	2019	2020	2021
Gross Power Output	MWh	4,010,221.75	3,919,791.88	3,973,376.29
Output Factor <sup>(1)</sup>	%	83.84	81.38	84.58

Note: <sup>(1)</sup> Weighted average of the installed capacity of the entire group of companies.

In addition, the group company has planned maintenance on a quarterly and yearly basis. To ensure that the power plants of the company's group will be able to continue producing efficiently. The details of the shutdown of the power plants of the group of the company are as follows:

Capacity Factor	2019	2020	2021
Planned Maintenance Outages (Hours/Years)	4,561	4,018	4,964
Unplanned Maintenance Outages (Hours/Years)	6,572	12,003	5,679
Actual (Hours/Years)	11,133	16,022	10,643

#### 1.2.4.2 Procurement of Raw Materials

The Company's primary raw materials are fuel, water, and others as follows:

##### 1) Procurement of Fuel

The Company uses three main fuels, which are coal, black liquor, and biomass as follows:

Fuel type	2019 (Trillion calories)	%	2020 (Trillion calories)	%	2021 (Trillion calories)	%
Coal	5,584.55	38.70	5,753.19	40.01	6,417.30	41.72
Black Liquor	2,841.24	19.69	2,554.66	17.77	2,783.80	18.10
Other biomass fuel <sup>(1)</sup>	5,785.29	40.10	5,949.44	41.38	6,065.18	39.38
Other <sup>(2)</sup>	218.28	1.51	120.38	0.84	123.48	0.80
<b>Total</b>	<b>100.00</b>	<b>100</b>	<b>14,377.67</b>	<b>100</b>	<b>15,380.76</b>	<b>100</b>

Notes: <sup>(1)</sup> Other biomass fuel such as woodchips, bark, rice husk and others

<sup>(2)</sup> Fuel oil, diesel oil and others

In this regard, the group company has a policy to supply each type of main fuel as follows:

### 1.1) Coal

Two power plants under the Company’s management, PP7 and PP8, use coal as the major fuel in the production process. The Company uses sub-bituminous coal, which is high-quality and contains low sulfite. The Company procures coal from both domestic and international suppliers at any desired quantity at market price and usually orders 25,000 - 160,000 tons, using it for vessels and trucks, with partners for inland transport. However, during a period of escalating coal prices, the Company may consider engaging in long-term contracts with suppliers if the price is appropriate or buy spot from domestic suppliers occasionally. Thus, the Company sets strict criteria for supplier selection and has an effective purchasing system. All suppliers are required to test and analyze coal quality before delivery to the Company in order to assure the same specifications and standards specified in the agreements, such as ISO and the American Society for the Testing of Materials (“ASTM”). If delivered coal does is not of the quality specified in the purchase order, the Company has the right to request that the supplier deliver a new lot of the specified quality or pay a penalty equal to the price difference between the delivered coal and the specified coal.

In addition, PT Utami Jaya Mulia, a subsidiary, is in the process of applying for the relevant permits in order to serve the coal demands of the Company as well as new power plant projects in the future.

### 1.2) Black Liquor

Two power plants, PP6 and PP11 are under NPP5’s management, use black liquor as the major fuel in the production process. Because black liquor is a by-product of the manufacturing process of pulp mills, the Company has entered into a contract to buy black liquor from AA, the related company.

Counterparties	Parties	Execution date	Contract terminate date	Contract period	Contract quantity (Tons/Year)
NPP5	AA	June 26, 2009	November 4, 2028	19 years 5 months	500,000
NPP5	AA	June 26, 2009	December 1, 2028	19 years 6 months	450,000

The price of black liquor as specified in the purchasing agreements mainly refers to natural gas. Regarding delivery of black liquor, AA is responsible for installing all equipment related to black liquor delivery to the Company’s power plants and making deliveries at the specified delivery points. Additionally, NPP5 and NPP11 provided 3 black liquor storage tanks with a total capacity of 88,000 tons to store enough black liquor for 5 days’ average of electricity generation.

### 1.3) Other Biomass Fuel

The Company uses other biomass fuels, such as woodchips, bark and rice husk, as primary and secondary fuels for electricity generation. This is managed by the Biomass Fuel Sourcing Division, which has extensive experience in sourcing biomass fuels. The Company has long-term biomass fuel agreements with AA and NPS. Payment to AA and NPS is based on the coal price adjusted by the heating value of the coal and other biomass fuels.

Counter-parties	Parties	Execution date	Contract terminate date	Contract period	Contract quantity (Tons/Year)
NPP5	AA	June 26, 2009	November 4, 2028	19 years 5 months	165,000
NPP5A	AA	April 1, 2011	June 30, 2023	12 years 3 months	350,000
FG	NPS	March 15, 2030	10 years	10 ปี	1,100,000

In addition, the group has also managed its risks by procuring other biomass fuels directly from farmers or biomass producers and has a policy to develop and promote the planting of energy plants and Napier grass to be used as other biomass fuel to generate electricity for the energy source. The group of companies has researched and developed. Eucalyptus which can produce new seedlings that are suitable for cultivation according to the climate and terrain of Thailand. It takes only 2-3 years to grow and improve the species to grow faster can provide high-density wood texture and provide energy higher heat than the original species from the technology of boilers. The group of companies is being flexible in using biomass fuel, the group has plans to research and develop other raw materials. to be used as other biomass fuels in the production process.

#### 1.4) Natural Gas

The Burapa Power Plant project under BPG will use natural gas as the main fuel to generate electricity. BPG has signed a Gas Sales Agreement with PTT Public Company Limited.

Counter-parties	Parties	Execution date	Contract terminate date	Contract period	Contracted high volume (Million BTUs per day)
BPG	PTT	July 24, 2019	25 years from Commercial Operation Date (COD)	25 years from Commercial Operation Date (COD)	81,130

The aforementioned natural gas purchase agreement between BPG and PTT stipulates the maximum capacity of fuel purchases of gas meat and service charges for gas transmission through the gas pipeline system.

#### 2) Procurement of Raw Water and Industrial Water

The Company procures raw water for industrial use within the Company group and distributes it through NS304. However, NPP2 still procures water for industrial use from EASTW because it is located outside the service area. Thus, NS304 is responsible for managing and procuring water at 304 Industrial Park, Prachinburi. NPP3 is a raw water provider with its own water filtration plant used in electricity generation process while the excess is being sold to industrial customers.

Buyer	Supplier and distributor	Execution date	Contract terminate date	Contract period	Contract quantity
NPS	NS304	July 1, 2013	June 30, 2018 <sup>(1)</sup>	5 years	Indefinitely
NPP2	EASTW	June 23, 2020	December 31, 2030	10 years	18,000 cubic meters/ year
NPP5	NS304	January 1, 2020	December 31, 2024	5 years	Indefinitely
NPP5	NS304	March 1, 2015	February 28, 2029	14 years	1,000,000 cubic meters/ year
E85	NS304	July 1, 2015	June 30, 2029	14 years	30,000 cubic meters/ year
FG	NS304	November 1, 2020	October 31, 2025	5 years	Indefinitely

Note: <sup>(1)</sup> At the expiration of the contract period and either party has not terminated the contract in writing at least 30 days in advance before the expiration date of the contract. The parties agree that this contract will be extended for an additional period of 1 year each.

The price of water for industrial use is referent to that of Provincial Waterworks Authority (“PWA”). In addition, the Company has reservoir within its own area with a capacity of 12 months of reserve water for operations.

### 3) Procurement of Other Main Raw Materials

The Company also uses limestone and chemicals such as sulfuric acid and sodium hydroxide as primary raw materials in the process of generating electricity. For the procurement of chemicals, the Company has no long-term sale and purchase agreements with any supplier as there are several domestic suppliers with similar standards. The Company sets strict criteria for selecting suppliers and systematically manages procurement by setting clear specifications for all raw materials. Price trends and sellers’ situations are also taken into consideration, as well as the power plant’s anticipated demand, in determining the strategy and terms of an auction. For example, the Company sets prices and conditions for one month, two months, three months, six months, or twelve months on different types of goods, after which suppliers quote the price of raw materials to the Company. With large orders, the Company has more bargaining power, and has maintained good relationships with its main raw material suppliers, which currently number more than 3.

#### 1.2.5 Environmental Impact

The Company insists that electricity and steam be produced in harmony with the environment and effectively utilizes natural resources. The Company realizes the importance of protecting and monitoring the effect of its operations by setting strict environmental and safety policies, founding a team of (Security Safety Health Environment Quality (SHEQ)) and setting up a Safety, Occupational Health, and Environment Committee, Environmental Representatives, and Energy Representatives to manage operations in accordance with environmental policies and business safety. The Company prioritizes environmental management such as air and water quality, and standardized industrial waste management, by continuously governing, controlling, supervising, and improving operations to maintain environmental impact within the standard level.



The Company uses CFB, or circulating fluidized bed, technology, which is globally regarded for its highly effective combustion that prevents the formation of nitrogen oxide, and therefore air pollution. In addition, the Company selects high-quality fuel with a low sulfur content to reduce sulfur dioxide formation, and applies an electrostatic precipitator to filter dust from the combustion process. For noise control, the Company installed a noise control system to keep noise from operations at a standard level friendly to the community. Regarding water control, the Company provides a pond for the precipitation of wastewater before discharging it to the water treatment system at 304 Industrial Park. The Company also monitors environmental quality by setting parameters to be tested and testing frequently. In the past, results of the Company's environmental assessments have all been within the specified standards.

The Company pays attention to the safety and health of employees as well. The Company comply with the occupational safety and international standards such as OSHA and NFPA by setting measures to monitor various parameters such as noise, chemical, and dust levels, temperature, and density of flammable gas in the workplace, and sets the frequency of monitoring in accordance with accepted standards. Moreover, the Company arranges annual health checkups to enhance the quality of life of personnel and mitigate any risk that might occur in the Company's operations.

The Company's guidelines for environment management are as follows:

Item	Action Plan
Compliance with laws and regulations	<ul style="list-style-type: none"> <li>■ Supervise production to assure strict compliance with environmental laws and regulations.</li> <li>■ Collaborate with government agencies on environmental preservation.</li> </ul>
Control and protection of environmental impact	<ul style="list-style-type: none"> <li>■ Select processes, equipment, and raw materials that have a low impact on the environment.</li> <li>■ Support suppliers and services that display environmental responsibility.</li> </ul>
Continual development and improvement	<ul style="list-style-type: none"> <li>■ Closely supervise operational performance and environmental impact.</li> <li>■ Improve the efficiency of operations by setting environmental objectives and periodically following up to assure they are being achieved.</li> <li>■ Use past performance as a reference to improve and develop current operations.</li> </ul>
Communication within the organization and Implementation	<ul style="list-style-type: none"> <li>■ Arrange environmental awareness programs for personnel.</li> <li>■ Train personnel to understand any possible environmental impact of the production process.</li> <li>■ Provide measures to minimize environmental impact.</li> </ul>
Disclosure to the public	<ul style="list-style-type: none"> <li>■ Inform community members, contact persons of government agencies, and customers about the Company's environmental management and planning.</li> </ul>

The operation of the Company's power plants is under the control of the Enhancement and Conservation of National Environmental Quality Act B.E.2535, and the Promotion and Conservation of National Environmental Quality Act (No. 2), B.E. 2561. Therefore, the Company has a responsibility to prepare Environmental Impact Assessment (EIA) reports for its power plant projects, which include results on compliance with environmental protection measures, as well as monitoring and improving the quality of the environment, to be submitted to the Office of National Resources and Environmental Policy and Planning for project approval. All reports on the Company's operating power plants were approved and the Company has had no disputes involving environmental impact.

#### 1.2.6 Backlog

-None-

#### 1.2.7 Main Fixed Asset Used in Business Operations

##### 1.2.7.1 Main Fixed Asset

Main characteristic of fixed asset used in business operations as of December 31, 2021 consists of land, buildings, and equipment mainly with net book value of THB 19,532 million. Land of the Group is primarily used in operations and detail of fixed asset is as follow:

Asset	Book value (Baht million)	Ownership
<b>Cost as of January 1, 2021</b>		
Land	3,028.85	Ownership
Land improvement	880.84	Ownership
Power plant, building, and machine	33,855.76	Ownership
Tools and equipment	590.17	Ownership
Furniture, fixture, and equipment	110.24	Ownership
Vehicle	1,196.00	Ownership/ Lease/ Finance
Right-of-use assets	190.00	Ownership
Asset under installation and construction	161.40	Ownership
<b>Total</b>	<b>40,013</b>	
Less: Accumulated depreciation and impairment	19,279	
<b>Net book value as at January 1, 2021</b>	<b>20,734</b>	
Changes during year 2021	(253)	
<b>Net book value as at January 1, 2021</b>	<b>19,532</b>	

The main fixed assets of the Group under loan and lease are with detail as follow:

Holder	Collateral	Characteristic	Credit line
NPS	Existing/ to acquire in future of power plant's land, building, and some machinery (including rights to sell electricity and buy reserve power between the Company and EGAT	Letter of guarantee	THB 964.83 million

Assets	Ownership	Value (THB Million)	Obligation* (THB Million)
1. Land improvement			
- 8 plots in Prachinburi with total of 714.88 Rai	NPS	1,091.20	1,134.96
- 2 plots in Chachoengsao with total of 2.41 Rai	NPP2	8.69	No obligation
- 11 plots in Chachoengsao with total of 85.22 Rai	NPP3	57.88	No obligation
- 9 plots in Prachinburi with total of 58.97 Rai	NPPP5	150.45	No obligation
- 7 plots in Prachinburi and Chachoengsao with total of 102.31 Rai	NPP5A	54.68	No obligation
- 1 plot in Prachinburi with total of 17.64 Rai	FG	34.92	No obligation
- 2 plots in Prachinburi with total of 38.97 Rai	NPP12	98.08	98.08
- 3 plots in Prachinburi with total of 246.31 Rai	IPP IP7	620.45	No obligation
- 1 plot in Prachinburi with total of 55.39 Rai	CHP1	95.10	95.10
- 5 plots in Chachoengsao with total of 105 Rai	CHP3	212.10	212.10
- 5 plots in Prachinburi with total of 127.92 Rai	CHP5	322.22	322.22
- 67 plots in Prachinburi, Sakaeo, Nakornsawan, Chaiyaphum, Nakhon Ratchasima, Uthai Thani, Lopburi with total of 1,278.10 Rai	E85	376.78	No obligation
- 4 plots in Prachinburi with total of 77.91 Rai	NS304	449.52	2.98
- 14 plots in Prachinburi with total of 152.73 Rai	IRC	12.90	No obligation
- 5 plots in Chachoengsao with total of 15.12 Rai	SNST	203.55	No obligation
<b>Total land and land improvement</b>		<b>3,516.43</b>	<b>1,865.44</b>
2. Building and factory			
- 2 power plant buildings located in Prachinburi	NPS	130.29	83.01
- 1 power plant building located in Chachoengsao	NPP2	2.31	No obligation
- 2 power plant buildings located in Chachoengsao	NPP3	53.70	No obligation
- 2 power plant buildings located in Prachinburi	NPPP5	73.41	No obligation
- 1 power plant building located in Prachinburi	NPPP5A	257.54	No obligation
- 1 power plant building located in Prachinburi	FG	660.08	No obligation
- 4 office buildings and factories located in Prachinburi, Sakaeo, Uthai Thani and Lopburi	E85	210.20	No obligation
- 1 factory building located in Prachinburi	NS304	18.18	-
- 1 factory building located in Chachoengsao	SNST	107.37	No obligation
<b>Total building and building improvement</b>		<b>1,513.08</b>	<b>80.01</b>

Assets	Ownership	Value (THB Million)	Obligation* (THB Million)
3. Machinery			
	NPS	4,026.64	No obligation
	NPP2	11.87	No obligation
	NPP3	493.18	No obligation
	NPP5	1,289.35	No obligation
	NPP5A	1,924.27	No obligation
	FG	3,868.26	No obligation
	E85	1,986.04	No obligation
	NS304	448.00	No obligation
	SNST	270.76	No obligation
<b>Total machinery</b>		<b>13,485.89</b>	<b>2,668.86</b>
4. Other assets			
	NPS	591.09	41.63
	NPP2	3.14	No obligation
	NPP3	53.26	No obligation
	NPP5	50.97	No obligation
	NPP5A	13.63	No obligation
	IPP IP7	0.69	No obligation
	CHP1	5.90	No obligation
	CHP3	1.23	No obligation
	CHP5	1.42	No obligation
	FG	10.98	No obligation
	E85	86.27	No obligation
	NS304	7.01	No obligation
	IRC	10.51	No obligation
	SNST	0.88	No obligation
Total other assets		816.60	41.63
<b>Total</b>		<b>19,532.00</b>	<b>3,928.47</b>

Remark: \* The obligation of fixed assets of Company and its subsidiaries is under financial institution

As of December 31, 2021, the Group's assets bounded with obligation are equal to THB 3,839 million or 19.65% of land, building, and equipment. Whereas, assets have no obligation are equal to THB 15,693 million of land, building, and equipment

### 1.2.7.2 Intangible Asset

The Group's intangible assets that used in electricity, steam and water for industry as a main business are with detail as follow:

#### 1) Power generation license

The Company and 6 subsidiaries including NPP2, NPP3, NPP5, NPP5A, FG and E85 are licensee who can generate electricity according to the Energy Industry Act B.E. 2550 as follow:

Licence Holder	Installed Capacity (Megawatt)	Total installed capacity (kilovolt-amperes)	Fuel	Year	Period
Company	More than 150	380,700	Biomass from bark, wood chips and husks. Coal is a primary fuel, whereas diesel is supplement fuel	15 Years	August 20, 2009 to August 19, 2024
Company	Less than 10	12,375	Stream from National Power Plant 5A Company Limited	10 years	June 4, 2014 to June 3, 2024
NPP2	More than 10, but less than 150	13,000	Biomass from husk	12 Years 2 months	March 13, 2012 to May 11, 2024
NPP3	More than 10, but less than 150	13,000	Biomass from husk, palm fiber Corncobs, bark, wood chips, sawdust and wood shavings	12 Years 7 months	March 20, 2012 to October 16, 2024
NPP3	More than 10, but less than 150	43,338.28	Biomass from husk, palm fiber Corncobs, bark, wood chips, sawdust and wood shavings	12 Years 7 months	March 20, 2012 to October 16, 2024
NPP5	More than 10, but less than 150	87,900	Husk and black rubber oil	19 Years 3 months	April 1, 2010 to June 24, 2029
NPP5 <sup>(1)</sup>	More than 10, but less than 150	41,125	Black rubber oil	19 Years 6 months	December 25, 2009 to June 24, 2029
NPP5A	More than 10, but less than 150	115,294.12	Biomass (woodchip, bark eucalyptus tree tops and agricultural residues) is a primary fuel, whereas bituminous coal is supplement fuel	10 Years	March 31, 2015 to March 30, 2025
E85 (Lan Sak)	Less than 10	1,025	Biogas, wastewater from starch production process	10 Years	September 25, 2015 to September 24, 2025
E85 (Lam Sonthi)	Less than 10	1,025	Biogas, wastewater from starch production process	10 Years	October 20, 2015 to October 19, 2025
FG	More than 10, but less than 150	158,823	Biomass, wood chips, bark, husk and rhizome	10 Years	March 31, 2016 to March 30, 2026

**Note :** <sup>(1)</sup> NPP11 transferred power generation license to NPP5 on November 1, 2018



## 2) Other licenses used in power plant operation business

The company and its subsidiaries including NPP2, NPP3, NPP5 and NPP5A are licensee who can distribute electricity according to the Energy Industry Act B.E. 2550. The details are followed:

License holder	Type	Year	Period
Company	Electricity distribution license	13 Years 10 months	October 29, 2010 to August 19, 2024
	Power Distribution System License	13 Years 10 months	October 29, 2010 to August 19, 2024
Company	Electricity distribution license (9.9 Megawatt project)	5 Years	March 3, 2020 to March 2, 2025
	Power Distribution System License (9.9 Megawatt project)	5 Years	March 3, 2020 to March 2, 2025
NPP2	Electricity distribution license	12 Years 2 months	March 13, 2012 to May 11, 2024
	Power Distribution System License	12 Years 2 months	March 13, 2012 to May 11, 2024
NPP3	Electricity distribution license	12 Years 7 months	March 20, 2012 to October 16, 2024
	Power Distribution System License	12 Years 7 months	March 20, 2012 to October 16, 2024
NPP5	Electricity distribution license	18 Years 8 months	October 29, 2010 to June 24, 2029
	Power Distribution System License	18 Years 8 months	October 29, 2010 to June 24, 2029
NPP5A	Electricity distribution license	5 Years	March 31, 2020 to March 30, 2025
	Power Distribution System License	5 Years	March 31, 2020 to March 30, 2025

The Company and its subsidiaries focus on risk management in term of compliance with condition and renewal power generation license and other licenses related to power plant business. In the event that is not incorporate or license expired, related party could apply penalty such as fine, suspension, or revocation of license. This could affect on the image and reputation of the Company. Hence, the Company and its subsidiaries set up the Permit and License section and the Corporate Compliance Committee to oversee the operation in order to follow the conditions and renew the license of the company's group

## 3) Right to use the transmission system

The Company and its subsidiary, NPP5, transferred the right to use the transmission system to EGAT and still have the right in use

## 4) Concessions to operate electricity business within the industrial zone

The Company received a concession to operate power business, currently known as the "Energy Industry License. A concession was previously owned by BECO in transmitting and distributing electricity to industrial customers within the said industrial zone as well as asset, equipment, and all buildings related to the electrical business operation within the 304 Industrial Zone, Prachinburi.

## 5) Right to operate a coal mining business

The Company invested in PT Utami Jaya Mulia, a company that owns a license to operate coal mining business in Indonesia. The license will expire in 2029 with the objective to use coal as a fuel source for Company's operation. The Company presents such an investment as "a right to operate a coal mining business" in the consolidated statement of financial position. The license fee will be gradually amortized as an expense over the lifetime of the right to operate the mining business.

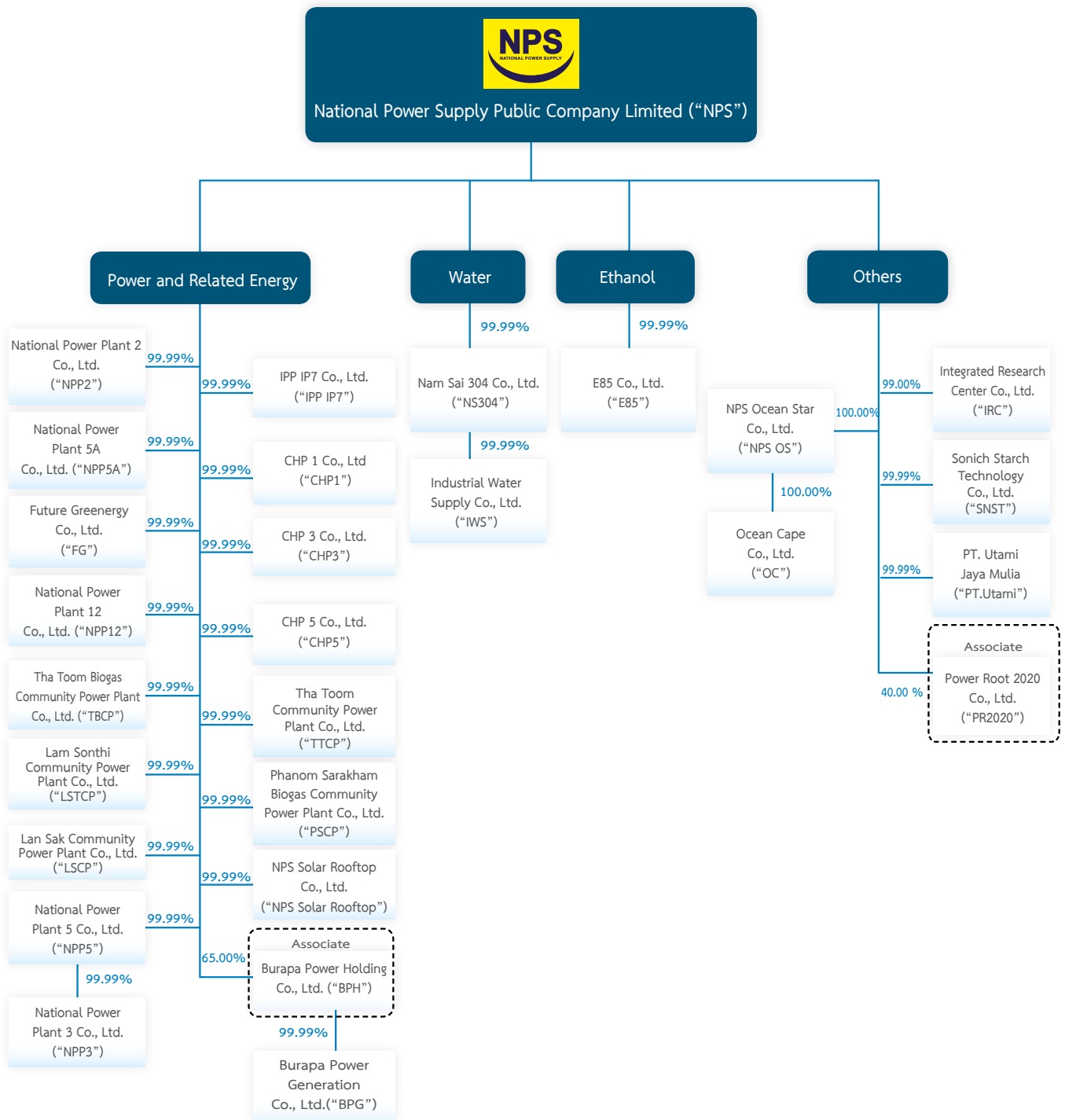
### 1.2.8 Investment Policy in Subsidiaries and Associated Companies

The Company has a policy to invest in its subsidiaries and associated companies that operate in electricity and steam distribution as well as businesses related to the Company's main business. Furthermore, if there is any other interesting business with worthwhile return, the Company may consider investing to expand the business and create value-added to the Company. However, the investments must be primarily considered and approved by the Board of Directors. The Company have set up management policy that the directors who are representatives of the company shall act as a board member or participate in its subsidiaries and associated companies. Similarly, the Company have set the control to measure the process in the companies that are owned shares. As a result, they could be directed toward the same goal and could generate profit for the company as well as to create value-added to the shareholders in the long run.

In this regard, the Company may consider investing in any additional business other than its subsidiaries and associated companies depending on opportunity and other factors that will maximize shareholders' benefit.

### 1.3 Group Structure

As of December 31, 2021, the company had 25 subsidiaries and 2 associates, categorized into 4 groups – power and related energy, water, ethanol and other businesses as follows.



### 1.3.1 Power and Related Energy Business Group

Power and related energy businesses are the main businesses of the Company. The Company realizes the importance of building a stable energy supply for the country to drive both the economy and society. Thus, the Company focuses on its goal of producing electricity sustainably to serve the nation's demand, which was achieved through its vision: "Growing the Power, Sustaining the Future". The power and related energy business group is categorized into power and ethanol. The Company saw that ethanol and rice bran oil can be developed as a source of renewable energy. With the Company, 17 subsidiaries and its 1 associate, there are a total of 19 companies in the power and related energy business group.

#### 1) National Power Supply Public Company Limited ("The Company")

The Company was registered as a limited company on July 7, 1995 to produce and sell electricity and steam as an operator of co-generation power plants with steam turbines and converted to a public company limited on May 26, 2010. As of December 31, 2021, the company had registered capital of Baht 10,000.00million, of which Baht 9,354.04 million was issued and paid up. There are 2 power plants under the Company's management, which are PP7 and PP8, each with an installed capacity of 164.00 MW, for a total of 328 MW, and a 9.9 MW power plant. These power plants are located at 304 Industrial Park, Prachinburi, and use coal and biomass as fuel in the production process. The Company's main customers are EGAT, AA, and the industrial customers at 304 Industrial Park, Prachinburi. The Company executed two power purchase agreements with EGAT, each of which has a contracted capacity of 90.00 MW for 25 years ending in 2024. In addition, the Company has three 5-year Power Purchase Agreements with AA, beginning on the date of obtaining the license. The agreements will be extended for an additional 1 years or 5 years if neither party expresses an intention not to renew them at least 30 days in advance of their expiration in writing. The remaining power will be distributed directly to the industrial customer at 304 industrial park.

Regarding steam, the Company uses some portion internally and sells the remainder to AA and industrial customers in the industrial park 304 Prachinburi. The steam purchase and sale agreement with AA is a 25-year contract, which began on February 10, 1997 and will expire on February 9, 2023.

#### 2) National Power Plant 2 Company Limited ("NPP2")

NPP2, a subsidiary, was registered as a limited company on June 28, 2011 to produce and sell electricity. As of December 31, 2021, NPP2 had registered capital of Baht 370.00 million and paid-up capital of Baht 361.64 million. The Company is the major shareholder, holding 99.99% of total registered capital. NPP2 manages one power plant, PP2, located in Bangpakong, Chachoengsao. It has an installed capacity of 10.40 MW, and uses biomass such as woodchips, bark and rice husk as its major source of fuel. The electricity generated is sold to EGAT under a long-term Power Purchase Agreement. The agreement has a contract term of 21 years, expiring in May 2020, and specifies a capacity of 8.00 MW. The rest of the electricity generated is sold to nearby related companies.

Regarding the termination of long-term Power Purchase Agreement between NPP2 and EGAT. NPP2 Power Plant operation is temporarily suspended. NPP2 as a member of Biomass Energy Entrepreneur has proposed Ministry of Energy for the contract extension which is currently under the reviewing. However, NPP2 still maintains the machine and the engine to be prepared for the operation. Once the extension of contract gets approved, NPP2 would be for full phase operational seeking around the new industrial customers.

### 3) National Power Plant 3 Company Limited (“NPP3”)

NPP3, a subsidiary, was registered as a limited company on June 28, 2011 to produce and sell electricity. As of December 31, 2021, NPP3 had registered capital of Baht 2,100.00 million, fully paid up. NPP5 is the major shareholder, holding 99.99% of total registered capital. NPP3 manages two power plants – PP3 and PP4 – which are located at 304 Industrial Park 2, Chachoengsao. PP3 has an installed capacity of 10.40 MW while PP4 has an installed capacity of 37.15 MW. Both PP3 and PP4 use other biomass such as woodchips, bark and rice husk as their major source of fuel. The electricity generated is sold to EGAT under a long-term Power Purchase Agreement. The agreement has a term of 26 years, expiring in 2024, and specifies a capacity of 41.00 MW. The remaining electricity will be sold to AA under a Power Purchase Agreement, with a one-year contract as of August 1, 2011. The agreement will be renewed for another year if neither party expresses its intention to terminate the agreement in writing at least 30 days in advance.

In addition, NPP3 owns an industrial water filtration plant with a capacity of 24,000.00 cubic meters per day. Thus, some water is used in the process of generating electricity at NPP3, and the rest is sold to customers at 304 Industrial Park 2, Chachoengsao.

Moreover, NPP3 owns a vessel name M.V. Inter Stevedoring 8 for its marine and Floating Storage business. Being a Panamax ship, the vessel has a capacity of 60,000 – 70,000 DWT, with 4 cranes and 4 grabs. This vessel was bought in September 2020 after unloading buoy was sold.

### 4) National Power Plant 5 Company Limited (“NPP5”)

NPP5, a subsidiary, was registered as a limited company on October 10, 2008 to produce and sell electricity. As of December 31, 2021, NPP5 had registered capital of Baht 3,600 million, fully paid up. The Company is the major shareholder, holding 99.99% of total registered capital. NPP5 manages 3 power plants – PP5, PP6 and PP11. The power plants are located at 304 Industrial Park, Prachinburi. PP5 has an installed capacity of 37.15 MW and uses other biomass such as woodchips, bark and rice husk as its major source of fuel. PP6 and PP11 have an installed capacity of 37.15 MW and 32.90 MW, respectively, and use black liquor as their major fuel. The electricity generated from 3 power plants is sold to EGAT under a long-term Power Purchase Agreement with a term of 24 years ending in 2027 with a total contracted capacity of 75.00 MW and the rest is sold to AA under a Power Purchase Agreement with a 19-year contract as of 1 December 2009; the agreement will expire on November 5, 2028. NPP5 also executed an agreement for the sale and purchase of steam with AA in order to sell steam from the electricity generating process. NPP5 has stocks of chloride, potassium, and other chemicals that are essential to the production of pulp from ash. The acquisition is part of an internal group restructuring.

### 5) National Power Plant 5A Company Limited (“NPP5A”)

NPP5A, a subsidiary, was registered as a limited company on October 10, 2008 to produce and sell electricity and steam. As of December 31, 2021, NPP5A had registered capital of Baht 2,250.00 million and fully paid-up. The Company is the major shareholder, holding 99.99% of total registered capital. NPP5A manages one power plant – PP5A – which has an installed capacity of 98.00 MW, is located at 304 Industrial Park, Prachinburi, and uses woodchips and bark as its major source of fuel.

NPP5A operates in two phases: the first phase – the steam generation unit – has a production capacity of 300 tons per hour and commenced commercial operations in July 2012, selling high-pressure steam to the Company,



NPP5 under steam purchase agreements, so that these power plants would be able to generate electricity at full installed capacity. In addition, NPP5A sells medium-pressure and low-pressure steam to AA and industrial customers located at 304 Industrial Park, Prachinburi. The second phase – with an installed capacity of 98.00 MW – commenced commercial operations on June 15, 2015. The electricity generated from the power plant is sold to AA under a long-term Power Purchase Agreement for 10 years ending in 2023 with a total contracted capacity of 60.00 MW.

#### **6) Future Greenenergy Company Limited (“FG”)**

FG, formerly NPS PP9 Company Limited (“NPS PP9”), a subsidiary, was registered as a limited company on October 18, 2012 to develop the 125-MW biomass power plant project transferred from BECO in accordance with the Company’s organizational restructuring. As of December 31, 2021, FG had registered capital of Baht 3,600.00 million and fully paid-up. The company is the major shareholder, holding 99.99% of total registered capital. FG has already been transferred to the biomass power plant, which is located at 304 Industrial Park, Prachinburi. The project will use approximate around 55 rai of land and the power plant will use Circulating Fluidized Bed Boiler (“CFB”) technology with a steam turbine to generate electricity, with the major fuel supplies being biomass products such as woodchips and bark. FG and NPS have 12 years Power Purchase agreement signed on July 4th, 2013. The electricity generated was purchased by the company and sold around 304 Industrial Park, Prachin Buri. Once the contract gets terminated, the agreement shall be renewed year on year until one party requires the termination before its expiry date.

#### **7) National Power Plant 12 Company Limited (“NPP12”)**

NPP12, a subsidiary, was registered as a limited company on March 11, 2013 to produce and sell electricity. As of December 31, 2021, NPP12 had registered capital of Baht 1,515.00 million and paid-up capital of Baht 378.75 million. The Company is the major shareholder, holding 99.99% of the total registered capital.

There is a plan to build a 98 MW full power plant project in Prachin Buri, Industrial Park 304. The plant will use Recovery Boiler technology and Black Fuel as its main fuels. NPP12 was granted an Investment Certificate from the Board of Investment on October 24, 2013, and received investment promotion on September 8, 2015. The EIA reports and Factory License and Construction Permit have been approved NPP12 is currently waiting for a clear plan for the third pulp mill, Apulm3, because the fuel for NPP12 is black oil, a by-product of pulp production.

#### **8) Burapa Power Holding Co., Ltd. (“BPH”)**

BPH registered as limited company on September 10, 2019 in order to purchase shares in BPG, the developer and operator of Burapa Power Plant with an installed production capacity of 560 MW. As of December 31, 2021, the company has total registered capital of Baht 1,412 million and paid-up capital of Baht 611.75 million, and remains the major shareholder, holding 65% of total registered capital and Gulf Energy Development Public Company Limited (“GULF”) owns 35% of the total registered capital.

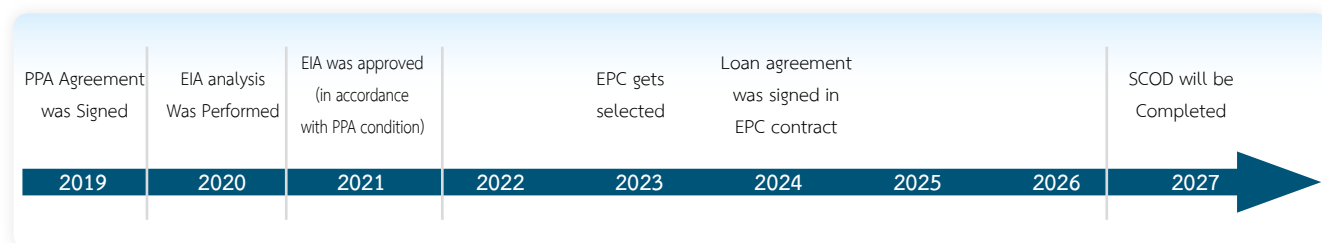
#### **9) Burapa Power Generation Co., Ltd. (“BPG”)**

BPG (formerly known as IPP IP2) is a subsidiary and was registered as limited company on May 11, 2012. The company produces and sells electricity to industries and supports the Burapa Power Plant project. It is a large private power plant with an installed production capacity of 560 MW. In accordance with the restructuring, it was acquired from NPS IPP, located in Khao Hin Son, Phanom Sarakham District, Chachoengsao. As of December 31, 2021, BPG has total registered capital of Baht 1,392.00 million, and paid-up capital of Baht 606.75 million. BPH is the major shareholder, hold-

ing 99.99% of total registered capital. Regarding the power plant project, natural gas will be the main source of fuel and an investment of approximately Baht 23,000 million will come from financial institutions, internal holding groups, and new external investors. The target Debt to Equity ratio of this project is 3:1. Loans from the financial institution will be used in BPG Project in which the fund will be utilized after discussion with Engineering, Procurement, and Construction Contractor: EPC Contractor). Similarly, equity will be from the company and Gulf in under the BPH's shares.

On July 12, 2019, BPG signed a Power Purchase Agreement with EGAT. The scheduled commercial operation date (SCOD) is November 1, 2027. BPG also signed a Gas Sales Agreement on July 24, 2019, to purchase natural gas from PTT Public Company Limited. The natural gas will be used as the main fuel to generate electricity at the BPG project. The company has asked external consultants to conduct an environmental impact assessment (EIA) that will be presented to the Office of Natural Resources and Environmental Policy and Planning (ONEP). On January 20, 2020, the company had received a result from ONEP regarding the EIA approval which was completed before February 1, 2021 as stated in PPA agreement. There is an ongoing process of conducting EIA of natural pipeline after which PP1(Public presentation 1) on March 11, 2021. and PP2 (Public presentation 2) will be held within the first quarter of 2022

Details of the project are following:



#### 10) IPP IP7 Company Limited (“IPPIP7”)

IPPIP7, a subsidiary, was registered as a limited company on February 24, 2014 to conduct a feasibility study on the electricity and steam generation and distribution business to serve the expansion plan of the Power Development Plan. As of December 31, 2021, IPPIP7 had registered capital of Baht 660.00 million and paid-up capital of Baht 629.69 million. The Company is the major shareholder, holding 99.99% of the total registered capital. The company is currently awaiting an electricity purchase announcement from a large private electricity supplier (IPP) under the Energy Regulatory Commission of Thailand (“ERC”).

#### 11) CHP1 Company Limited (“CHP1”)

CHP1, a subsidiary, was registered as a limited company on May 31, 2012 to conduct a feasibility study on the electricity and steam generation and distribution business with a cogeneration system that uses natural gas and to serve the growth of the energy business in accordance with the Power Development Plan. As of December 31, 2021, CHP1 had registered capital of Baht 2,492.00 million and fully paid-up. The Company is the major shareholder, holding 99.99% of the total registered capital.

CHP1 submitted the revised EIA report to the Office of Natural Resources and Environmental Policy and Planning (EPPO) on August 30, 2017, and the EIA report was approved by the “Kor Chor Kor” on September 13, 2017. In addition, CHP1 sent a letter of intent to use natural gas to PTT Public Company Limited (“PTT”). and received a reply from PTT on June 17, 2013. PTT has been surveying and designing the expansion of a gas pipeline network

for the CHP1 project and CHP1 will consider the cost-effectiveness of the project. Currently, CHP1 is waiting for the announcement on the purchase of electricity from a small power producer, SPP Gas, from the Energy Regulatory Commission of Thailand (“ERC”).

#### **12) CHP3 Company Limited (“CHP3”)**

CHP3, a subsidiary, was registered as a limited company on November 12, 2013 to conduct a feasibility study on the electricity and steam generation and distribution business with a cogeneration system that uses natural gas and to serve the growth of the energy business in accordance with the Power Development Plan. As of December 31, 2021, CHP3 had registered capital of Baht 250.00 million, fully paid up. The Company is the major shareholder, holding 99.99% of the total registered capital. CHP3 is awaiting the announcement of electricity purchase from a small producer like SPP Gas under the Energy Regulatory Commission (ERC).

#### **13) CHP5 Company Limited (“CHP5”)**

CHP5, a subsidiary, was registered as a limited company on November 12, 2013 to conduct a feasibility study on the electricity and steam generation and distribution business with a cogeneration system that uses natural gas and to serve the growth of the energy business in accordance with the Power Development Plan. As of December 31, 2021, CHP5 had registered capital of Baht 350.00 million, of which Baht 346.00 million was paid up. The Company is the major shareholder, holding 99.99% of the total registered capital. CHP5 has a plan to conduct an EIA in the near future and sent a letter of intent to use natural gas to PTT. CHP5 is awaiting the announcement of electricity purchase from a small producer like SPP Gas under the Energy Regulatory Commission (ERC).

#### **14) Lan Sak Community Power Plant Co., Ltd. (“LSCP”)**

LSCP, a subsidiary, was registered as a limited company on April 1, 2020 to participate in Quick Win Project in accordance with Ministry of Energy’s Policy. As of December 31, 2021, LSCP had registered capital of THB 3.00 million with paid-up capital of THB 0.75 million. The company is the major shareholder, holding 99.99% of the total registered capital. In the meantime, the Company is awaiting to attend Community-Power-Plants-for-Local-Economy phase II Project from Energy Regulatory Commission.

#### **15) Lam Sonthi Community Power Plant Co., Ltd. (“LSTCP”)**

LSCP, a subsidiary, was registered as a limited company on April 1, 2020 to participate in Quick Win Project in accordance with Ministry of Energy’s Policy. As of December 31, 2021, LSCP had registered capital of THB 3.00 million with paid-up capital of THB 0.75 million. The company is the major shareholder, holding 99.99% of the total registered capital. In the meantime, the Company is awaiting to attend Community-Power-Plants-for-Local-Economy phase II Project from Energy Regulatory Commission.

#### **16) Phanom Sarakham Biogas Community Power Plant Co., Ltd. (“PSCP”)**

PSCP, a subsidiary, was registered as a limited company on April 1, 2020 to participate in Quick Win Project in accordance with Ministry of Energy’s Policy. As of December 31, 2021, PSCP had registered capital of THB 20.00 million with paid-up capital of THB 5 million. The company is the major shareholder, holding 99.99% of the total registered capital. In the meantime, the Company is awaiting to attend Community-Power-Plants-for-Local-Economy phase II Project from Energy Regulatory Commission.

### **17) Tha Toom Biogas Community Power Plant Co., Ltd. (“TBCP”)**

TBCP, a subsidiary, was registered as a limited company on April 1, 2020 to participate in Quick Win Project in accordance with Ministry of Energy’s Policy. As of December 31, 2021, TBCP had registered capital of THB 20.00 million with paid-up capital of THB 5 million. The company is the major shareholder, holding 99.99% of the total registered capital. Till date, the company is awaiting to attend Community-Power-Plants-for-Local-Economy phase II Project from Energy Regulatory Commission.

### **18) Tha ToomCommunity Power Plant Co., Ltd. (“TTCP”)**

TTCP, a subsidiary, was registered as a limited company April 1st, 2020, to participate in Quick Win Project in accordance with Ministry of Energy’s Policy. As of December 31st, 2021, TTCP had registered capital of THB 27.00 million with paid-up capital of THB 6.75 million. The company is the major shareholder, holding 99.99% of the total registered capital. In the meantime, the company is awaiting to attend Community-Power-Plants-for-Local-Economy phase II Project from Energy Regulatory Commission.

### **19) NPS Solar Co.,Ltd. (“NPS SOLAR”)**

NPS Solar, a subsidiary, was registered as a limited company on March 17, 2021 to improve Solar Power Plan. As of March 31, 2021, NPS Solar had registered capital of THB 184.45 million with paid-up capital of THB 46.11 million. The Company is the major shareholder, holding 99.99% of the total registered capital. In the meantime, the company is in the stage of receiving Promotion Certificate from the Board of Investment, Engineering advisory, and Environment and Safety. The purpose is to operate solar power plant over floating buoy with 30.0 Megawatt in 304 Industrial Park area.

## **1.3.2 Waters Business Group**

The Company invested in water business to produce and sell water for industrial use. It consists of two companies as listed below:

### **1) Namsai 304Company Limited (“NS304”)**

NS304, a subsidiary, was registered as a limited company on January 28, 2005 to produce and sell water for industrial use to customers at 304 Industrial Park, Prachinburi, and manage untreated water for NPP3. As of December 31, 2021, NS304 had registered capital of Baht 462.00 million, fully paid up. The Company is the major shareholder, holding 99.99% of the total registered capital. NS304 owns 3 water treatment plants located at 304 Industrial Park, Prachinburi, with an installed capacity of 160,000 cubic meters per day. The new water treatment plant uses an innovation from South Korea called “Pore Controllable Fiber,” a water filtration technology that uses a high-efficiency fiber filter, does not use sedimentation tanks and old-fashioned filter tanks, reduces chemical usage, and uses only half of the installed area of the existing production system. NS304 is committed to being an efficient supplier of water for industrial for distribution to the Company and external customers to support their future growth.

## 2) Industrial Water Supply Co., Ltd. (“IWS”)

IWS, a subsidiary of NS304, was registered as a limited company on August 1, 2019. It locates in Khao Hin Son, Phanom Sarakham District, Chachoengsao. The purpose is to supply water for industrial through water system of Burapa Power Plant Project. As of January 7, 2022, IWS had registered capital of Baht 54.00 million, with paid-up capital of THB 14.26 million. The company is the major shareholder, holding 99.99% of the total registered capital. Currently, the Company received water plumbing license on December 26, 2019 and yet pending to the result from the Board of Investment (BOI) for an approval of dredge the well which expecting to be accomplished within mid-2021.

### 1.3.3 Ethanol Business Group

The company invested in Ethanol business consisting of a single company as mention below:

#### 1) E85 Company Limited (“E85”)

E85, formerly Double A Ethanol Company Limited, a subsidiary, was registered as a limited company on February 5, 2007 to produce and sell ethanol, and changed its name to E85 on March 28, 2013. As of December 31, 2021, E85 had registered capital of Baht 5,150.00 million, fully paid up. The Company is the major shareholder, holding 99.99% of the issued and paid-up shares. E85 has two production lines with an aggregate capacity of 500,000 liters per day at 304 Industrial Park, Prachinburi. Sanitizer gel and spray produced by using E85 had already been approved and certified by Food and Drug Administration. This is generating additional revenues for the Company.

### 1.3.4 Other Business Group

To mitigate risk related to the unavailability of the main raw materials required for power plant operation, the Company invested in a group of Logistics, Energy-Tree promotion, research and development, and coal mining. The group includes 5 subsidiaries and 1 associate, a total of 6 companies, which are detailed below.

#### 1) Ocean Star Holding Company Limited (“OSH”)

OSH, a subsidiary, was registered as a limited company under the laws of Hong Kong Special Administrative Region of the People’s Republic of China on November 17, 2014 to be the major shareholder of the subsidiary that operates a marine transportation business. As of December 31, 2021, OSH had registered capital of USD 32.50 million, fully paid up. The Company is the major shareholder, holding 100.00% of the total registered capital.

#### 2) Ocean Cape Company Limited (“OC”)

OC, a subsidiary of OSH, was registered as a limited company under the laws of Hong Kong Special Administrative Region of the People’s Republic of China on November 24, 2014 to operate a marine cargo transportation business. As of December 31, 2021, OC had registered capital of USD 5,000.00, fully paid up. OSH is the major shareholder, holding 100.00% of the total registered capital. At present, OC manages the general operations of Alizay 2 and Cape Shipping.

#### 3) Integrated Research Center Co., Ltd. (“IRC”)

IRC (formerly known as D.A. Research Center Company Limited), a subsidiary, was registered as a limited company on May 29, 2007 to conduct research on the genetic development of the Energy-Tree, agricultural

products, the environment, electricity, energy, and other, as well as to provide scientific physical, chemical and biological analysis services. Majority of IRC's customers is related companies to the group or the Company. As of December 31, 2021, IRC had registered capital of Baht 30.00 million, fully paid up. The Company is the major shareholder, holding 99.99% of the total registered capital.

IRC has continually grown in its pursuit of the Company's underlying policy to focus on research and development, from improving raw materials, to production and waste management from the production process. IRC's past achievements include the development of high-heating value prototypes to be used as fuels that are compatible with the environment and unaffected by diseases and insects prevalent in Thailand, optimizing the power generation process with engineering models, developing an automated inspection system with an unmanned aerial vehicle or drone, and increasing the value of the waste from the production process in various ways.

#### **4) PT. Utami Jaya Mulia ("PT Utami")**

PT Utami, a subsidiary, was registered as a limited company in Indonesia on May 1, 2009 to operate a bituminous coal mine in Kalimantan. As of December 31, 2021, PT Utami had registered capital of IDR 34,000.00 million, fully paid up on March 6, 2018. The Company is the major shareholder, holding 99.00% of the total registered capital. The Company purchased its shares of PT Utami from the former shareholder in June 2011 in order to invest in the bituminous coal business. The objective of the investment was to secure a coal supply for the Company's power plants, which would enable them to operate more efficiently. The preliminary survey estimated that the mine has total coal reserves of approximately 13.00 million tons at a stripping ratio of 10:1. On December 31, 2019, PT Utami received concession to run coal mining business. Currently, the business is applying for other related such as land, port, and export license.

#### **5) Sonish Starch Technology Company Limited ("SNST")**

SNST, a subsidiary, was registered as a limited company on August 2, 1995 to produce and distribute tapioca starch and biogas. As of December 31, 2021, SNST had registered capital of Baht 270.00 million, fully paid up. The Company is the major shareholder, holding 99.99% of the total registered capital. The manufacturing plant is located in Panom Sarakham, Chachoengsao, close to cassava fields – the source of production. It has a production capacity of 150.00 tons of tapioca starch per day, 120.00 tons of modified tapioca starch per day, and 12,400.00 cubic meters of biogas per day. The major customers are the paper and food sectors that use tapioca starch as a raw material and biogas as fuel for power generation. SNST has sometimes temporary halted the production because the price of raw material is too high to make the profit margin.

#### **6) Power Root 2020 Co., Ltd. ("PR2020")**

PR2020, registered as a company limited on February 26, 2020, is a joint venture between PR2020 and Trade Material 2014 Company, specialist in producing root woodchip. PWR is established to operate Eucalyptus woodchip project. PR2020 holds 40% of registered capital, whereas Trade Material 2014 Company Limited holds 60%. As of December 31, 2021, PR2020 had registered capital of THB 5 million and fully paid up consisted of 50,000 common shares valued THB 100 per share. The Root Woodchip Project locates in Sala Lamduan, Sa Kaeo. The area is nearby the sources of raw material. The capacity is 5,000 ton per month or calculated in term of fuel from Eucalyptus is equivalent to 60,000 Tons per year. In the meantime, the company will purchase root woodchip and supply to others company such as PP9 and PP10.



### 1.3.5 Relationship with Major Shareholder

As of August 31, 2020, AA had 25.51% of registered and paid-up capital of the company. AA signed selling common shares agreement with SSJ, formerly known as Double A Holding (Thailand) Company Limited or “DAHTH” established in Thailand. AA had transferred 17.85% of its shares to SSJ. On October 30, 2020, AA transferred the remaining shares of 7.66% to SSJ. As a result, on December 31, 2021, the major shareholders are Future Energy Holding Company Limited and Cogen Investments Limited with shares of 64.49% and 10.00% respectively.

Nonetheless, The Company had connected transactions with AA and related parties, and in 2019, 2020, and 2021, the Company’s revenue from AA and related parties was 22.30%, 21.73%, and 23.65% of total revenue, respectively. The Company is a producer and distributor of electricity and steam as well as industrial water at 304 Industrial Park, Prachinburi and 304 Industrial Park 2, Chachoengsao, where AA is located, and AA needs to purchase electricity, steam and water from the Company. The sale of electricity, steam and water are normal business transactions in which the selling price of electricity is based on the rate of the PEA, the price of steam is based on the type of fuel used for electricity generation, such as natural gas or coal and the Consumer Price Index, and the price of water for industrial use is based on the rate of the Provincial Waterworks Authority (“PWA”). However, the Company could sell electricity to the other customers, for example EGAT and other industrial customers, in the event that AA had reduced demand.

The Company purchased black liquor as its major fuel for Power Plant 6 (“PP6”) and Power Plant 11 (“PP11”). The price of black liquor is referred to natural gas, and because black liquor is a by-product of AA’s pulp production process, the Company procured black liquor by executing long-term black liquor purchasing agreements with AA and keeps black liquor on hand in reserve tanks to mitigate risks related to procurement of black liquor. In addition, these two power plants have the ability to modify their boiler technology to use other types of fuel such as fuel oil or natural gas to replace black liquor.

### 1.3.6 Shareholders

#### (1) Major Shareholders

As of December 31, 2021, the Company had the following major shareholders:

Name	No. of Shares	% Shareholding
1. Future Energy Holdings Company Limited <sup>(1)</sup>	603,263,508	64.49
2. Sinsukjai Company Limited <sup>(2)</sup>	238,599,994	25.51
3. Cogen Investments Limited <sup>(3)</sup>	93,540,392	10.00
4. Others	26	0.00
<b>Total</b>	<b>935,403,920</b>	<b>100.00</b>

Notes: <sup>(1)</sup> Future Energy Holdings Company Limited invests in various companies and Mr. Yothin Dumnernchanvanit indirectly held 99.99% of its issued and paid-up capital. As a result, Mr. Yothin Dumnernchanvanit held approximately 64.49% of the Company’s issued and paid-up capital.

<sup>(2)</sup> Sinsukjai Company limited; an investment company, where Double A Holdings Limited is a major shareholder with 99.99% of issued and paid-up capital. Double A Holdings Limited has Mr. Yothin Dumnernchanvanit held 100% of issued and paid-up capital. Consequently, Mr. Yothin Dumnernchanvanit indirectly owns SSJ, held 25.51% of issued and paid-up capital.

<sup>(3)</sup> Cogen Investments Limited is a company incorporated in the British Virgin Islands and not related to the Company.

- (2) An agreement between a group of major shareholders in matters that affecting the issuance and offering of securities or affecting the sign agreement of the company management.

- none -

#### 1.4 Registered Capital and Paid-up Capital

As of December 31, 2021, the company has a registered capital of baht 10,000 million, consisting of 1,000,000,000 shares with a par value of 10 baht per share, of which 9,354.04 baht is issued and paid-up capital, of which 935,403,920 are ordinary shares.

#### 1.5 Other securities

##### 1.5.1 Debentures

As of December 31, 2021, the company has debentures of which the principal has not yet matured, amounting to Baht 16,705.00 million, all of which are long-term debentures in the name of the holders. Unsubordinated, unsecured, and has a debenture holder representative with details as follows:

Symbol	Registration Date	Issue Size (THB mln.)	Outstanding size (THB mln.)	Maturity Date	Redemption of debentures before maturity	Rating	
						Issuer Rating	Issue Rating
NPS227A	24 Feb 2017	982.20	982.20	24 Jul 2022	1 year after the issuance date	BBB-	-
NPS227B	27 Apr 2017	772.60	772.60	24 Jul 2022		BBB-	-
NPS233A	27 Sep 2019	2,968.30	2,968.30	27 Mar 2023		BBB-	-
NPS242A	7 Aug 2020	1,383.70	1,383.70	7 Feb 2024		-	BBB
NPS258A	7 Aug 2020	2,298.20	2,298.20	Aug 7, 2025		-	BBB
NPS265A	12 May 2021	2,000.00	2,000.00	12 May 2016		-	BBB+
NPS273A	12 May 2021	2,250.00	2,250.00	12 Mar 2027		-	BBB+
NPS24NA	12 May 2021	1,250.00	1,250.00	12 Nov 2024		-	BBB+
NPS28NA	12 Nov 2021	2,800.00	2,800.00	12 Nov 2028		-	BBB+
<b>Total</b>		<b>16,705.00</b>	<b>16,705.00</b>				

##### 1.5.1.1 Bill of exchange

As of December 31, 2021, the group has no outstanding debts of bills of exchange.

## 1.6 Dividend policy

### 1.6.1 Company Dividend policy

The Company has a policy to pay dividends to shareholders of not less than 40% of its net profit from consolidated financial statements after tax, all legal reserve as stipulated in laws and the company's regulations. Before each dividend payment, the Company considers its performance, cash flow, liquidity, financial position, future business plans, the need for use as working capital for business management and business expansion, economic conditions, terms and conditions of loan agreements, as well as other factors related to its operations with a view to maximizing shareholder benefits. Dividend payments are approved by the Board of Directors and/or a resolution of the shareholders' meeting in accordance with the Company's Articles of Association. However, the amount of dividends paid must not exceed the retained earnings of the separate financial statements. The Company's dividend history is as follows:

Year	2019	2020	2021
Profit attributable to equity holders of the Company (Million Baht)	1,422.60	1,444.17	696.28
Dividend (Million Baht)	523.83	551.89	1,702.44
Number of weighted average shares (Million Shares)	935.40	935.40	935.40
Earnings per share (Baht)	1.52	1.54	0.74
Dividend per share (Baht)	0.56	0.59	1.82
Dividend payout ratio (%)	36.82	38.21	244.51

Article No. 43 of the Company's Articles of Association states that "Payment of dividends from monies other than profit is prohibited, and in the case of the Company incurring accumulated losses, no dividend shall be paid. Dividends shall be divided and paid equally for each share and shall be approved by the shareholders' meeting. The Board of Directors may pay interim dividends to shareholders from time to time after considering whether the Company has sufficient profit to do so, and following dividend payments, the Board of Directors shall report such payments at the next shareholders' meeting"

### 1.6.2 Subsidiary Dividend Policy

Each subsidiary has a policy to pay dividends to its shareholders at 100% of net profit after legal reserve and retained loss (if any) on interim financial statements. Before each dividend payment, each subsidiary considers its performance, financial position, liquidity, future business plans, terms and conditions of loan agreements, as well as other factors related to its operations with a view to maximizing shareholder benefits. Dividend payments are approved by the shareholders' meeting in accordance with the Articles of Association of each subsidiary.

## 2. Risk Management

### 2.1 Risk management policy and plan

Board of Directors promotes and supports the policy that comply with the principles of good corporate governance. At the Board of Directors Meeting No. 5/2017 held on December 18, 2017, they resolved to appoint the Risk Management Committee in order to support the efficiency of risk management and internal control system and reviewed the policy. At the Board of Directors' Meeting No. 2/21 held on February 22, 2021 and No. 4/21 held on August 10, 2021, respectively, the Committee was set to report risk management results to the Board of Directors at least once a quarter or immediately if there are significantly important events happen and affect the Company.

### 2.2 Risk Factors in Business Operations

The Corporate group realizes the importance of effective management and applies appropriate management tools to operate its business with continuity and stability in an environment of internal and external change. However, The Corporate group still faces some significant risk factors, which could have adverse effects on its business, as well as other risk factors that may not affect The Corporate group at present, but will have adverse effects on The Corporate group in the future, and other unforeseen risk factors. Risk factors of the Company and its subsidiary as follows:

#### 2.2.1 Risk from maintaining financial ratios

To maintain the Debt-to-Equity Ratio specified in the debenture covenant, the debt in the ratio excludes (1) subordinated debt and (2) subordinated convertible debentures. Subordinated creditors have the right to claim debt or assets after the preferred creditors and general creditors in the event that the Company goes bankruptcy or liquidates, but the rank is higher than preferred and common stockholders. The Company considers that the right of those subordinate is similar; so, the Company includes them in equity instead of debt. The calculated formula of debt to equity ratio of the Company is different from the general because debt takes up all the interest-bearing liabilities subtract with cash and cash equivalents as well as the equity does not include subordinated debt. The calculated D/E Ratio of the Company is lower than the general formula of general bonds. Nevertheless, the subordinated creditors have rights to receive debt repayment equivalent to preferred creditors and general creditors in the event that Company can regularly operate.

Calculating D/E Ratio, according to the Company's formula, may result in the future's liabilities because they can generate an unlimited debts more than other companies that have a normal D/E Ratio formula. This

may affect the ability to repay its debts in the future. Even though debts can incur any time, the bondholders have the rights to claim for debt repayment or assets rated before other subordinated debts. As of the end of 2021, the Company has no outstanding subordinated debt. The calculating debt-to-equity ratio, according to the formula under the terms and conditions of the debentures, is 1.18 times. This debt to equity ratio must maintain at the end of each accounting period not exceeding 2.50 times or not exceeding 3.0 times in the event that there is a financial support agreement with a financial institution to support the Burapha Power Project.

As per the debenture covenant, in the event that the Debt to Equity Ratio exceeds the covenant, the Company will default and triggered to repay the debenture before maturity. However, the Company could call a bondholders' meeting to ask for a waiver, whichever option is determined by a resolution of the bondholders' meeting. In addition, the Company has a plan to control and monitor D/E Ratio at the end of each accounting period at the level that does not exceed the rate specified in the terms and conditions. During the quarter, if D/E ratio increases more than the specified amount, the Company may consider repaying some of the liabilities before its maturity. To pay off such liabilities, the Company can used the funds from business operations, disposition of property, or capital increase in order to reduce the proportion of D/E ratio to the level specified in the term.

### **2.2.2 Risk Factors in Paying Off debts**

As of December 31, 2021, the Group has short-term loans from related parties of THB 131.14 million. Hire purchase payables and liabilities under financial lease agreements are THB 202.31 million and long-term debentures are THB 16,497.12 million, together with total interest-bearing liabilities is THB 16,830.57 million. On the other hand, earnings before interest, tax, depreciation, and amortization (EBITDA) is THB 3,811.20 million and a net profit is THB 1,554.50 million. The interest coverage ratio was 3.49 times and the obligation payment ratio was 0.24 times. This can be implied that the Company has ability to pay interest and obligations.

In addition, the Company realizes to lower the risk of the ability to repay debt by focusing on maintaining the liquidity that enable to repay the principal and interest as required. To prevent the repayment's ability, the company may have to obtain funds from other sources to repay debts. For example, the Company may dispose investments of ordinary shares within the group that is not related to main business in order to repay debt that will be due.

### **2.2.3 The risk from the end of the subsidiary's long-term power purchase agreement between NPP2 with EGAT.**

The Group has one long-term power purchase agreement ending in 2020, which is a long-term power purchase agreement between NPP2 and EGAT, terminate on May 6, 2020. Currently, NPP2 operates only power plants. Therefore, the termination will impact to NPP2. There will no operating income if NPP2 cannot obtain a power purchase agreement from private sector. This will result in operating income and profit from the Group's operations, slightly decreasing from this impact. As of December 31, 2019 and March 31, 2020, NPP2 reported operating income of 1.65% and 1.65%, respectively, from the operations as well as operating profits of 0.80% and 1.14% from operations, respectively.

However, NPP2 was aware of the issue and submitted a letter to the Minister of Energy to request the renewal of the said contract. The Biomass Electricity Association of which NPP2 a member has also submitted a letter to the Minister of Energy regarding a proposal guideline for renewing long-term power purchase agreement

between small business and EGAT. The aforementioned issue is still being considered by the government agencies. However, NPP2 continues to maintain the plant as the plant will be ready when receiving an acceptance letter for the renewal of the said contract. In addition, NPP2 is in the process of seeking additional new industrial customers as an alternative after resuming to the operations. The Group has also studied the Quick Win project and is pending for a clear policy from Government agencies. The Group establishes 5 subsidiaries to prepare for bidding projects in accordance with the regulations of the ERC. Similarly, the Group is finding additional industrial customers and believe that these measurements will help to reduce financial impact that may occur from the Group's ending long-term power purchase agreement with EGAT in the future.

#### 2.2.4 Risks Related to the Company's Group Structure

The Company has conducted connected transactions with related parties through common directors of the Company, subsidiaries and an associate, and/or executives, and/or persons in control, including Mr. Yothin Dumnernchanvanit, who serves as director and managing director of the Company. These connected transactions could create conflicts of interest or unfair business practices, or distort market mechanisms. Therefore, the Company is exposed to risks related to connected transactions. Most of these connected transactions are conducted in the course of the Company's normal business operations, such as sale and purchase of goods and services, and related loans, etc.

In the past, the Company has entered into land purchase and sale agreements with related companies to develop its power plant business. In each agreement, a deposit was required of almost the full value of the contract price. Some projects have not yet transferred land ownership and require the valuation of the land from the independent appraiser prior to the transfer of land ownership. This may affect the Company in terms of the appropriateness of the transaction. Details may be found in the following section and are summarized in the following table.

No	Related Party	Party	Land to Buy/Sell	Contract Price (1)	Appraisal Price by Independent Appraiser (2)	Price Difference (2) - (1)	Current Status
1.	BPG	304IP2	Area of 1,207.12 rai in Industrial Park 304IP2, Chachoengsao (IPP IP2 Power Plant project)	Baht 1,220.95 million (Price per rai: Baht 1.5 Million and Baht 0.73 Million) In 2008 – 2012	Baht 581.31 million (Baht 0.04-1.30 million per rai) As of May 8, 2012	Appraisal price is Baht 639.64 million lower than contract price	Transfer of ownership on Jun 26, 2019
2.	NPP12	304 Pulp	Area of 38-3-87 rai in 304 Industrial Park in Prachin Buri ("NPP 12 Power Plant Project").	Baht 97.4 million (baht 2.5 million per rai) as of Nov 25, 2014	Baht 97.4 – 101.3 million (Baht 2.5 million per rai as of 25 Dec 2015 and Baht 2.6 million per rai as of 16 Mar, 16, 2016)	Appraised price is Baht 3.9 million higher than contract price	Transfer of ownership on Dec 30, 2015
3.	CHP1	BECO	Area of 55-1-56 rai Located in industrial Park 304, Prachin Buri ("CHP 1 Power Plant Project")	Baht 94.2 million (1.7 million per rai) As of Nov 24, 2013	Baht 129.8 million (2.6 million per rai) As of Mar 16, 2016	Appraised price is Baht 35.6 million higher than the contract price	Transfer of ownership on Feb 24, 2014



No	Related Party	Party	Land to Buy/Sell	Contract Price (1)	Appraisal Price by Independent Appraiser (2)	Price Difference (2) - (1)	Current Status
4.	CHP3	304IP2	Area of 105 rai Located in Industrial Park 304 Industrial Park 2, Chachoengsao ("CHP 3 Power Plant Project")	Baht 210.0 million (2.0 million per rai)As of Nov 24, 2013	Baht 212.8 million (2.0 - 2.2 million per rai) As of Mar 18, 2016	Appraised price is Baht 2.8 million higher than the contract price	Transfer of ownership on Feb 24, 2014
5.	CHP5	304IP7	Area of 127-3-66 rai located in Industrial Park 304 Industrial Park 7, Prachin Buri ("CHP 5 Power Plant Project")	Baht 319.8 million (2.5 million per rai) as of Nov 24, 2013	Baht 323.0 million (2.5 - 2.6 million per rai)as of Mar 18, 2016	Appraised price is Baht 3.2 million higher than the contract price	Transfer of ownership on Jun 27, 2016
6.	IPP IP7	304IP7	Area of 243-1-88 rai located in Industrial Park 304, Industrial Park 7, Prachinburi ("IPP IP 7 Power Plant Project")	Baht 608.7 million( 2.5 million per rai) as of Mar 1, 2014	Baht 97.4 million (0.4 million per rai) and not allocated as of Mar 17, 2016	Appraised price is Baht 511.3 million lower than the contract price	Transfer of ownership on Jun 28, 2019
<b>Total</b>				<b>Baht 2,551.05 million</b>	<b>Baht 1,445.61 million</b>	<b>Baht 1,105.44 million</b>	<b>-</b>

Note: The land appraisal price of the IPP IP2 project is based on the land in groups 1-5, according to the property appraisal report of Year Appraisal Company Limited, dated 8 May 2012

From the above table, it can be implicit that BPG and IPP IP7 projects are made contracts to buy and sell in 2008 and 2014 respectively, with high transaction values and the prices from independent land appraisers and contract are different. The appraised land of BPG's project is THB 639.64 million which is lower than the contract price, and the appraised land of the IPP IP7 project is lower than the contract price, THB 511.30 million. Before transferred the land ownership, BPG and IPP IP7 hired Sims Property to proceed with the appraisal of the said land. The outcome is the price is higher than specified in the purchase and sale contract. The parties therefore use the appraisal price as the final price transferring ownership as stipulated in the terms of the contract. The company registered and received the ownership according to the contract as well as received the difference from the deposit for the land that has not been transferred.

The Group is aware of the aforementioned events occurred in the past and has set a policy on the purchase and sale of land in the future by considering investments. The investment must be carried out through internal policy and process. Currently, the project consideration process starts from business development department to study and consider the feasibility study in order to propose to the Executive Committee and the Board of Directors. In the case of investment are considered as connected transactions, the Group will comply with the procedures and policies on entering into connected transactions due to transparent, fair and ethic and does not cause any benefit transfer practices.

In addition, the Audit Committee Meeting, no. 1/2020 held on February 19, 2020, the board was aware of the connected transactions that occurred during the year 2019 and suggested to reduce or cancel unnecessary connected transactions. Also, at the Audit Committee Meeting, no. 1/21, held on February 17, 2021, the board was informed the connected transactions that took place in 2020 by emphasizing the management to review the necessity of entering into the transaction regularly on a quarterly basis. This is to reduce the transaction value and/or the number of unnecessary connected transactions in the future.

## 2.2.5 Risks that the Company has a Major Shareholder

Future Energy Holding Company Limited and SSJ held 64.49% and 25.51% of total issued and paid up shares, respectively. Thus, Mr. Yothin Dumnernchanvanit directly and indirectly held 89.71% of the Company's issued and paid-up shares through both companies. Therefore, these shareholders could exercise their right to object to or disapprove of any resolution of the shareholders' meeting in accordance with the Articles of the Company and relevant laws. For this reason, the Company set a clear scope of authorization and delegation of authority for the approval of any business transaction. The Company also set up an Internal Audit Department to monitor and control the operations of the Company to ensure that internal controls and any actions carried out as per shareholder resolutions are in line with the current situation and the Company's policies for long-term success and growth.

## 2.2.6 Risks Related to Procurement of Fuel Supplies for Electricity Generation

The Company's main cost in the production of electricity and steam is fuel. The Company and subsidiaries use various types of fuel and raw materials to produce electricity and steam depending on the machinery and technology used. The risks related to the procurement of fuel supplies for electricity generation are categorized by type of fuel as follows:

### 2.2.6.1 Risks Related to Procurement of Coal for Electricity Generation

Two power plants, PP7 and PP8, are under management of the Company. Coal is the main fuel to generate electricity and steam, using high quality coal low sulfur content or Sub-bituminous coal. PP7 and PP8 have a combined capacity of 328 MW from the Group's total capacity of 736.05 MW, which PP7 and PP8 accounted for approximately 85-95% of the total fuel consumption. Both power plants are used to generate electricity and steam, hence PP7 and PP8 are at risk from relying on coal fuels. There are risks involved as follows:

#### 1) Risk of rising in coal prices

Coal procurement costs consist of two main significant components: coal price and cost of transportation. Currently, the Group sources coal from both domestic and international distributors by purchasing coal at market price in the required quantity, approximately 25,000 - 160,000 tons each time. Such coal will be delivered by the Company's ships, and/or trucks, and/or partners in coal transportation, depending on the situation. From the time the Group purchases Coal each time, there is risk involved when the price increased. However, the Group may consider entering into a long-term coal procurement contract with supplier if the price is reasonable.

#### 2) Risk from coal suppliers and distributors that may not be able to supply the quantity and quality required by the Company.

The Group is supplied coal from both domestic and international distributors. The Group also sets criteria for selecting suppliers and/or distributors and systematically managing procurement by clearly defining the quality of coal and require all suppliers and/or distributors to conduct testing and analysis of the quality before supply to the Company. This is to ensure the quality in accordance with the standards specified in the coal purchase order, such as ISO and the American Society for the Testing of Materials (ASTM). If the coal does not meet the conditions specified in the buy order, the Group has the right to demand the suppliers to ship new quality coal or fine the supplier according to price difference between delivery and quality specified in the condition. In addition, PT Utami Jaya Mulia, a subsidiary, is in the process of applying for a permit related to coal mining in Indonesia to support the consumption of the Group and future power plant projects

### 2.2.6.2 Risks Related to Procurement of Black Liquor for Electricity Generation

PP6 and PP11, which are managed by NPP5, use black Liquor to generate power. All black Liquor used by the two subsidiaries is a by-product of the production process within the AA pulp mill, a related company. In case, if AA's business is interrupted, it cannot supply black Liquor to NPP5. It will affect the power generation process of the two power plants. Therefore, NPP5 has risks from supplying black Liquor used in electricity generation.

In this regard, NPP5 has entered into a long-term black rubber oil purchase agreement with AA and set the term contract consistent with the term of the power purchase agreement signed by each subsidiary with EGAT as follows:

Counterparties	Parties	Execution date	Contract terminate date	Contract period	Contract quantity (Tons/Year)
NPP5	AA	June 26, 2009	November 4, 2028	19 years 5 months	500,000
NPP5	AA	June 26, 2009	December 1, 2028	19 years 6 months	450,000

In addition, NPP5 has reserved black Liquor to be used in 3 storage tanks, totaling of 88,000 cubic meters. This can be used to generate electricity about 5 days. Also, PP6 and PP11 adopt Chemical Recovery Boiler to use in the production process. As a result, both power plants support the use of other fuels such as fuel oil or natural gas, instead of black Liquor in case AA is unable to supply black rubber oil to NPP5. However, throughout the past, AA can supply black Liquor to the group according to the quantity specified in the contract.

### 2.2.6.3 Risks Related to Procurement of Other Types of Biomass Fuel for Electricity Generation

The Company and subsidiaries use other types of biomasses as either major or supplemental fuel at each power plant. The other types of biomass fuel mean all types of biomass fuel other than black liquor, ranging from wood chips, rice husks, bark, to palm shell. PP7 and PP8 currently accounted for approximately 5-15% of the total fuel consumption of other biomass fuels mixed with coal as the primary fuel. The other 6 power plants are: PP2 is under the management of NPP2, PP3 and PP4 are under the management of NPP3, PP5 is under the management of NPP5, PP5A is under the management of NPP5A, and PP9 is under the management of FG. They use all other biomass fuels to process electricity and steam. As a result, the Group is at risk from price and production volatility due to this type of fuel obtained from agriculture and the output rely on the natural environment. Similarly, crop can be used in other industries. Therefore, the demand for other biomass fuels may vary depending on the business environment. This will affect the price and the procurement of other biomass fuels of the Group.

As a result, the Group has set measurement for the procurement of other biomass fuels by signing two purchase and sale agreements with AA and one with the Company as follows:

Counterparties	Parties	Execution date	Contract terminate date	Contract period	Contract quantity (Tons/Year)
NPP5	AA	June 26, 2009	November 4, 2028	19 years 5 months	165,000
NPP5A	AA	April 1, 2011	June 30, 2023	12 years 3 months	350,000
FG	NPS	March 16, 2020	March 15, 2030	10 years	1,100,000

In addition, the Group has also managed its risks by supplying other biomass fuels directly from farmers or biomass producers, and has a policy to develop and promote the planting of energy trees using as other biomass fuel to generate electricity. There are also plans to research and develop other energy crops such as rice straw, sugarcane leaves, or corn plants to be used as other biomass fuels in the production process. This can reduce the risk from price volatility and production uncertainty of other biomass fuels.

#### 2.2.6.4 Risks Related to Procurement of Other Main Raw Materials for Generating Electricity

In addition to fuel, the main raw material in power generation process, the Group also uses raw water, industrial water, and chemicals as important raw materials in the production of electricity. Similarly, the group has a policy in managing the risks associated with such raw materials as follows:

##### 1) Raw water and industrial water

Raw and industrial water are essential raw materials for electricity and steam generation for industry. Those who can supply raw water and produce industrial water on their own can reduce risk from raw material shortages as well as increase competitiveness in the market.

Currently, NS304 is a subsidiary that provides management and supplies of industrial water in 304 Industrial Park, Prachinburi. It has 3 own industrial water purification plants with a total production capacity of 160,000 cubic meters per day, which can provide raw water and industrial water using in the production process. The Group also has supplied some industrial water from external. In this regard, the 7 power plants in the Group are PP5, PP6, PP7, PP8, PP9, PP11 and PP5A, located in 304 Industrial Park, Prachinburi, and have used the service of supplying industrial water from NS304. Whereas, PP2, located in Bang Pakong, Chachoengsao, was supplied all raw water from Eastern Water Resources Development and Management Public Company Limited (“EASTW”), and PP3 and PP4, located in 304 Industrial Park, section 2, Chachoengsao, are supplies raw water by NPP3 which has its own water filtration plant to produce industrial water using in the power generation process. Also, the remaining production capacity will be sold to industrial customers and the Group has signed 6 industrial water purchase agreements, details are as follows:

Buyer	Supplier and distributor	Execution date	Contract terminate date	Contract period	Contract quantity
NPS	NS304	July 1, 2013	June 30, 2018 <sup>(1)</sup>	5 years	Indefinitely
NPP2	EASTW	June 23, 2020	December 31, 2030	10 years	18,000 cubic meters/year
NPP5	NS304	January 1, 2020	December 31, 2024	5 years	Indefinitely
NPP5	NS304	March 1, 2015	February 28, 2029	14 years	1,000,000 cubic meters/year
E85	NS304	July 1, 2015	June 30, 2029	14 years	30,000 cubic meters/year
FG	NS304	November 1, 2020	October 31, 2025	5 years	Indefinitely

Note: <sup>(1)</sup> At the expiration of the contract period and either party has not terminated the contract in writing at least 30 days in advance before the expiration date of the contract. The parties agree that this contract will be extended for an additional period of 1 year each.

However, in the said supplying raw and industrial water contract, the contracting party must supply raw water and/or industrial water according to the quantity and quality specified in the memorandum and/or contract. The Group also has provided wells within its own area to store water for operations used. The said Well can reserve water for electricity generation for approximately 12 months. In case, the party cannot supply raw and/or industrial water as specified in the contract and/or memorandum, some contracts stipulate that the Group has the right to claim fines from the counterparty. In the past, providers were able to supply according to the contract agreement.

## 2) Chemical

The Group uses limestone and various chemicals such as Sulfuric acid, Sodium hydroxide, Sodium hydrochloride, Hydrochloric acid, Trisodium phosphate, Ammonia, Hydracite, anti-scaling and non-oxidizing Biocides. They are a component in the generation of electricity. There is no long-term contract for the purchase of chemicals. Yet, raw materials are supplied by distributors in large quantity per order because most of the chemicals can be supplied by many domestic distributors and have similar standards. At present, more than 3 distributors supply the chemical.

### 2.2.7 Risks Related to Inability to Adjust the Selling Price of Electricity in Accordance with the Increasing Cost of Fuel

The main cost of electricity generation is fuel cost. Therefore, if fuel prices rise, the profitability of the Company will be materially affected. At the same time, the Company cannot adjust its selling price in line with increasing fuel cost. The burden from changes in fuel prices is only partially passed to customers who buy electricity because it depends on the specification in each agreement. Main customers who purchase electricity can be divided into 3 groups: EGAT, AA and connected companies. The details are as follows.

#### 1) Requirements in the power purchase agreement in small business between the Group and EGAT

EGAT is a major customer of the Group which have long-term power purchase agreements with them. In this regard, the agreement between the Group and EGAT was set the burden of increasing fuel costs can partially passed to EGAT with details as follows:

Company	Execution date	Commercial Operation Date (COD)	Contract terminate date	Contract period (Years)	Contracted Capacity
NPS	January 6, 1998	March 12, 1999	March 11, 2024	25	90.00
NPS	January 6, 1998	July 12, 1999	July 11, 2024	25	90.00
NPP2	April 16, 1999	May 7, 1999	May 6, 2020 <sup>(1)</sup>	21	8.00
NPP3	April 16, 1999	April 21, 1999	December 15, 2024	26	41.00
NPP5	September 22, 2003	November 4, 2003	October 15, 2027	24	50.00
NPP5	September 22, 2003	December 1, 2003	October 15, 2027	24	25.00
<b>Total</b>					<b>304.00</b>

Note: <sup>(1)</sup> NPP2 submitted a letter to NEPC requesting a renewal of the long-term power purchase agreement with EGAT, which is currently under consideration by the NEPC. It is pending the clarification of the community power plant project and the consideration of government agencies regarding the extension of the long-term power purchase agreement with EGAT for the biomass power plant operator according to the proposal of the Operators Club. However, if NPP2 is not approved to extend the power purchase agreement before the contract expiration date, NPP2 will need to terminate the PP2 power plant operation at the end of the contract.

### ***1.1) Power purchase agreement between the Company and EGAT***

The power purchase agreement between the Company and EGAT stipulates that the electricity sale price is partially referred to the cost of coal fuel although the Company manages the risk of coal cost by entering into the long-term trading contract with direct suppliers and setting the electricity tariffs under the power purchase agreements with some customers based on the JPU coal price index. Also, the Company adopts Circulating Fluidized Bed (“CFB”) boiler technology that has flexibility on the type of fuel using to generate electricity. This technology allows to mix coal with other biomass fuels in a ratio that maximum efficiency in production at an appropriate cost level. Yet, the guidelines do not cover all fuel costs of all types.

### ***1.2) Power purchase agreement between the Subsidiary and EGAT***

According to the amended agreement between NPP3 with EGAT, and NPP5 (including the transferred version from NPP11) with EGAT, it has determined that the price of electricity is sold as a Feed-in Tariff (FIT), consisting of fixed electricity prices (FITf) and variable electricity rates (FITv). The FITv rate will increase according to the core inflation, while the price of fuel used by the two subsidiaries does not vary with the inflation rate. The fuel that power plants under the management of NPP3 and NPP5 are other biomass fuels, which is a waste from wood chipping mills and sawmills. Additionally, the Company can be procured from farmers in the plant area. Some have entered into fuel purchase agreements with fuel suppliers, while some of the fuel prices are based on natural gas prices. Moreover, the fuel used in each subsidiary’s power plants is a waste material, and some are by-products from AA’s paper mill business, which will only be used in the electricity production process. Power plants that used this type of raw material must be specifically designed. As a result, there is limited users using this fuel.

## **2) Terms specified in the contract selling electricity to AA and related companies and industrial customers**

The Group sells electricity directly to AA and distributes electricity to industrial customers located in 304 Industrial Park, Prachinburi and 304 Industrial Park, Section 2, Chachoengsao. The Group has set the price of electricity by referring to the electricity tariff for large businesses of PEA, which is a state enterprise that distributes electricity to consumers in Prachinburi and Chachoengsao. Even though the electricity rate of PEA reflects the volatility of fuel prices using formula of Fuel Transfer Charge: Ft, the price used does not design to reflect on the cost of fuel. Therefore, the Group can only partially pass the burden of increased fuel costs to industrial customers. In case of Ft does not apply to used to electricity charge of PEA, during the period of rising fuel costs, the Group will not be able to adjust the price of electricity sold to industrial customers in accordance with the rising fuel price. This may affect the profit margin of the Group.

### **2.2.8 Risks Related to Efficiency of Power Plants**

Compensation under the power purchase agreement with counterparty, the Group will receive additional compensation upon Capacity Payment (CP) and Energy Payment (EP) based on the efficiency of power plants. In addition, the Group has to comply with other conditions such as monthly capacity factor: MCF which was set at least 51%. In case, it fails to maintain the efficiency and production conditions as stipulated in the contract, the Group will have to pay a fine to the counterparty. If the case is worse, the contract may be terminated which could increase risks from the efficiency. Therefore, the Group uses KPI to evaluate performance including:



- Availability Factor: The proportion of hours that machines can apparently generate electricity. After considering both maintenance and emergency shutdowns taken into account, the total number of hours in the calendar year reflects stable power generation for customers
- Force Maintenance Outage (FMO): The proportion of off-duty electricity generation hours beyond planned maintenance. The total number of hours in a calendar year reflects the length of outages time due to machinery or force majeure
- Plant Maintenance Outage (PMO): The proportion of planned maintenance downtime per total number of hours in a calendar year
- Equivalent Gross Generation (EGG): Total amount of electricity and steam generated according to the number of hours that the machine can actually run, comparing to the same unit. By converting the units of steam, it is delivered to kilowatt-hours. The amount of steam that is calculated is approximately 10% of the total equivalent electricity generated.
- MCF: the proportion of electricity unit sold to EGAT per electricity sale according to the power purchase agreement between the Group and EGAT.
- Power under the Long-term Power Purchase Agreement (Capacity PPA): Power that must be delivered to EGAT according to the long-term trading contract

The average power generation efficiency of the power plant of the entire group in 2019, 2020 and 2021 is as follows:

KPI	Unit	2019	2020	2021
Availability factor <sup>(1)</sup>	%	84.97	85.46	85.04
FMO <sup>(1)</sup>	%	5.08	5.16	6.70
PMO <sup>(1)</sup>	%	9.95	9.39	8.26
Plant Renovation <sup>(1)</sup>	%	-	-	
EGG	'000 MWh <sup>(3)</sup>	3,947	3,864	3,954
MCF <sup>(2)</sup>		> 51		
Capacity PPA <sup>(2)</sup>		304		

Note: <sup>(1)</sup> Weighted average of the installed capacity of the entire group

<sup>(2)</sup> Indicators that are specified in the long-term power purchase agreements between the Group and EGAT.

<sup>(3)</sup> Megawatt-hours: MWh

The Group has established guidelines for managing the efficiency by defining the KPIs of the power plants to cover efficiency measurement such as 1) Availability Factor 2) Force Maintenance Outage (FMO) 3) Plant Maintenance Outage (PMO) 4) Equivalent Gross Generation: EGG and 5) Power under the Long-term Power Purchase Agreement (Capacity PPA). All of the indices will be used as criteria for monitoring and analyzing the potential of the Group's power plants.

### 2.2.9 Risks Related to Business Interruption from Force Majeure

The Company is exposed to risks related to business interruption from production problems, damaged major assets, natural disasters or other incidents, which could affect its operations. Thus, the Company has insurance policies including 1) property all-risk and business interruption insurance and 2) public and product liability insurance covering

damages caused to major assets and people in the course of the Company's business. Both types of insurance cover damages from business interruption caused by natural disasters or other incidents, and the Company will receive compensation if an incident occurs.

#### 2.2.10 Risks Related to Occupational Safety, Health and the Environment

The Company realizes that its production process might affect the safety, occupational health and environment of the surrounding areas. The Company therefore pays great attention to the control and prevention of such impacts by setting environmental, occupational health and safety policies. These policies focus on the use of natural resources to achieve maximum efficiency and cause minimal environmental pollution. The Company also provides Safety, Health, Environment and Quality (SHEQ) to manage its operations. To comply with these policies, the SHEQ committee will closely monitor performance and environmental, occupational health and safety.

Additionally, the Company has prepared an EIA report to identify environmental issues and establish preventive measures and solutions for any environmental impacts as well as measure and monitor environmental quality according to the notification of the Ministry of Natural Resources and Environment (MNRE). MNRE requires power generation projects of over 10 megawatts to prepare environmental impact assessment reports and submit them to the Office of Natural Resources and Environment's Policy and Planning Office as well as the licensor prior to commencement of the project. In these cases, the Company submits EIA reports to the Department of Industrial Works and the Ministry of Energy, which are the direct regulators, and to the Office of Natural Resources and Environmental Policy and Planning at the Ministry of Natural Resources and Environment.

The guidelines and measures that the Company has taken to reduce risks related to occupational health and the environment are:

- Implement the quality, environment, occupational health and safety management system to the operating area under the international standards ISO 9001:2015, ISO 14001:2015 and ISO45001:2018. This standard is certified with international standards from Lloyd's Register International (Thailand) Limited as follows:
  - Occupational Health and Safety Standard (ISO45001:2018) 18001:2007 for NPS, NPP3, NPP5, NPP5A, FG and E85
  - International Organization for Standardization (ISO) ISO 14001:2015 for NPS, NPP3, NPP5, NPP5A, FG and E85
  - ISO9001:2015 for NPS, NPP3, NPP5, NPP5A, FG, E85 and NS304
- Set measures to protect, solve, monitor, and minimize environmental impacts.
- Monitor and analyze environmental quality, such as quality of flue gases, quality of ambient air, and quality of wastewater.
- Manage waste from the production process in accordance with regulations of the Ministry of Industrial Works.
- The Company complies with relevant environmental and safety regulations and implements the Safety, Security, Health and Environment Quality Management System or SSHEQ MS, which focuses on systematic risk management that evaluates the risks of all activities of the Company and identifies appropriate measures to mitigate them to an acceptable level.

Moreover, the Company has a clear safety policy in its operations to minimize loss, utilizing safety performance indexes such as Lost Time Injury Frequency Rate. At the same time, the Company has focused on the preparation of safety measures to cover all operating units and support the expansion of the Company during the past year. The Company has improved its document management system and SSHEQ management to the same standard, and is striving to continuously improve performance and support sustainable growth in the future.

### 2.2.11 Risks Related to Dependence on Large Customers

The major customers of the Company are comprised of 1) EGAT, 2) AA and related parties, and 3) industrial customers. In 304 Industrial Park, Prachinburi and 304 Industrial Park, Section 2, Chachoengsao which in 2019, 2020 and 2021, the Group's revenues from each major customer group are as follows:

Customers	Consolidated Financial Statement					
	2019		2020		2021	
	THB Million	%	THB Million	%	THB Million	%
EGAT		35.96	5,013.46	31.84	4,895.84	31.28
AA and related company	3,404.15	22.30	3,421.68	21.73	3,701.77	23.65
Industrial customer <sup>(1)</sup>	4,358.88	28.56	4,347.91	27.62	4,853.56	31.01
Others <sup>(2)</sup>	2,011.91	13.18	2,961.71	18.81	2,202.37	14.07
Total	15,263.29	100.00	15,744.75	100.00	15,653.54	100.00

Note : <sup>(1)</sup> Industrial customers consist of external companies which is located within the 304 Industrial Park, Prachinburi. and 304 Industrial Park, Section 2, Chachoengsao

<sup>(2)</sup> Others are customers outside 304 Industrial Park, Prachinburi and 304 Industrial Park, Section 2, Chachoengsao

From the information above table, it can be implicit that the Group is exposed to risks arising from its dependence on large customers. Nevertheless, the normal operation of small power producers will be signed a power and steam distribution contract with a small number of large customers. Furthermore, similar terms and conditions have been stated in the purchase agreement. This is to reduce income risks and chance to sell electricity lower than break-even point. In addition, the Group has maintained a good relationship with customers and built a good reputation to increase the opportunity to expand business through the government's policy supporting and encouraging the purchase of additional electricity from the supplier in the future.

### 2.2.12 Risk from interest rate volatility

As of December 31, 2021, the Group's interest-bearing debt comprises fixed interest-bearing liabilities and debt with floating interest rates. The details are as follows:

Significant liabilities	Amount (THB million)	Interest rate (% p.a.)	Collateral	Maturity
Overdraft	-	MOR	Yes	Within 1 year
Promissory note	-	3.30 – 3.80, MOR-0.5	Yes	Within 1 year
Liabilities from making trust receipts	123.58	3.08	Yes	Within 1 year

Significant liabilities	Amount (THB million)	Interest rate (% p.a.)	Collateral	Maturity
Liabilities from making trust receipts Hire purchase payable and financial lease liabilities (including the portion due within 1 year)	10.41	5.00	Yes	2023-2024
Long-term loans from financial institutions (including the portion due within 1 year)	-	MLR - 0.50	Yes	2023-2028
Baht long-term borrowing (including the portion due within 1 year)	16,497.12	4.70 - 5.50	-None-	2021-2025
<b>Total</b>	<b>14,461.00</b>			

Note: For more information on collateral details. It can be found in Part 1 under Topic 1: Assets used in business operations.

From the table, it can be implied that the Group has no floating interest rate on debt, so the Group does not have to risk the changes in market interest rates. This may result in higher significant burden of interest expenses and financial costs used for operating or investing in projects.

The floating interest rate liabilities of the Group are long-term loans from financial institutions. The increase or decrease of 0.25%, 0.50% and 1.0% may affect the Group. The burden of interest expenses and financial costs from financial institutions could be increased or decreased by THB 5.21 million, THB 10.43 million or THB 20.85 million per year, respectively.

### 2.2.13 Risk from fluctuations in foreign exchange rates

Due to long-term power purchase agreement between the Group and EGAT, some of the electricity tariffs are based on the US dollars such as import of coal in US dollars and some spare parts from abroad. Therefore, the group risks from the fluctuation of foreign exchange rates. However, the Group use financial tools to manage risks. The details are as follows.

#### 1) Power tariffs under the Power Purchase Agreement with EGAT

Under the long-term power purchase agreement with EGAT, the price of electricity is based on the power formula which compose of 2 main components: CP rate and EP rate. Both CP rate and EP rate will change according to movement of the US dollar exchange rate. At the same time, if the coal is imported, cost of fuel will also be based on the US dollar. Therefore, in case, THB appreciates, the electricity rate will be decreased, similarly to the cost of coal in the production will be reduced. On the other hand, if THB depreciates, it will cause the electricity tariff and the cost of coal fuel increased in the same direction.

#### 2) Financial instruments

The Group uses financial instruments to manage foreign exchange risk. It hedges forward foreign exchange contracts with local financial institutions from time to time in the event that raw materials and spare parts are imported. Most of these forward foreign exchange contracts have a contract term of less than 1 year.

## 2.2.14 Risk from borrowing from financial institutions and long-term debts and compliance with the conditions

Presently, the Group acquires some of main operating assets from long-term borrowings from financial institutions and bonds, which are all denominated in Thai Baht. As of December 31, 2021, the Group has no long-term loans from financial institutions, but has long-term bonds denominated in Thai Baht, totaling THB 16,497.12 million. One-year maturity is accounted for THB 1,729.78 million, which the said liabilities caused the Group to maintain sufficient liquidity being able to repay the principal, as specified in loan agreement and long-term bond. This is to prevent the repayment of such loans from significantly affecting the Group's liability to operate and financial position of the Group.

In this regard, the loan agreement between the Group with each financial institution is set to the company and/or its subsidiaries that they must comply with various important conditions and requirements such as maintaining a major shareholder of the Company in subsidiaries. The maintenance of financial ratios at an appropriate level, for example, Debt to Equity Ratio (D/E) should be less than 2.0 to 2.5 times, long-term debt to equity ratio should be lower than 2.0 times, Debt Service Coverage Ratio (DSCR) should be higher than 1.05 to 1.3 times at the end of each quarter and/or year throughout the loan agreement (as specified in each loan agreement).

As for long-term bonds in Thai baht, they are of 2-7 years maturity with interest rates of approximately 4.70% - 5.50% per annum. The terms and conditions governing the rights and obligations of the bond issuers specify conditions for maintaining Debt to Equity Ratio should be lower than 2.5 times at the end of each accounting period throughout the bond life. Unless, after BPG or other subsidiaries who will act as a producer and generator of the Burapha Power Project instead of BPG and will sign a power purchase agreement with EGAT. This is to financial support with a financial institution supporting Burapha Power Project. The ratio of debt-to-equity at the end of each accounting period or at the end of the last quarter should not exceed 3 times.

As of December 31, 2021, the Company has 5 financial ratios under the consolidated financial statements that must be maintained in accordance with loan agreements and the provisions that the rights and obligations of bond issuers. The details are as follows:

Financial Ratio	Conditions for maintaining the ratio	As of December 31, 2021	Status
Debt to Equity Ratio (Terms and conditions for the rights of debentures)	Less than 2.50 times	1.18 times	Conditions apply
Debt to Equity Ratio	Less than 2.50 times	1.74 times	Conditions apply
Coverage ratio	Less than 1.30 times	0.24 times	Conditions apply
Debt to Earnings Before Interest Expenses Income Taxes Depreciation and amortization	Less than 5.00 times	4.42 times	Conditions apply
Long-term debt to equity ratio	Less than 2.00 times	1.35 times	Conditions apply

However, if the Group is unable to comply with terms or conditions, they will result in the creditor can charge interest at the unconditional, impose any additional conditions, or secure collateral (if any). The ultimate impact is reputation and image of the financial status unless a written waiver has been received.

## 2.2.15 Risks Related to Entering into a Long-Term Loan Agreement Between a Subsidiary and a Financial Institution

### E85 Company Limited

On December 8, 2011, E85 Company Limited (“E85”) entered into a long-term loan agreement with a financial institution to obtain a loan facility of up to Baht 2,300.00 million, in order to continue funding its investment in an ethanol production project, tapioca starch factories, biogas plants and related businesses. The loan agreement contains specified covenants.

Subsequently, on April 24, 2020, E85 amended to the loan agreement with the said bank in accordance with the Bank’s policy to aid customers who are at risk or affected by the COVID-19 epidemic situation. The Group mentioned that if the situation is prolonged, it may affect on E85’s performance. Although current situation does not directly affect E85, all principal repayments are suspended for two years from June, 2020 to May, 2022 and will start to repayment in June, 2022 and last installment in December 2027. However, E85 still has to remit interest on the original repayment period.

As of December 31, 2020, E85 was able to maintain the debt service coverage ratio in accordance with the practice of contract.

On June 30, 2020, E85 made a repayment of all long-term loans of THB 837 million baht, plus interest. and terminate the loan agreement with the bank before its maturity. Currently, it is in the process of redemption of collateral.

## 2.2.16 Risks from Unsecured Debts

The Company has both secured and unsecured debt structures. Creditors who have collateral assets have the right to enforce debt from assets insured before the unsecured creditors. As of December 31, 2020, the Company had assets encumbrance equal to THB 14,046 million or 67.74% of the property, plant, and equipment. Also, the Company has assets that are not encumbered with liabilities under property, plant, and equipment remaining of THB 6,688 million, equivalent to THB 12,242.38 million of Interest-bearing and unsecured liabilities. If the Company has to sell assets to repay debts, secured debts will be repaid first. Thus, the debenture holders may have a risk of repayment due to the unsecured debt.

### Instrument risk

## 2.2.17 Risks Related to the Right of the Company to Redeem Debentures Before Maturity

The Company has the right to redeem debentures in full or in part as specified in the terms and conditions of the debentures. This is an exclusive right of the Company. Investors therefore have the risk of early redemption of the debentures. The Company can exercise its right to redeem the debentures at the first anniversary of the issue date and the date of the interest payment, no matter which period of time after the one-year anniversary of the debentures. Whether or not to exercise the right to redeem the bond depends on overall circumstances. However, redemption of the debentures before maturity may cause investors not to receive returns as expected and investors may be exposed to risk in their investment due to changes in interest rates. Consequently, inves-



tors are unable to invest the principal and interest received from the redemption of the debenture within the expected return. Investments are affected by changes in interest rates even when the Company pays the early redemption fee to debenture holders.

#### **2.2.18 Credit Risks**

Debenture holders are exposed to the risk that they might not receive interest payment or principal repayment in the event that the business and operating performance of the issuer is not in line with expectations, or the Company could face a liquidity problem, or assets of the Company may not be covered for liquidation. The Company conduct credit risk assessment provided by the credit rating insitution. However, credit rating results cannot not guarantee that the Company will definitely be able to pay interest or principal and the credit rating results may be canceled or changed at any time. Creditor or bond holder can follow up the news as well as improvements and changes in credit ratings from the SEC's website, a relevant credit rating agencies, or the Thai Bond Market Association.

#### **2.2.19 Price Risks**

The market price of the debentures could increase or decrease, depending on several factors, such as interest rates in the money market, the policy of the Bank of Thailand, overall economic conditions, the inflation rate, or an excess or shortage of demand for the debentures. Thus, debenture holders could experience negative effects from fluctuations in the prices of debentures in the event that they are traded prior to the maturity date.

#### **2.2.20 Liquidity Risks**

Debenture holders might not be able to sell the debentures immediately at the desired price if there is little or no trading of the debentures in the secondary market. In such cases, the issuer would not list the debentures on the Bond Electronic Exchange (BEX) or any secondary markets. However, debenture holders could sell debentures to licensed dealers, which are primarily commercial banks and securities companies, if such licensed dealers wished to purchase them.

## 3. Driving the Business towards Sustainability

### 3.1 Sustainability Management Policy and Objectives

NPS is one of the leaders in the renewable energy business with over 30 years of experience in electricity generation. The Company operates the business following the sustainable development direction under the principle of good governance, placing emphasis on social responsibility, transparency and verifiability. The Company adheres to ethical principles, rules of law and respects the international practices and stakeholders' benefits. Furthermore, the Company also emphasizes on the community and environment, by adopting modern manufacturing technology and the environmental management system that builds trust among community members, by selecting clean technologies and using biomass fuel from agricultural waste, residue from the pulp industry and sub-bituminous mixed with biomass to offer new alternatives and diversify risks from relying on oil or natural gas in electricity generation, reduce oil imports and contribute to strengthen energy stability for the country, reflecting leadership in the energy business on the basis of sustainability both at present and in the future, in accordance with 'growing the energy for future sustainability' concept.

### 3.2 Impact Management on Stakeholders in the Value Chain

#### 3.2.1 Value Chain

##### 1. Primary Activity

###### (1) Inbound Logistics

The group of companies operate power plants that use a wide array of raw materials as fuels, for instance, biomass fuel from agricultural residues, leftovers from the pulp industry and the use of sub-bituminous mixed with biomass to offer new alternatives and diversify risks from relying on oil or natural gas in electricity generation and reduce oil imports. The Company also participates in the improvement and research on seedlings that offer an especially high heat factor, which is suitable for using as fuel (energy source). Besides, we also support growing energy plants for agriculturists instead of growing rice in Na Don that yields low production, which has helped change lifestyles of agriculturists and generate extra income in parallel with improving environmental conditions in the long run.

###### (2) Operations

NPS power plants utilize the CFB kiln (Circulating Fluidized Bed) that is widely accepted globally, given its competencies in combusting a wide range of fuels and controlling the emissions of nitrogen oxide of not exceeding 130 parts per million (the standard regulates 350 parts per million) that works together with the lime-fed sulfur dioxide removal system that can control the emissions of sulfur dioxide of not more than 450 parts per million (the standard regulates 640 parts per million). The entire fuel will be combusted at the temperature of 850

degrees Celsius, with the complete combustion system that helps minimize the formation of nitrogen oxide and chances of pollution.

### **(3) Outbound Logistics**

The electric current generated by NPS is distributed to the Electricity Generating Authority of Thailand (EGAT), industrial zones and factories in the area, as well as for internal use, contributing to strengthen the country's infrastructure stability and prosperity of the communities surrounding the power plants.

### **(4) Marketing and Sales**

NPS has 10 power plants altogether and 1 generator, with the capacity to generate electricity and steam of 726 MW in total. The electricity generation capacity using renewable energy is equivalent to 398 MW, so we are the top of mind alternative for customers in industrial parks that prefer to use green energy that is environment-friendly. Besides, there is a reservoir with a raw water filtration system with the capacity of 160,000 cubic meters/day to distribute to factories in 304 Industrial Park, Prachinburi, and partly to EGAT. Moreover, the Company also invested in the construction of reservoir with the raw water filtration facility with the capacity of 25,000 cubic meters/day, which will be completed in 2024, and also invested in the expansion of the electricity transmission system to the expanded phase of 304 Industrial Park in order to respond to increasing customers' demand in the long run.

### **(5) Customer Services**

The group of companies' business operations focus on maintaining and developing relationships with customers. However, due to the nature of business operations that mainly associate with electricity and steam generation for industrial applications, the Company's customers are all key accounts, so the Company always ensures to comply with the conditions and terms stated in the sales agreements with customers, and cooperate in solving problems, allowing the Company to earn trust and acceptance from customers all along.

## **2. Support Activities**

The group of companies operate the power plant business, with the major revenue generated from distribution of electricity, steam and water, as well as from production and distribution of steam for industrial applications. Moreover, the group has also invested in services that facilitate the operations of the core business and businesses with growth and revenue generation potential in the future.

### **2.1.2 Stakeholder Analysis in the Value Chain**

The Company is aware of the rights entitled to all stakeholders, with adherence to the business code of conduct, in order to constitute benefits to all stakeholders, via the processes of hearing out opinions, satisfaction survey, meetings, presentations of investment information (by doing roadshows and different investor relations activities), communication to establish an understanding of matters of interest via several channels such as website, telephone, letter, social media – Facebook, Line @nps\_investor and others, to receive stakeholders' opinions and integrate them into the decision-making process and business planning execution, so that the Company can respond to stakeholders' requirements effectively, and mitigate risks of damaging the image and create added values to the business. Key stakeholders; internal and external, can be categorized into 6 major groups as follows:

1. Shareholders
2. Investors/ Trade Creditors
3. Staff Members
4. Suppliers
5. Customers
6. Communities and Environment

In this regard, stakeholders' expectations and responses to those expectations do vary by groups, with the following details:

Stakeholders	Stakeholders' Expectations	Response to Stakeholders' Expectations
Shareholders	<ul style="list-style-type: none"> <li>• Good operating results, high stock price and dividend</li> <li>• Continuous business growth and expansion</li> <li>• Transparency in business operations and good governance</li> <li>• Risk management, joint investment and innovation development to enhance operational effectiveness</li> <li>• Fuel management</li> <li>• Equal opportunity in information access</li> </ul>	<p>The Company will be operating the business with transparency and effectiveness to create value to the business in a sustainable manner, with the determination to generate good operating results and stable growth for shareholders' maximum benefits in the long run, while ensuring transparent and trustworthy information disclosure.</p>
Investors/ Trade Creditors	<ul style="list-style-type: none"> <li>• Good operating results, high stock price and dividend</li> <li>• Continuous business growth and expansion</li> <li>• Transparency in business operations and good governance</li> <li>• Business operations that consider environmental factors and governance</li> <li>• Joint investment and innovation development to enhance operational effectiveness</li> <li>• Disclosure of operational information in terms of finance, environment, society and governance.</li> <li>• Provision of comprehensive and sufficient information for the forecast of the Company's operating results</li> <li>• Accuracy of the information used in the presentation of the quarterly operating results, financial stability, financial ratios, levels of debt and debt repayment competencies</li> </ul>	<p>The Company will be operating the business with transparency and effectiveness to create value to the business in a sustainable manner, with the determination to generate good operating results and stable growth for investors'/trade creditors' maximum benefits in the long run, while ensuring transparent and trustworthy information disclosure. The Company will also make sure to comply with terms and conditions as committed towards trade creditors/investors, as well as repayment of the capital and interests, and management of collaterals under relevant agreements.</p>
Staff Members	<ul style="list-style-type: none"> <li>• Support staff members' potential to align with the Company's strategic direction</li> <li>• Take care of staff members' quality of lives and safety in the working environment</li> <li>• Good compensation and welfare and career advancement opportunities</li> <li>• Fair performance evaluation system</li> <li>• Revenue stability</li> <li>• Equal treatment</li> <li>• Leadership development</li> <li>• Talent Retention</li> </ul>	<p>The Company will be treating all staff members equally and fairly, and providing appropriate compensation. Besides, the Company also emphasizes on the development of skills, knowledge, competencies and potential of staff members on a regular basis, i.e. training and seminar, offering equal opportunities to all staff members and retaining highly competent staff members to continue working with the Company to further develop the business, as well as encouraging occupational health and safety to ensure good quality of lives both mentally and physically. The anti-corruption measures have also been identified to foster an awareness to comply with the laws and relevant regulations, for instance, prohibition to use internal information, etc.</p>

Stakeholders	Stakeholders' Expectations	Response to Stakeholders' Expectations
Suppliers	<ul style="list-style-type: none"> <li>• Fair competition and equal treatment</li> <li>• Relationship, collaboration and growing together</li> <li>• Effective, transparent and verifiable purchasing system</li> <li>• Fair, clear, transparent and verifiable purchasing policy</li> <li>• Abide by the stated agreement and not take advantage of suppliers</li> </ul>	<p>The Company has the procedures in supplier selection, encouraging suppliers to compete based on equal information and selecting them on the basis of fairness, under the assessment and selection criteria. Besides, the Company also compiles a contract in an appropriate and fair manner towards all contract partners, and arranges for the follow-up system to ensure proper compliance with the conditions and prevent corruption or misconduct in every purchasing procedure, whereby the Company will be entering into transactions with suppliers under the general commercial terms and strictly complying with the contractual agreements.</p>
Customers	<ul style="list-style-type: none"> <li>• Delivery of products and services that are of quality as committed in the agreement with fair prices as regulated by the regulating bodies</li> <li>• Stability of the electricity generation and distribution systems</li> <li>• Quick response to customers' requirements in a timely manner by competent staff members, being able to solve problems in time</li> <li>• Fair treatment towards all customers under the relevant laws</li> <li>• Convenient, fast and easily accessible customer contact channels</li> <li>• Technological development to alleviate environmental impact</li> <li>• Joint effort in identifying new business opportunities</li> </ul>	<p>Implement the customer relationship management measures, showing responsibility towards customers by maintaining the quality and standard of products and services, and responding to customers' requirements in the most comprehensive ways, striving to ensure customer satisfaction in the long run. Moreover, the Company is also aware of the importance of providing the accurate and comprehensive information on products and services to customers, and has arranged for channels for customers to notify issues related to products and services in order to prevent and solve problems in a timely manner, and maintain customers' confidentiality and never use them to seek benefits for oneself or others.</p>
Communities and Environment	<ul style="list-style-type: none"> <li>• Measures to alleviate environmental impact that may arise from the Company's business operations</li> <li>• Operating the business with safety and environmental awareness</li> <li>• Fostering an understanding in the Company's business operations for the community</li> <li>• Encouraging job creation, income generation and cost reduction for the community</li> <li>• Regular support to community activities</li> <li>• Offering job opportunities for community members to work with the Company</li> <li>• Exercise the Company's knowledge, skills and expertise to develop communities surrounding the power plants</li> <li>• Wise use of resources</li> <li>• Being aware of the community's water consumption</li> <li>• Development of the business alongside the community, society, economy and environment to thrive sustainably both directly and indirectly</li> </ul>	<p>The Company cares for and emphasizes on the safety of the society, environment and quality of lives of those related to the Company's operations and encourages staff members to be aware of and responsible for the environment and society, as well as ensures strict compliance with the laws and relevant regulations. The Company aims to develop and support job creation for community members through various means, and supports local education and considers hiring local people as much as possible, based on the knowledge, skills and appropriate job positions to distribute income to citizens living in the areas. Besides, the Company tries to participate in different activities to build and maintain environmental and social viability, as well as local cultures where the Company operates.</p>

### 3.3 Sustainability Management in Environmental Dimension

#### 3.3.1 Environmental Policy and Practices

The group of companies focuses on quality electricity and steam generation, together with environmental conservation, with an awareness of preventing and controlling the impact from business operations, by identifying a cautious environmental and safety policy, with the establishment of the division designated to supervise security, safety, occupational health and environment, as well as the quality system (SHEQ), the SHE Committee and a responsible person in energy issues to manage the operations to align with the environmental and safety policy for power plants. In this regard, the group of companies emphasizes on environmental management in different aspects, for instance, air quality, water quality and standardized handling of industrial residues, etc., with the operational supervision and improvement in a continuous manner to control the level of pollution to remain in the standard. Besides, the Company also makes sure that natural resources utilization is carried out in the most efficient of ways.

#### Energy Plants: Source of Extra Income and Sustainable Renewable Energy

The Company places emphasis on growing energy plants to use as electricity generation fuels and encourage occupational opportunities for agriculturists and the communities. So the Company has researched and developed the “energy plants” for agriculturists to plant in unused areas to generate extra income for their families. The “energy plants” have been researched and developed to have special attributes, whereby the wood itself gives off high heat rate; suitable for use as electricity generation fuels, and growing energy plants also helps alleviate the global warming too.

#### Electricity from Clean Technology

With a sense of responsibility and an awareness of surrounding communities and environments, the Company opts for clean technologies in generating electricity, especially the steam boiler that serves as the core unit in electricity generation processes, the use of CFB kiln (Circulating Fluidized Bed) with the capacity to combust a wide array of fuels and control the emissions of nitrogen oxide more efficiently than the regulated standard. The kiln works alongside the lime-fed sulfur oxide removal system that facilitates the emission of sulfur dioxide removal more efficiently than the regulated standard. The entire fuels will be fully combusted at the temperature of 850 degrees Celsius, which can help reduce the formation of nitrogen oxide and prevent pollution. Moreover, the ashes obtained after the combustion process will be used for cement production, so there will be no waste left. In this regard, dust particles are being controlled by allocating a closed fuel storage facility, as well as the installation of the ESP system (Electro-Static Precipitator), which is equipped with the dust collecting efficiency of 99.5%, resulting in the factory having the better ventilation from chimneys than the regulated standard. Besides, we also installed the equipment to inspect the quality of air released from the continuous emission monitoring system (CEMs).

#### “Never Let the Waste Go to Waste”

The Company has an idea to reuse the waste from the electricity generation process for maximum benefits to alleviate environmental burden, for instance, the reuse of sap oil, bark and wood chips left over from the production to be used as electricity generating fuels again, serving as back-up energy in the factories, and the remaining is distributed to the Electricity Generating Authority of Thailand to use in the communities.

### 3.4 Sustainability Management in Social Dimension

#### 3.4.1 Social Policy and Practices

The Company is determined to operate the business with a significant emphasis on social responsibility, transparency and verifiability, adhering to the principles of ethics and laws, and respecting the international standard of practices and benefits of stakeholders. Furthermore, the Company is aware of its responsibility towards the environment and community, by supporting and maintaining the safety and occupational health standards for staff members, contractors, surrounding communities and visitors, as well as striving to maintain the environmental sustainability via systematic administration and prevention of pollution. The Company also encourages wise resource consumption and executes activities aiming to constitute public benefits together with the communities for economic and social development in a continuous and sustainable manner. Hence, the Social Responsibility Policy in different aspects has been compiled (de-



tails of the Social Responsibility Policy are available <https://www.npsplc.com/storage/download/corporate-governance/nps-cg-corporate-policies-08.pdf>

### **Development and Dissemination of Innovation Obtained from Business Operations with Responsibility towards the Society, Environment and Stakeholders**

The Company encourages innovation both at the organizational procedure level and inter-organizational collaboration level, inclusive of execution of different matters with new methods, with the objective of inducing positive changes and increased productivity. In this regard, for maximum social benefits, disseminating innovation is considered an act of social responsibility, whereby the Company will be communicating and disseminating the innovation to all stakeholders both directly and indirectly via different channels to ensure that the news and updates get through to all stakeholders thoroughly.

### **Operating the Business with Fairness**

The Company is determined to operate the business with honesty, fairness, and transparency, by disclosing significant and verifiable information, as well as strive to engage in commercial competition and comply with the laws, relevant regulations and principles of code of conduct. The Company will guard against any behaviors that obstruct fair competition, for instance, seeking competitors' confidential information, calling for, receiving and offering any dishonest commercial interests, etc.

### **Anti-Corruption**

The Company operates the business on the basis of transparency and ethics, adhering to the principles of good governance and complying with the laws relevant to prevention of and guarding against corruption, offering or receiving bribes with government officials or private sector employees. The Company has identified the organizational structure that clearly designates the scope of responsibility, work procedures and lines of supervision in each division, in order to ensure proper balance of power and prudence in inter-departmental audit. Furthermore, the Company has laid out practical guidelines for directors, executives and staff members of the Company and subsidiaries, which are available at <https://www.npsplc.com/storage/download/corporate-governance/20211209-nps-anti-fraud-and-corruption-policy-th.pdf>

### **Respecting Human Rights**

The Company has a policy that supports and respects the protection of human rights, by treating all stakeholders; staff members, communities and surrounding society with respect in the value of humanity, an awareness of equality and independence, never violate basic rights and discriminate in terms of nationality, race, religion, language, skin color, gender, age, education, physical condition or social status, while also ensuring that the Company's business does not associate with the violation of human rights, for instance, using child labor or sexual harassment, etc.

### **Fair Treatment of Labor**

The Company is aware of the significance of developing human resources and treating them fairly, which will contribute to increase values for the business and strengthen competitive edges and sustainable growth for the Company in the future.

### **Responsibility towards Customers**

The Company is determined to develop products and services sold by the Company and subsidiaries for customers' maximum satisfaction and benefits, while striving to treat customers with responsibility, honesty and care.

### **Environmental Conservation**

The Company places emphasis on social responsibility in terms of environmental conservation, by ensuring that the operations, production and service provision strictly comply with the laws relevant to environmental conservation. The Company has been administering with an awareness of environmental safety in every business procedure all along. Moreover, the Company also focuses on utilizing and managing natural resource in the most effective of ways.

## Joint Development of Communities through Electricity Development Fund

As an operator of power plants, NPS is of the opinion that being responsible for communities is critical, and so the Company has contributed financial support to the Electricity Development Fund, for communities to use in different causes, for instance, occupational development, health improvement, and development of community, education and religion.

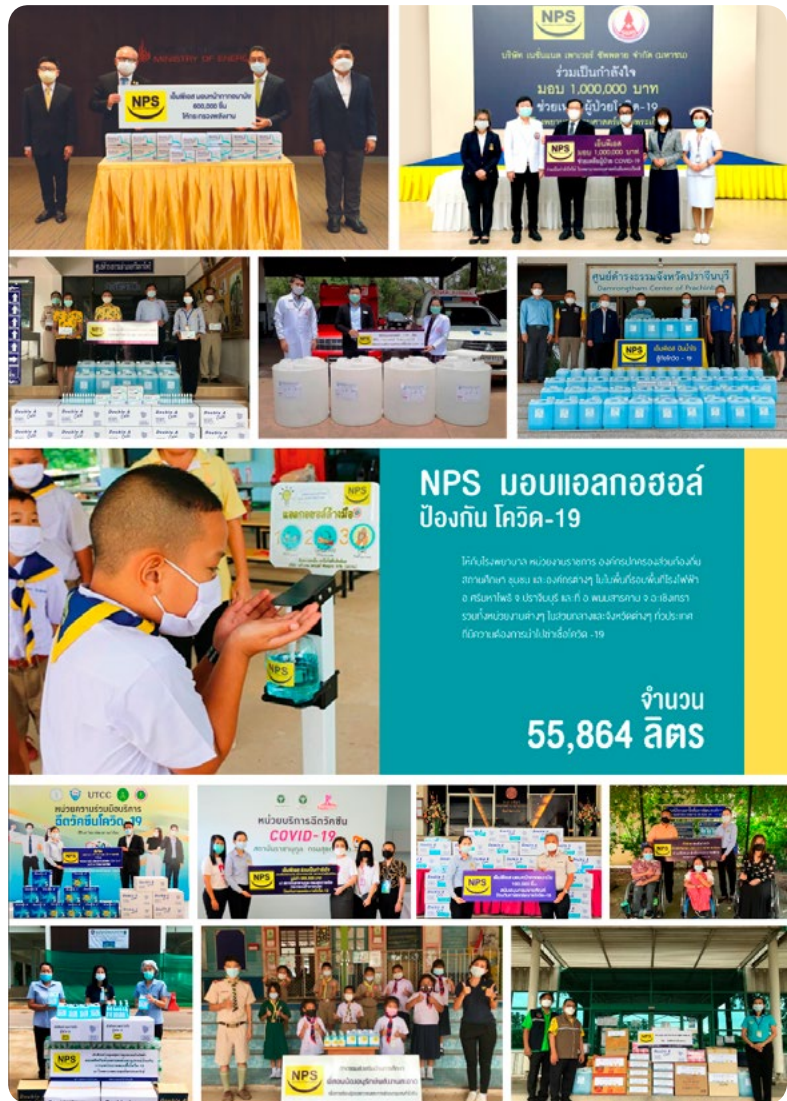
Furthermore, we take it seriously in terms of compliance with the laws and regulations to achieve harmony with the environment, society and communities. The Company also proceeded to conduct the EIA (Environmental Impact Assessment) to comply with the regulations, on the basis of disclosure and transparency as stated in the Company’s policy, with the objective of being another driving force in developing the community and the country to grow sustainably and advance alongside one another.

### Joint Development of Community or Society

The Company focuses on sustainable energy development, in parallel with placing significance in taking care of quality of lives and well-being of community members, by engaging in activities in collaboration with the Community Development Fund under the concept “**Encouraging Education, Occupational Development, Health Improvement for Better Lives**”, in order to induce development in coherence with the actual requirements that are beneficial for the communities.

Because many sectors were still affected by the most recent spread of COVID-19 in several areas in the country in 2021, leading to the increase in infected cases. NPS is aware of the significance of collaboration from all parties to help prevent the disease, support and take care of the communities to get through this together. Hence, NPS is determined to take part in supporting the Thai society to fight against COVID-19, through NPS’s charitable donation to alleviate the impact of COVID-19 in 2021, and public benefit activities that have been executed continuously, for instance, provision of alcohol to hospitals, public health organizations, government bodies and communities of over 55,864

liters in total, as well as masks, infrared temperature measurement equipment, automatic alcohol dispensers, oxygen generators, handwash gel and alcohol gel for community schools, hospitals, public and private sector organizations in areas surrounding the power plant and other affected areas to facilitate and take care of the citizens. Furthermore, the Company also provided survival packages and general consumer goods to the Local Administrative Organization to grant to those who isolated themselves to observe symptoms, as well as those with low income or lack of income during the pandemic. The Company also provided budget to the officers performing duties during those times, with the expectation to serve as another support mechanism for Thailand to get through this crisis in the best ways possible.



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

### 4.1 Executive summary report and milestone

#### 1 Investment in subsidiary – NPS Solar Company Limited

On March 16, 2021, the Company established NPS Solar Company Limited, registered in Thailand with registered capital of THB 184.45 million by issuing 18.345 million ordinary shares with a par value of THB 10. The Company owns 99.99% and the main business of this subsidiary is generating electricity from solar energy.

#### Bonds

In 2021, the Company issues 4 tranches of bonds: first tranche is worth THB 1,250 million: 3.5 years term with 4.5% interest rate. Second tranche is worth THB 2,000 million: 5 years term with 5.00% interest rate. Third tranche is worth THB 2,250 million: 5 years and 10 months term with 5.35% interest rate. Fourth tranche is worth THB 2,800 million: 7 years term with 4.75% interest rate. During the year, the Company repaid the debentures amount of THB 3,900 million.

#### Sale of associated company shares – Kanna Company Limited

In Q3 2020, at the Extraordinary General Meeting of Kanna Company Limited (“KN”), the board approved to reduce specific capital of the Company amounted to THB 667.20 million. KN registered the capital reduction with the Ministry of Commerce on November 2, 2020, the Company hence presents its investment in KN as “Receivable from ordinary shares from related parties”, previously listed as “Assets classified as held-for-sale assets”

Subsequently, in Q1 2021, at Board of Directors’ meeting of the Company, they approved to execute all remaining investments to a related company with the amount of THB 1 million. The investment values at THB 254 million and fully booked as the allowance for impairment. The Company also received capital from the capital reduction of THB 667 million and THB 1 million from executing the investment.

#### Assets Held for Sale - Investments in Subsidiaries

On November 8, 2021, at the Board of Directors meeting, the board approved to sell 0.74 million ordinary shares of Sonish Starch Technology Company Limited (“SNST”) to a related company at the price of THB 946 per share, totaling THB 700 million. The Company presents assets and liabilities related to SNST as “Asset held for sale” and “Liabilities directly related to assets held for sale”.

#### Long-term loans from financial institutions

During Q1 and Q2 of 2021, 3 subsidiaries have fully repaid long-term loans to financial institutions before its maturity, with total amount of THB 1,941 million and request to cancel the revolving line, FX Forward Contract, and proceed to release the collateral under the said credit agreement. Currently, the bank has released the burden of guarantees for land and building mortgaging as well as machinery and equipment.

## 4.2 Performance Analysis for 2021

### Overall Performance

The Group's net profit for the year is THB 1,554.50 million with an increase of THB 622.98 million or 28.61% from last year. Total revenue is THB 15,653.54 million with a decline of THB 91.21 million or 0.58% from previous year. Even though the price went up from previous year, the ethanol sales declined because of the impact of Covid19 as well as higher cost of production. Furthermore, the revenue from electricity, steam and water sales increased due to higher price factors and higher demand. Revenue from other products and services also increased. Nevertheless, the Company's expense is THB 13,449.98 million baht with an increase of THB 816.28 million or 6.46% from last year. The analysis can be shown in details as follows:

### Revenue

Total revenue comes from selling electricity, steam and water as a main business. The revenue also comes from ethanol, other products, services, and others. Revenue structure is divided by type of products and services in 2020 and 2021 as follow:

Source of Revenues (THB Million)	2020	2021	Increase (Decrease)	Percentage
Revenues from selling electricity, steam and water	12,539.93	13,277.92	737.99	5.89
Revenues from selling ethanol	2,841.97	1,877.93	(964.04)	(33.92)
Revenues from selling other products <sup>(1)</sup>	172.74	392.60	219.85	127.28
Revenues from services <sup>(2)</sup>	62.67	99.75	37.07	59.16
Other revenues <sup>(3)</sup>	127.43	5.35	(122.08)	(95.80)
<b>Other revenues</b>	<b>15,744.75</b>	<b>15,653.54</b>	<b>(91.20)</b>	<b>(0.58)</b>

- Notes:
- <sup>(1)</sup> Revenues from other products such as Tapioca Starch and chemical
  - <sup>(2)</sup> Revenue from services: resource and development, and loading buoy and unloading cargo
  - <sup>(3)</sup> Other revenues: profit from exchange rate, fixed assets and investment in its subsidiaries

Revenue structure can be classified into type of customer in 2020 and 2021

Customer	2020	2021	Increase (Decrease)	Percentage
EGAT	5,013.46	4,895.84	(117.62)	(2.35)
AA and related company	3,421.68	3,701.77	280.09	8.19
Industrial customer <sup>(1)</sup>	4,347.91	4,853.56	505.65	11.63
Others <sup>(2)</sup>	2,961.69	2,202.37	(759.32)	(25.64)
<b>Total</b>	<b>15,744.74</b>	<b>15,653.54</b>	<b>(91.20)</b>	<b>(0.58)</b>

- Notes:
- <sup>(1)</sup> Industrial customers: Other companies that located in Industrial Park 304, Prachinburi Province and Industrial Park 304 section 2, Chachoengsao Province
  - <sup>(2)</sup> Others: Customer that located outside Industrial Park 304, Prachinburi Province and Industrial Park 304 section 2, Chachoengsao Province

#### Revenue from selling electricity, steam, and water

Revenue comes from selling electricity, steam and water worth of THB 13,277.92 million with an increase of THB 737.99 million or 5.89%, mainly due to an increase in volume. The higher amount of electricity was sold to Electricity Generating Authority of Thailand. After a shutdown of steam turbines, NPP5 started operating again in Q2 in which the sales volume of electricity and steam increased in accordance with the growing demand of industrial customers and sales management.

#### Revenue from selling ethanol

Revenue from selling ethanol is THB 1,877.93 million with a decrease of THB 964.04 million or 33.92% from last year. This is due to a decline in ethanol sales volume according to the market situation. It was affected by Covid19 and resulting from higher production cost. Similarly, the price goes up, compared to last year.

#### Revenue from selling other products

Revenue from selling other products is THB 392.60 million with an increase of THB 219.86 million or 127.27% from last year. The sales are from selling raw materials and inventories.

#### Revenue from service

Revenue from services is THB 99.75 million with an increase of THB 37.07 million or 59.16% from last year. This is due to an increase from external transportation service fees.

#### Other revenues

Other revenue is THB 5.35 million with a decline of THB 122.08 million or 95.80% from last year. The main reason is from the sale of investments in subsidiaries

#### **Cost of goods sold**

Cost of goods sold and services can be categorized as follow:

Transaction	Consolidated Financial Statement			
	2020		2021	
	Million (THB)	Percentage	Million (THB)	Percentage
Cost of selling electricity, steam, and water	9,044.46	76.10	10,393.73	80.95
Cost of selling ethanol	2,609.44	21.96	1,926.16	15.00
Cost of selling other products	164.03	1.38	344.74	2.68
Cost of services	66.41	0.56	175.16	1.36
<b>Total cost of goods sold and services</b>	<b>11,884.35</b>	<b>100.00</b>	<b>12,839.79</b>	<b>100.00</b>

Cost of goods sold and services are THB 12,839.79 Million with an increase of THB 955.44 million or 8.04% from last year. Cost of selling electricity, steam, and water goes up from last year amounted to THB 1,349.27 million or 14.92% because of coal price factor. On the other hand, cost of selling ethanol declined THB 683.27 million because lower production volume and sales. Consequently, cost per unit increases because of higher price of raw sugar and cassava. In addition, cost of other products and services increase THB 289.46 million or 125.61% from last year because of higher revenue.



### Selling and administrative expenses

Selling and administrative expenses is THB 499.32 million which a decline of THB 43.59 million or 8.03% from previous year. The Group can manage and control the cost by adopting online technology to use in the organization.

### Factory expenses incurred during the production halt

Factory expenses incurred from E85, SNST, and NPP2's production halt are THB 114.82 million with a decrease of THB 53.55 million or 31.81%. This is due to Ethanol business production increased.

### Financial cost

Financial cost is THB 848.36 million with a decline of THB 65.61 million or 7.81%. The Group has fully repaid long-term loans to financial institutions before its maturity.

## 4.3 Financial analysis

### 4.3.1 Assets

Assets	December 31, 2020	December 31, 2021	Change	Percentage
	Million (THB)	Million (THB)		
Cash and bank deposit	721.92	3,588.25	2,866.33	312.46
Trade accounts and other receivables	2,630.54	2,934.96	304.42	11.57
Share receivable	667.2	-	(667.20)	(100.00)
Asset held for sale	-	680.13	680.13	100.00
Inventories	1,079.63	1,596.96	517.33	47.92
Property, plant and equipment	20,734.01	19,532.00	(1,202.01)	(5.80)
Other assets	2,001.27	2,518.86	517.6	(355.31)
<b>Total assets</b>	<b>27,834.57</b>	<b>30,851.16</b>	<b>3,016.60</b>	<b>10.84</b>

The Group has total assets of THB 30,851.16 million with an increase of THB 3,016.60 million or 10.84% from previous year. The changes are significantly as follow:

#### 1) Cash and bank deposit

Cash and bank deposit are THB 3,588.25 million with an increase of THB 2,866.33 million or 312.46% from cash flow from operating activities and issuing bonds.

#### 2) Trade accounts and other receivables

As of December 31, 2021, total receivables are THB 2,934.96 million with an increase from previous year of THB 304.42 million or 11.57%, mainly due to related trade account receivable. The increase is from higher sales of electricity and steam as well as total overdue debts of THB 428.62 million. Yet, the unrelated trade accounts receivable decreased.

#### 3) Accounts receivable for shares and assets held for sale

At the Board of Directors Meeting, no. 1/2019 held on January 21, 2019, the board considered to sell

all KN ordinary shares to Diamond Transport Holding Company Limited, a related person, amounting to 92,160,000 shares, or 48% of the registered and paid-up capital with total amount of THB 667.20 million. This is to comply with Company's policy as the Company has restructured its subsidiaries and associated companies in order to have better potential and competitiveness. The structure was to reduce unrelated and indirect business with the core. On September 16, 2020, at the Board of KN Directors Meeting, they approved to reduce specific investment of THB 667.20 million. However, Kanna Company Limited registered the capital reduction with the Ministry of Commerce on November 2, 2020. Therefore, the Company reversed its investment of THB 667.20 million to "Receivables for common shares from related parties". Previously, it was recorded under the "Assets classified as asset held for sale". Moreover, at the Board of Directors meeting held on February 17, 2021, the Company approved to invest all remaining investment in Sinsukjai Company Limited amounted to THB 1.00 million. The investment is worth of THB 254.40 million, and recorded full amount as investment impairment. In addition, the Company receives capital from the capital reduction of THB 667.20 million and dispose investments of THB 1.00 million in February 2021.

At the Board of Directors' meeting, no. 5/2021 held on November 8, 2021, it is resolved to sell 0.74 million ordinary shares of Sonish Starch Technology Company Limited ("SNST") to a related company at the price of THB 946 per share, totaling THB 700 million. This is to align with Thai Financial Reporting Standards (TFRS) No. 5 (Revised 2019), non-current assets held for sale and discontinued operations. The Company presents assets and liabilities related to Sonish Starch Technology Company Limited under "Assets held for sale" and "Direct liabilities related to assets held for sale" in financial statement as of December 31, 2021. Profit and loss from discontinued operation are not listed because they are not in the main business line of the Group.

#### 4) Inventories and advance payments for goods

Inventories are categorized into raw materials for production: coal, biomass fuel, cassava, diesel, and finished goods: ethanol and tapioca starch.

As of December 31, 2021, the Group has inventories of THB 1,551.53 million with an increase of THB 746.64 million from the previous year or 92.76%. The Group also managed to buy raw materials, biomass and coal as the price is rising. In addition, raw material, last year, was changed from cassava chips to sugar.

#### 5) Property, plant and equipment

Land is recorded at book value, whereas buildings and equipment are recorded at book value after accumulated depreciation and asset impairment. Their value is amounted to THB 19,532 million as of December 31, 2021, with a decrease of THB 1,202.01 million from the previous year or 5.80% due to depreciation over time. Also, assets liable to guarantee are amounted to THB 3,928.47 million.

#### 6) Other assets

**Financial assets:** Invested in corporate bonds that were in market demand with additional value of THB 327.20 million as well as government bonds that used to guarantee the power purchasing with EGAT of one additional subsidiary, worth THB 97.63 million.

**Joint venture:** Increased THB133.60 million from a capital increase in a joint venture company, Burapha Power Holding Company Limited ("BPH").

**Deferred tax assets:** Increased THB 139.88 million from last year due to the differences subject to deductible and tax losses which are unused.



### 4.3.2 Liabilities

Transaction	December 31, 2020	December 31, 2021	Change	Percentage
	Million (THB)	Million (THB)		
Trade and other payables	1,295.28	1,214.07	(81.21)	(6.27)
Loans from financial institutions	2,084.63	-	(2,084.63)	(100.00)
Bonds	12,242.38	16,497.12	4,254.74	34.75
Other liabilities	764.53	1,895.18	1,130.65	147.89
<b>Total liabilities</b>	<b>16,510.39</b>	<b>19,606.37</b>	<b>3,095.98</b>	<b>18.75</b>

As of December 31, 2021, total liabilities are THB 19,606.37 which increased THB 3,095.98 million or 18.75% from previous year.

#### 1) Trade and other payables

As of December 31, 2021, trade and other payables are THB 1,214.07 million with a decrease of THB 81.21 million from the previous year or 6.27%, according to the remaining cash flow.

#### 2) Loans from financial institutions

As of December 31, 2021, there is no loans outstanding from financial institutions remaining because loans are fully repaid before its maturity, totalling value of THB 1,941 million. Also, the Group requests to cancel the revolving line and FX Forward Contract as well as proceed to release the collateral under the said credit agreement. Currently, the bank has released the burden of guarantees for the mortgage of property, plant and equipment of its subsidiaries.

#### 3) Bonds

As of December 31, 2021, the balance of bonds is worth of THB 16,497.12 million, with an increase of THB 4,253.74 million from last year or 34.75% because of issuing additional bonds during the year, worth THB 8,300 million.

#### 4) Other liabilities

##### Lease liabilities TFRS16

The Group has adopted the International Financial Reporting Standard No. 16 (TFRS16) in 2021, resulting in lease liabilities of THB 192.19 million.

### 4.3.3 Equity

As of December 31, 2021, the Company has registered capital of THB 10,000 million, consisting of 1,000,000,000 shares with a par value of THB 10 per share, totaling THB 9,354.04 million of issued and paid-up capital. They are divided into 935,403,920 ordinary shares. As of December 31, 2021, the shareholders' equity is amounted to THB 11,244.80 million, with a decrease from the year of THB 79.38 million or 0.70% of net profit for the year of THB 1,554.50 million.

#### 4.4 Cash flow analysis

Cash flow	Unit (THB million)
Cash flow from operating activities	1,907.10
Cash flow from investing activities	(574.25)
Cash flow from financing activities	1,510.97
<b>Net cash flow increased during year</b>	<b>2,892.67</b>

##### 1) Cash flow from operating activities

Cash flow from operating activities is THB 1,907.10 million which decreased from operation and are adjusted by the changes of operating assets and liabilities amount of THB 526.56 million.

##### 2) Cash flow from investing activities

Cash flow from investing activities is THB 574.25 million, mainly from obtaining financial assets of THB 421.30 million. This is to pay machinery and equipment, net of THB 737.05 million and increased capital in BPH value of THB 131.14 million. Also, there is net cash inflows from KN share receivables of THB 667.20 million.

##### 3) Cash flow from financing activities

Cash flow from financing activities is THB 1,510.97 million. They are from loan repayment from financial institutions under credit agreements of THB 2,089.94 million. Similarly, net cash received from issuing and repaying bonds are THB 4,400 million, and paying dividend is THB 701.55 million.

#### 4.5 Key financial ratio analysis

##### Financial ratio analysis

As of December 31, 2020 and December 31, 2021, debt-to-equity ratios are 1.46 times and 1.74 times, respectively. Total liabilities increased, whereas retained earnings decreased. While interest coverage ratios are 5.43 times and 3.49 times, respectively. This is result from decrease in net cash flow from operating activities.

In this regard, the terms and conditions govern the rights and duties of the bond issuer and holder. The issuer will maintain Net Interest-Bearing Debt to Equity ratio at the end each quarter, accounting period and in case of last quarter less than 2.5:1. Unless, after BPG signed agreement with a financial institution to support the project, such a ratio shall not exceed 3.0:1. As of December 31, 2021, the calculated Net Interest-Bearing Debt to Equity ratio is equal to 1.18 times, which is lower than what is stated in the terms and conditions.

Source of funds comes from issuing and offering bonds and main shareholders' equity

#### 4.6 Obligations and liabilities that may incur in the future

As of December 31, 2021, the Group has commitments under various operating agreements as follows:

- 1) *Power Sale Agreements:* The Group signed 5 Power Purchase Agreements with EGAT: 296 Megawatt contract. The contract is between 24-26 years and end between 2024-2027. In 2019, BPG made power purchase agreement with EGAT, amounting to 540 Megawatt. The contract is 25 years starting from the date of commercial operation.
- 2) *Reserve Power Purchase Agreement:* The Group made 2 reserve power purchase agreements with EGAT, 1 year contract. If no party terminates the contract after 1 year, this contract will continue to be effective every 1 year. In case, power purchase agreement terminates before reserved power purchase contract ends, the reserved power purchase contract shall be terminated as well.
- 3) *Contracts related to natural gas purchase:* BPG signed 1 natural gas purchase agreement. The contract is 25 years starting from the commercial operation date. This is to support production and distribution of electricity complying with the power purchase agreement and EGAT
- 4) *Capital Expenditure:* The Group has commitments to purchase machinery and equipment in the amount of THB 71 million.
- 5) *Guarantees:* As of December 31, 2021, there are letters of guarantee issued by local financial institutions on behalf of the Group, totalling THB 696 million.

#### 4.7 Factors that may affect future operations

##### 1. Government policy

Change, measurement, or announcement from government agencies may impact on projects. For instance, environmental impact assessment report of the Office of Natural Resources and Environmental Policy and Planning involve many aspects: community and environment. To apply permit application, it consumes times to prepare additional relevant information and may result in extra overhead cost before receiving any revenue. Moreover, the country's power development plan from various government policies must align with economic growth. Because this may affect plans to build a power plant, type to be constructed, and volume to generate in the future. Each government may support and prioritize different focus which could affect future income.

##### 2. Price of electricity

Revenue from sales of electricity is the main income. The price of electricity varies according to the customer. The price sold to EGAT varies to various variables, specified in calculated formula in the agreement between the Group and EGAT. They are subjected to coal, fuel oil and foreign exchange rates. The price sold to industrial customers is based on the price sold by PEA, which is subjected to the electricity tariff (Ft). Ft is set to reflect the volatility of fuel prices, inflation, and exchange rate as well as other calculated formula for the wholesale. Moreover, Ft calculation formula is not designed to reflect the actual fuel cost. Subsequently, an increased cost is only partially passed on to the customers. Therefore, the change of these variables affects the revenue and profit.

### 3. Sourcing

Factors that impact on sourcing:

Coal : Coal is supplied from both domestic and international distributors. The quantity and price will vary to supply and demand. If the price fluctuates, it may affect the cost and profits.

Black liquor oil: PP6 and PP11 power plants use black liquor oil as the main fuel. It is supplied by AA pulp mill, a related company. If there is a case where AA's business is interrupted, black liquor oil cannot be delivered, it would affect the production process and profit margin.

Biomass : Biomass such as wood chips, husks, bark and palm husks is supplied from agriculture. They are uncertainties as they are depended on natural environment. Similarly, they can be used in other industries as well. Therefore, it may affect the price, procurement, and performance.

### 4. Bond issuances

In addition to loans received from Siam Commercial Bank many, the company has also issuing bonds. As of December 31, 2021, the Company still has 9 sets of bonds remaining with a total debt value of THB 16,497.12 million. The Company has to pay interest at the rate of 4.50 - 5.50% per year. This will be recorded in financial statements and reflected in performance.

## 4.8 4.8 Financial Highlights

### 4.8.1 Audit Summary Report

The audit report includes consolidated financial statements of the Company and subsidiary for the accounting period ending on December 31, 2020 and December 31, 2021. The Company and its subsidiaries have prepared and presented financial statements in accordance with financial reporting standards. The opinions of the auditors can be summarized as follows:

Financial Statement	Auditor	Company	Opinion of Auditor	Information and Specific Event
Audited statement for the fiscal year 2019	K.Suphanee Triyanuntakul, license no.4498	EY Company Limited	The auditor stated that the performance and cash flow of the Company and its subsidiary showed in financial statement as of December 31, 2019, was verified in accordance with financial reporting standards.	Note to the consolidated financial statement note no.6 and no.20 related to deposits paid for purchasing land to related parties (2018, worth of THB 1,768 million) and purchasing land from related parties (currently, worth of THB 762 million). Original sale agreement will be amended per purchasing condition. The agreement will make a request to refund some deposit amounting to THB 1,131 million (net of THB 50 million from termination penalty) as well as pay additional amount of THB 175 million to obtain additional land. The auditor did not mention anything on on this case.
Audited statement for the fiscal year 2020	K.Suphanee Triyanuntakul, license no.4498	EY Company Limited	The auditor stated that the performance and cash flow of the Company and its subsidiary showed in financial statement as of December 31, 2020, was verified in accordance with financial reporting standards.	N/A
Audited statement for the fiscal year 2021	K.Suphanee Triyanuntakul, license no.4498	EY Company Limited	The auditor stated that the performance and cash flow of the Company and its subsidiary showed in financial statement as of December 31, 2021, was verified in accordance with financial reporting standards.	N/A

#### 4.8.2 Significant Change in Accounting Policy

The Company, its subsidiaries and associated companies have changed their accounting policies. They have complied with the revised and new accounting standards issued by the Federation of Accounting Professions as well as prepare and present financial statements. The summary of important changes in accounting policies are as follows:

##### 2019

During the year, the Group adopted financial reporting standards and reporting standard interpretations. They are revised (edition 2018) and new editions and will be effective in the accounting periods beginning on or after January 1, 2019. The revised are to comply with international standard and to clarify about the disclosures in the notes of the financial statements. In addition, the adoption does not have any significant impact on the Company's and its subsidiaries' financial statements.

##### 2020

During the year, the Group adopted financial reporting standards and reporting standard interpretations. They are revised (edition 2019) and new editions and will be effective in the accounting periods beginning on or after January 1, 2020. The revised are to comply with international standard and to clarify about the disclosures in the notes of the financial statements. In addition, the adoption does not have any significant impact on the Company's and its subsidiaries' financial statements.

Thai Financial Reporting Standard No. 16 under "leases" will replace Thai Accounting Standard No. 17 under "leases and accounting standard interpretations". This standard establishes the principles for the recognition, measurement, presentation and disclosure of leases. Also, it requires the lessee to recognize assets and liabilities for all leases with a lease term of more than 12 months, unless the underlying asset value is of low. There is no significant change in accounting for lessors under Thai Accounting Standing No. 17. Leases shall be classified as operating leases or capital leases.

The Group adopted this financial reporting standard and realized the cumulative effect of adoption. The standard is used to adjust with the retained earnings as at January 1, 2020 and does not use to retroactively adjusting last year financial statement shown for comparison. The cumulative results of changes in accounting policies are shown in the notes of financial statements.

##### 2021

During the year, the Group adopted financial reporting standards and reporting standard interpretations. They are revised (edition 2021) and new editions and will be effective in the accounting periods beginning on or after January 1, 2021. The revised are to comply with international standard and to clarify about the disclosures in the notes of the financial statements. In addition, the adoption does not have any significant impact on the Company's and its subsidiaries' financial statements.

### 4.8.3 Summary of financial position and operating results

#### Statement of financial position

Detail	December 31, 2019		December 31, 2020		December 31, 2021	
	Million Baht	%	Million Baht	%	Million Baht	%
<b>Assets</b>						
<b>Current assets</b>						
Cash and cash equivalents	412.35	1.43	721.92	2.59	3,588.25	11.63
Restricted bank deposits within one year	79.11	0.27	92.43	0.33	-	-
Trade and other receivables						
Related parties	637.49	2.21	747.44	2.69	1,196.98	3.88
Unrelated parties	1,636.53	5.68	1,883.10	6.77	1,196.98	5.63
Total trade and other receivables	2,274.01	7.89	2,630.54	9.45	2,934.96	9.51
Share capital receivables from related party	-	-	667.20	2.40	-	-
Advances for goods and services paid to related parties	23.87	0.08	14.84	0.05	44.38	0.14
Advances for goods paid to unrelated parties	480.02	1.67	259.90	0.93	1.05	0.00
<b>Inventories</b>	1,052.24	3.65	804.89	2.89	1,151.03	5.03
Current tax assets	64.57	0.22	57.97	0.21	62.22	0.20
Current financial assets	-	-	0.30	-	327.50	1.06
Other current assets	281.74	0.98	295.68	1.06	248.85	0.81
Assets held for sale	667.20	2.31	-	-	680.13	2.20
<b>Total current assets</b>	5,335.11	18.51	5,545.67	19.92	9,438.87	30.59
<b>Non-current assets</b>						
<b>Restricted bank deposits</b>	20.02	0.07	55.62	0.20	-	-
Pledged bank deposits	271.56	0.94	271.56	0.98	276.93	0.90
<b>Long-term loans to related party</b>	127.26	0.44	-	-	-	-
Non-current financial assets	-	-	126.47	0.45	223.32	0.72
Investments in subsidiaries	-	-	221.63	0.80	355.23	1.15
Investment properties - land for rent	14.65	0.05	14.65	0.05	14.65	0.05
Property, plant and equipment	22,240.74	77.16	20,734.01	74.49	19,532.00	63.31
Intangible assets - computer software	6.00	0.02	4.70	0.02	3.65	0.01
Right to operate a coal mining business	315.54	1.09	315.54	1.13	315.54	1.02
Deferred tax assets	355.53	1.23	413.25	1.48	553.13	1.79
Other non-current assets						
Guarantee for power purchase agreement	62.63	0.22	62.63	0.23	63.23	0.20
Deferred expenses	48.44	0.17	45.48	0.16	46.27	0.15
Others	28.29	0.10	23.35	0.08	28.35	0.09
Total other non-current assets	139.36	0.48	131.47	0.47	137.85	0.45
<b>Total non-current assets</b>	23,490.65	81.49	22,288.90	80.08	21,412.30	69.41
<b>Total assets</b>	28,825.75	100.00	27,834.57	100.00	30,851.16	100.00



## Statement of financial position (continued)

Detail	December 31, 2019		December 31, 2020		December 31, 2021	
	Million Baht	%	Million Baht	%	Million Baht	%
Liabilities and shareholders' equity						
Current liabilities						
Bank overdrafts and short-term loans from financial institutions	894.56	3.10	123.58	0.44	-	-
Trade and other payables						
Related parties	520.62	1.81	280.50	1.01	87.71	0.28
Unrelated parties	1,128.08	3.91	1,014.78	3.65	1,126.36	3.65
Total trade and other payables	1,648.70	5.72	1,295.28	4.65	1,214.07	3.94
Dividend payables to related parties	-	-	-	-	1,000.88	3.24
Short-term loans from related parties	-	-	-	-	131.14	0.43
Current portion of long-term lease liabilities	0.91	0.00	9.90	0.04	10.02	0.03
Current portion of long-term loans	1,536.68	5.33	667.79	2.44	-	-
Current portion of long-term debentures	3,597.12	12.48	3,896.97	14.00	1,729.79	5.61
Income tax payable	5.05	0.02	7.60	0.03	12.22	0.04
Current financial liabilities	-	-	50.79	0.18	-	-
Other current liabilities	168.64	0.59	158.94	0.57	217.00	0.70
Liabilities directly associated with the assets held for sale	-	-	-	-	41.46	0.13
<b>Total current liabilities</b>	<b>7,851.66</b>	<b>27.24</b>	<b>6,220.86</b>	<b>22.35</b>	<b>4,356.57</b>	<b>14.12</b>
Non-current liabilities						
Long-term lease liabilities - net of current portion	3.35	0.01	164.69	0.59	192.29	0.62
Long-term loans - net of current portion	1,248.73	4.33	1,406.84	5.05	-	-
Long-term debentures - net of current portion	9,679.94	33.58	8,345.40	29.98	14,767.34	47.87
Provision for long-term employee benefits	202.86	0.70	204.07	0.73	184.93	0.60
Electricity usage and other guarantees	26.37	0.09	41.31	0.15	59.56	0.19
Deferred tax liabilities	68.50	0.24	94.19	0.34	21.14	0.07
Other non-current liabilities	37.30	0.13	33.03	0.12	24.54	0.08
<b>Total non-current liabilities</b>	<b>11,267.05</b>	<b>39.09</b>	<b>10,289.53</b>	<b>36.97</b>	<b>15,249.80</b>	<b>49.43</b>
<b>Total liabilities</b>	<b>19,118.71</b>	<b>66.33</b>	<b>16,510.39</b>	<b>59.32</b>	<b>19,606.37</b>	<b>63.56</b>

## Statement of financial position (continued)

Detail	December 31, 2019		December 31, 2020		December 31, 2021	
	Million Baht	%	Million Baht	%	Million Baht	%
Shareholders' equity						
Share capital						
Registered						
1,000,000,000 ordinary shares of Baht 10 each	10,000.00		10,000.00		10,000.00	
Issued and fully paid						
935,403,920 ordinary shares of Baht 10 each	9,354.04	32.45	9,354.04	33.61	9,354.04	30.32
Differences on reorganisation of business	(336.81)	(1.17)	(336.81)	(1.21)	(350.70)	(1.14)
of group companies						
Retained earnings						
Appropriated - statutory reserve	246.60	0.86	318.81	1.15	353.62	1.15
Unappropriated	467.91	1.62	2,021.29	7.26	1,871.53	6.07
Other component of equity						
Exchange differences on translation	(24.70)	(0.09)	(33.15)	(0.12)	16.31	0.05
of financial statements in foreign currency						
<b>Total shareholders' equity</b>	<b>9,707.04</b>	<b>33.67</b>	<b>11,324.18</b>	<b>40.68</b>	<b>11,244.80</b>	<b>36.45</b>
<b>Total liabilities and shareholders' equity</b>	<b>28,825.75</b>	<b>100.00</b>	<b>27,834.57</b>	<b>100.00</b>	<b>30,851.16</b>	<b>100.00</b>

## Statement of comprehensive income

Detail	Year 2019 ends		Year 2020 ends		Year 2021 ends	
	December 31, 2019		December 31, 2020		December 31, 2021	
	Million Baht	%	Million Baht	%	Million Baht	%
Revenues						
Sales of electricity, steam and water	13,094.50	85.79	12,539.93	79.65	13,277.92	84.82
Sales of ethanol	1,725.30	11.30	2,841.97	18.05	1,877.93	12.00
Sales of other goods	225.79	1.48	172.74	1.10	392.60	2.51
Service income	85.21	0.56	62.67	0.40	99.75	0.64
Other income						
Exchange gains	17.74	0.12	-	-	-	-
Gain on sale of investment in subsidiary	14.63	0.10	25.48	0.16	-	-
Others	100.12	0.66	101.96	0.65	5.35	0.03
<b>Total revenues</b>	<b>15,263.29</b>	<b>100.00</b>	<b>15,744.75</b>	<b>100.00</b>	<b>15,653.54</b>	<b>100.00</b>
Expenses						
Cost of electricity, steam and water sold	9,820.58	64.34	9,044.46	57.44	10,393.73	66.40
Cost of ethanol sold	1,544.96	10.12	2,609.44	16.57	1,926.16	12.30
Cost of other goods sold	207.44	1.36	164.03	1.04	344.74	2.20
Cost of services	49.58	0.32	66.41	0.42	175.16	1.12
Selling and distribution expenses	22.75	0.15	37.20	0.24	35.48	0.23
Administrative expenses	605.59	3.97	505.70	3.21	463.84	2.96
Factory overheads during the production halt	162.38	1.06	168.37	1.07	114.82	0.73
Exchange losses	-	-	22.53	0.14	4.06	0.03
Impairment loss (reversal) on financial assets	-	-	15.55	0.10	(8.01)	(0.05)
<b>Total expenses</b>	<b>12,413.29</b>	<b>81.33</b>	<b>12,633.70</b>	<b>80.24</b>	<b>13,449.98</b>	<b>85.92</b>
Profit from operating activities	2,850.00	18.67	3,111.05	19.76	2,203.56	14.08
Share of profits from investment in joint venture	-	-	0.44	-	2.46	0.02
Finance income	12.32	0.08	13.86	0.09	22.88	0.15
Finance cost	(1,062.26)	(6.72)	(913.98)	(5.80)	(848.36)	(5.42)
Profit before income tax	1,836.06	12.03	2,211.38	14.05	1,380.54	8.82
Income tax benefits (expenses)	(76.35)	(0.50)	19.95	0.13	173.95	1.11
Profit for the year from continued operation	1,759.71	11.53	2,231.33	14.17	1,554.00	9.93
Discontinued operation						
Loss for the year from discontinued operation	(119.05)	(0.78)	(53.85)	(0.34)	-	-
<b>Profit for the year</b>	<b>1,640.66</b>	<b>10.75</b>	<b>2,177.48</b>	<b>13.83</b>	<b>1,554.50</b>	<b>9.93</b>

## Cash flow statement

Detail	2019	2020	2021
	Million Baht	Million Baht	Million Baht
Cash flows from (used in) operating activities			
Profit before tax	1,836.06	2,211.38	1,836.06
Loss before tax from discontinued operation	(119.05)	(53.85)	(119.05)
Profit before tax	1,717.01	2,157.53	1,717.01
Adjustments to reconcile profit before income tax to net cash provided by (paid) from operating activities:			
Depreciation expenses	1,546.30	1,510.24	1,540.97
Amortisation expenses and amortisation of prepaid expenses	37.35	40.22	41.31
Impairment loss (reversal) on financial assets	-	15.55	(8.01)
Reduction of inventories to net realisable value (reversal)	0.08	4.55	11.82
(Gain) loss on sales of investment in subsidiary	(14.63)	(25.48)	-
Share of profits from investment in joint venture	-	(0.44)	-
(Gain) loss from disposal/write-off of machinery and equipment	32.32	(15.34)	4.63
Loss from penalty for termination of the land purchase and sale agreement	50.00	-	-
Loss from disposal of vessel	110.79	-	-
Impairment loss on fixed assets	42.68	-	-
Loss from write-off biological assets	0.03	2.28	-
Loss from write-off refundable withholding tax deducted at source	4.32	1.16	-
Revenue from financial support from the Energy Conversation Promotion Fund	(4.27)	(4.27)	(4.27)
Provision for long-term employee benefits	38.04	13.04	20.02
Gain on disposal assets held for sale	-	-	(1.00)
Unrealised exchange (gains) losses	(5.80)	32.54	4.07
Unrealised loss on changes in fair value of forward contracts	-	50.79	-
Interest income	(12.71)	(13.86)	(22.88)
Finance cost	988.91	888.57	816.57
Profit from operating activities before changes in operating assets and liabilities	4,530.39	4,657.07	4,120.24
Operating assets (increase) decrease			
Trade and other receivables	62.06	(373.11)	(320.52)
Advances for goods and services	69.03	9.03	229.31
Inventories	(436.59)	203.93	(820.30)
Other current assets	(369.91)	203.92	34.13
Other non-current assets	(8.01)	(3.40)	(19.20)
Operating liabilities increase (decrease)			
Trade and other payables	50.76	(3.81)	(204.77)
Advance for goods received from related parties	(116.82)	-	-
Other current liabilities	(102.24)	(9.70)	8.26
Provision for long-term employee benefits	(6.45)	(11.84)	(10.07)
Electricity usage and other guarantees	(5.64)	14.94	18.25
Cash flows from operating activities	3,666.57	4,687.04	3,035.34
Interest received	12.71	13.86	22.88
Interest paid	(1,035.95)	(876.44)	(800.26)
Cash received from income tax refundable	17.25	56.64	73.99
Cash paid for corporate income tax	(71.04)	(64.40)	(85.91)
<b>Net cash flows from operating activities</b>	<b>2,589.54</b>	<b>3,816.70</b>	<b>2,246.04</b>

## Cash flow statement (continued)

Detail	2019	2020	2021
	Million Baht	Million Baht	Million Baht
Cash flows from (used in) investing activities			
(Increase) decrease in restricted bank deposits	(23.60)	(48.92)	148.05
Increase in pledged bank deposits	(270.01)	(0.01)	(5.36)
Cash paid for acquisition of current financial assets	-	-	(421.30)
Cash paid for acquisition of non-current financial assets	-	-	(97.63)
Cash paid for purchases of intangible assets	(0.14)	-	-
Advances paid for purchases of machinery and equipment	(31.32)	(1.27)	-
Cash received from deposits for purchases of land paid to related parties	1,131.16	-	-
Cash received from sale of investment in subsidiaries	17.30	120.75	-
Cash received from the discontinued subsidiaries	-	-	2.76
Cash paid for additional investment in joint venture	-	(44.25)	(131.14)
Cash received from share capital receivables - related party	-	-	667.20
Cash received from disposals of assets held for sale	-	-	1.00
Cash paid for acquisitions of property, plant and equipment	(851.30)	(870.10)	(737.05)
Cash received from disposals of machinery and equipment	252.63	443.43	4.62
Cash paid for deposit	-	0.38	(5.41)
<b>Net cash flows from (used in) investing activities</b>	<b>224.73</b>	<b>(399.99)</b>	<b>(574.25)</b>
Cash flows from (used in) financing activities			
Decrease in bank overdrafts and short-term loans from financial institutions	(426.13)	(770.98)	(123.58)
Increase (decrease) in short-term loans from related parties	-	-	131.14
Repayment of liabilities under lease agreements	(1.39)	(20.34)	(24.66)
Repayment of long-term loans from financial institutions	(842.57)	(704.24)	(2,089.94)
Repayment of long-term debentures	(4,000.00)	(4,706.70)	(3,900.00)
Cash paid for issuance of long-term debentures	(26.40)	(36.15)	(80.44)
Cash received from issuance of long-term debentures	2,968.30	3,681.90	8,300.00
Dividend paid	(523.83)	(551.89)	(701.55)
<b>Net cash flows from (used in) financing activities</b>	<b>(2,852.02)</b>	<b>(3,108.40)</b>	<b>1,510.97</b>
Decrease in translation adjustments	(10.98)	1.26	48.85
Net increase (decrease) in cash and cash equivalents	(48.74)	309.57	3,231.61
Cash and cash equivalents at the beginning of the year	461.09	412.35	-
Cash and cash equivalents at the end of the year of assets held for sale	-	-	(26.35)
<b>Cash and cash equivalents at the end of the year</b>	<b>412.35</b>	<b>721.92</b>	<b>3,205.26</b>

## Financial ratio

Detail	Jan - Dec	Jan - Dec	Jan - Dec
	2019	2020	2021
<b>Liquidity ratio</b>			
Liquidity ratio	0.68	0.89	2.17
Quick Ratio	0.34	0.55	0.69
Cash flow liquidity ratio	0.30	0.54	0.36
Accounts Receivable Turnover Ratio	6.83	6.54	5.85
Average collection period	52.67	55.00	61.55
Inventory turnover ratio	N/A	N/A	N/A
Average sales lead time	N/A	N/A	N/A
Payable turnover ratio	17.90	18.04	21.03
Repayment period	19.71	20.00	17.12
Cash Cycle	32.96	35.00	44.44
<b>Profitability Ratio</b>			
Gross margin	23.19	23.90	18.06
Operating profit margin	17.96	19.25	14.85
Net profit margin	10.75	13.83	9.93
Return on Equity	17.86	20.71	13.78
<b>Operating efficiency ratio</b>			
Return on Total Assets	5.54	7.69	5.30
Return on fixed assets	14.10	17.15	15.36
Asset Turnover	0.52	0.56	0.53
<b>Financial Policy Analysis Ratio</b>			
Total Debt to Equity Ratio	1.97	1.46	1.74
Total Debt to Equity Ratio (according to the terms and conditions of the debentures)	1.70	1.23	1.18
Interest Coverage Ratio(1)	3.57	5.43	3.49
Ability to settle obligations (cash threshold) (2)	1.84	0.50	0.24
Dividend payout ratio	36.82	25.35	45.13
Net debt to earnings before interest expense, income tax, depreciation and amortization	3.76	3.01	4.42
Debt to interest burden ratio due within 1 year to total interest-bearing debt	0.36	0.32	0.11
Ratio of loans from financial institutions to total liabilities	0.19	0.14	0.01

Note: \* Net Debt to Equity Ratio according to the terms and conditions = Interest-bearing debt minus cash and cash equivalents / Equity

<sup>(1)</sup> Interest Coverage Ratio = Operating cash flow + Interest expenses from operations + Tax / Interest expense

<sup>(2)</sup> Ability to settle obligations (Cash basis) = Net cash flow from operations / (Debt settlement + Capital expenditure + Buy assets + dividend payout)

## 5. General Information and Other Important Information

### 5.1 General Information

General information on the Company, its subsidiaries, associate and other reference persons as at December 31, 2021 is as follows:

#### 5.1.1 The Company

##### National Power Supply Public Company Limited (“NPS”)

Company Name	:	National Power Supply Public Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0107553000123
Telephone No.	:	1759 Ext. 9 (Investor Line)
Website	:	www.npsplc.com
Registered Capital	:	Baht 10,000.00 million
Paid-Up Capital	:	Baht 9,354.04 million

#### 5.1.2 Subsidiaries and Associate

##### Power and Related Energy Business Group

##### 1) National Power Plant 2 Company Limited (“NPP2”)

Company Name	:	National Power Plant 2 Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	57/5-9 Moo 11 Bangpakong, Bangpakong, Chachoengsao 24130 Thailand
Company Registration No.	:	0245554001309
Registered Capital	:	Baht 370.00 million
Paid-Up Capital	:	Baht 361.64 million

**2) National Power Plant 3 Company Limited (“NPP3”)**

Company Name	:	National Power Plant 3 Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	94/1 Moo 3 Khao Hin Son, Phanom Sarakram, Chachoengsao
24120 Thailand	:	0245554001317
Company Registration No.	:	0245554001317
Registered Capital	:	Baht 2,100.00 million
Paid-Up Capital	:	Baht 2,100.00 million

**3) National Power Plant 5 Company Limited (“NPP5”)**

Company Name	:	National Power Plant 5 Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	217 Moo 2 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255551000786
Registered Capital	:	Baht 3,600.00 million
Paid-Up Capital	:	Baht 3,600.00 million

**4) National Power Plant 5A Company Limited (“NPP5A”)**

Company Name	:	National Power Plant 5A Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	218 Moo 2 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255551000794
Registered Capital	:	Baht 2,250.00 million
Paid-Up Capital	:	Baht 2,250.00 million



**5) Future Greenergy Company Limited (“FG”)**

Company Name	:	Future Greenergy Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	155 Moo 4, Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255555000969
Registered Capital	:	Baht 3,600.00 million
Paid-Up Capital	:	Baht 3,600.00 million

**6) National Power Plant 12 Company Limited (“NPP12”)**

Company Name	:	National Power Plant 12 Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	206 Moo 4, Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255556000270
Registered Capital	:	Baht 1,515.00 million
Paid-Up Capital	:	Baht 378.75 million

**7) Burapa Power Holding Company Limited (“BPH”)**

Company Name	:	Burapa Power Holding Company Limited
Nature of Business	:	Invest in other companies
Head Office	:	206 Moo 4, Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255562001801
Registered Capital	:	Baht 1,412.00 million
Paid-Up Capital	:	Baht 611.75 million

**8) Burapa Power Generation Company Limited (“BPG”) (Formerly “NPPIP2 Company Limited” (“IPPIP2”))**

Company Name	:	Burapa Power Generation Company Limited
Nature of Business	:	Generation and distribution of electricity to EGAT under the Power Purchase Project from the Large Private Power Producers (IPP)
Head Office	:	94/1 Moo 3, Khao Hin Son, Phanom Sarakham Chacho- engsao 24120 Thailand
Company Registration No.	:	0245555000985
Registered Capital	:	Baht 1,392.00 million
Paid-Up Capital	:	Baht 606.75 million

**9) IPP IP7 Company Limited (“IPPIP7”)**

Company Name	:	IPP IP7 Company Limited
Nature of Business	:	Generation and distribution of electricity
Head Office	:	Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255557000214
Registered Capital	:	Baht 660.00 million
Paid-Up Capital	:	Baht 629.686 million

**10) CHP1 Company Limited (“CHP1”)**

Company Name	:	CHP1 Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255555000471
Registered Capital	:	Baht 2,492.00 million
Paid-Up Capital	:	Baht 2,492.00 million

**11) CHP3 Company Limited (“CHP3”)**

Company Name	:	CHP3 Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	125 Moo 2 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255556001519
Registered Capital	:	Baht 250.00 million
Paid-Up Capital	:	Baht 250.00 million

**12) CHP5 Company Limited (“CHP5”)**

Company Name	:	CHP5 Company Limited
Nature of Business	:	Generation and distribution of electricity and steam for industry
Head Office	:	125 Moo 2 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255556001527
Registered Capital	:	Baht 350.00 million
Paid-Up Capital	:	Baht 346.00 million

**13) Tha Toom Community Power Plant Company Limited (“TTCP”)**

Company Name	:	Tha Toom Community Power Plant Company Limited
Nature of Business	:	Generation and distribution of electricity
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255563000719
Registered Capital	:	Baht 27.00 million
Paid-Up Capital	:	Baht 6.75 million

**14) Lam Sonthi Community Power Plant Company Limited (“LSTCP”)**

Company Name	:	Lam Sonthi Community Power Plant Company Limited
Nature of Business	:	Generation and distribution of electricity
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255563000735
Registered Capital	:	Baht 3.00 million
Paid-Up Capital	:	Baht 0.75 million

**15) Lansak Community Power Plant Company Limited (“LSCP”)**

Company Name	:	Lansak Community Power Plant Company Limited
Nature of Business	:	Generation and distribution of electricity
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255563000727
Registered Capital	:	Baht 3.00 million
Paid-Up Capital	:	Baht 0.75 million

**16) Tha Toom Biogas Community Power Plant Company Limited (“TBCP”)**

Company Name	:	Tha Toom Biogas Community Power Plant Company Limited
Nature of Business	:	Generation and distribution of electricity
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255563000701
Registered Capital	:	Baht 20.00 million
Paid-Up Capital	:	Baht 5.00 million

#### 17) Phanom SaraKham Biogas Community Power Plant Company Limited (“PSCP”)

Company Name	:	Phanom SaraKham Biogas Community Power Plant Company Limited
Nature of Business	:	Generation and distribution of electricity
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255563000697
Registered Capital	:	Baht 20.00 million
Paid-Up Capital	:	Baht 5.00 million

#### 18) NPS SOLAR Company Limited (“NPS SOLAR”)

Company Name	:	NPS Solar Company Limited
Nature of Business	:	Generation and distribution of electricity
Head Office	:	206 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255564000542
Registered Capital	:	Baht 184.45 million
Paid-Up Capital	:	Baht 46.11 million

#### Waters Business Group

##### 1) Namsai 304 Company Limited (“NS304”)

Company Name	:	Namsai 304 Company Limited
Nature of Business	:	Produce and sell water for industry
Head Office	:	299 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255548000037
Registered Capital	:	Baht 462.00 million
Paid-Up Capital	:	Baht 462.00 million

##### 2) Industrial Water Supply Company Limited (“IWS”)

Company Name	:	Industrial Water Supply Company Limited
Nature of Business	:	Procurement and distribution of water for household and industrial use through the water supply system.
Head Office	:	200 Moo 3, Khao Hin Son, Phanom SaraKham Chacho- engsao 24120 Thailand
Company Registration No.	:	0245562002769
Registered Capital	:	Baht 54.00 million
Paid-Up Capital	:	Baht 14.25 million

## Ethanol Business Group

### 1) E85 Company Limited (“E85”)

Company Name	:	E85 Company Limited
Nature of Business	:	Produce and sell ethanol
Head Office	:	78 Moo 4 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255550000081
Registered Capital	:	Baht 5,150.00 million
Paid-Up Capital	:	Baht 5,150.00 million

## Others Business Group

### 1) Ocean Star Holding Company Limited (“OSH”)

Company Name	:	Ocean Star Holding Company Limited
Nature of Business	:	Invest in the business of international shipping marine cargo transportation
Head Office	:	Unit B-18, 8/F., Hong Kong Spinners Industrial Building, Phase 1-2,601-603 Tai Nan West Street, Cheung Sha Wan, KOWLOON, HONG KONG
Company Registration No.	:	2169333
Registered Capital	:	USD 32.50 million
Paid-Up Capital	:	USD 32.50 million

### 2) Ocean Cape Company Limited (“OC”)

Company Name	:	Ocean Cape Company Limited
Nature of Business	:	Operate a marine cargo transportation business
Head Office	:	Unit B-18, 8/F., Hong Kong Spinners Industrial Building, Phase 1-2,601-603 Tai Nan West Street, Cheung Sha Wan, KOWLOON, HONG KONG
Company Registration No.	:	2172548
Registered Capital	:	USD 5,000.00
Paid-Up Capital	:	USD 5,000.00

**3) Integrated Research Center Company Limited (“IRC”)**

Company Name	:	Integrated Research Center Company Limited (Formerly D.A. Research Center Company Limited (“DARC”))
Nature of Business	:	Research and develop the genetic of the Energy-Tree
Head Office	:	122 Moo 2 Thatoom, Srimahaphote, Prachinburi 25140 Thailand
Company Registration No.	:	0255550000235
Registered Capital	:	Baht 30.00 million
Paid-Up Capital	:	Baht 30.00 million

**4) PT. Utami Jaya Mulia (“PT Utami”)**

Company Name	:	PT. Utami Jaya Mulia
Nature of Business	:	Operate a bituminous coal mine
Head Office	:	Jl. Pendreh, KomplekPerhubungan Gang Bandara No. 184, RT. 33-A, Kel. Melayu, MuaraTeweh Barito Utara 73811
Company Registration No.	:	2090.2011
Registered Capital	:	IDR 34,000 million
Paid-Up Capital	:	IDR 34,000 million

**5) Sonich Starch Technology Company Limited (“SNST”)**

Company Name	:	Sonich Starch Technology Company Limited
Nature of Business	:	Produce and distribute tapioca starch and biogas.
Head Office	:	99/2 Moo 3, Khao Hin Son, Phanom Sarakham Chachoengsao 24120 Thailand
Company Registration No.	:	0105538091278 (Formerly No. 1859/2538)
Registered Capital	:	Baht 740.00 million
Paid-Up Capital	:	Baht 740.00 million

**6) Power Root 2020 Company Limited (“PR2020”)**

Company Name	:	Power Root 2020 Company Limited
Nature of Business	:	Production of root woodchip
Head Office	:	90/132 Soi Song Sa-at, Chomphon Subdistrict, Chatuchak District, Bangkok 10900
Company Registration No.	:	0125563006718
Registered Capital	:	Baht 5.00 million
Paid-Up Capital	:	Baht 5.00 million

### 6.1.3 Reference Persons

#### 1) Auditor

Company Name : EY Office Limited  
Head Office : 193/136-137 Lake Rajada Office Complex, Rajadapisek Road,  
Klongtoey, Bangkok 10110 Thailand  
Tel. : (66)2-264-9090  
Fax : (66)2-264-0789-90  
Website : www.ey.com

#### 2) Debenture Registrar and Debenture Representative

##### 2.1) Debentures of National Power Supply Public Company Limited No. 1/2017, Series 2, due 2022 (NPS227A)

###### Debenture Registrar

Company Name : Krungthai Bank Public Company Limited  
Head Office : 35 Sukhumvit Road, Khlong Toei Nuea, Watthana ,  
Bangkok 10110 Thailand  
Tel. : (66)2-298-0830-31  
Fax : (66)2-298-0835  
Website : www.krungthai.com

###### Debenture Representative

Company Name : Bank of Ayudhya Public Company Limited  
Head Office : 1222 Rama III Road, Bang pongpang, Yannawa, Bangkok  
10120 Thailand  
Tel. : (66)2-296-2000  
Fax : -  
Website : www.krungsri.com

##### 2.2) Debentures of National Power Supply Public Company Limited No. 2/2017, Series 3, due 2022 (NPS227B)

###### Debenture Registrar

Company Name : Krungthai Bank Public Company Limited  
Head Office : 35 Sukhumvit Road, Khlong Toei Nuea, Watthana , Bang-  
kok 10110 Thailand  
Tel. : (66)2-298-0830-31  
Fax : (66)2-298-0835  
Website : www.krungthai.com



#### Debenture Representative

Company Name : Bank of Ayudhya Public Company Limited  
Head Office : 1222 Rama III Road, Bang pongpang, Yannawa, Bangkok  
10120 Thailand  
Tel. : (66)2-296-2000  
Fax : -  
Website : www.krungsri.com

### **2.3) Debentures of National Power Supply Public Company Limited No.1/2019, due 2023 (NPS233A)**

#### Debenture Registrar

Company Name : Krungthai Bank Public Company Limited  
Head Office : 35 Sukhumvit Road, Khlong Toei Nuea, Watthana , Bangkok  
10110 Thailand  
Tel. : (66)2-298-0830-31  
Fax : (66)2-298-0835  
Website : www.krungthai.com

#### Debenture Representative

Company Name : Bank of Ayudhya Public Company Limited  
Head Office : 1222 Rama III Road, Bang pongpang, Yannawa, Bangkok 10120  
Thailand  
Tel. : (66)2-296-2000  
Fax : -  
Website : www.krungsri.com

### **2.4) National Power Supply Public Company Limited's Debentures No.1/2020, Series 1 due 2024 (NPS242A) and Series 2, due 2025 (NPS258A)**

#### Debenture Registrar

Company Name : Krungthai Bank Public Company Limited  
Head Office : 35 Sukhumvit Road, Khlong Toei Nuea, Watthana ,  
Bangkok 10110 Thailand  
Tel. : (66)2-298-0830-31  
Fax : (66)2-298-0835  
Website : www.krungthai.com

#### Debenture Representative

Company Name : Bank of Ayudhya Public Company Limited  
Head Office : 1222 Rama III Road, Bang pongpang, Yannawa, Bangkok 10120 Thailand  
Tel. : (66)2-296-2000  
Fax : -  
Website : www.krungsri.com

#### **2.5) National Power Supply Public Company Limited's Debentures No. 1/2021, Series 1, Due Year 2024 S24NA), Series 2, Due Year 2026 (NPS265A), and Series 3 Maturity Year 2027 (NPS273A)**

##### Debenture Registrar and Debenture Representative

Company Name : Bank of Ayudhya Public Company Limited  
Head Office : 1222 Rama III Road, Bang pongpang, Yannawa, Bangkok 10120 Thailand  
Tel. : (66)2-296-2000  
Fax : -  
Website : www.krungsri.com

#### **2.6) Debentures of National Power Supply Public Company Limited No. 2/21, due 2028 (NPS28NA)**

##### Debenture Registrar and Debenture Representative

Company Name : Krungthai Bank Public Company Limited  
Head Office : 35 Sukhumvit Road, Khlong Toei Nuea, Watthana , Bangkok 10110 Thailand  
Tel. : (66)2-298-0830-31  
Fax : (66)2-298-0835  
Website : www.krungthai.com

#### **3) Legal Advisor**

-None-

#### **4) Financial institutions that are regularly contacted**

Krungthai Bank Public Company Limited

#### **5) Auditor**

Company Name : EY Office Limited  
Head Office : 193/136-137 Lake Rajada Office Complex, Rajadapisek Road, Klongtoey, Bangkok 10110 Thailand  
Tel. : (66)2-264-9090  
Fax : (66)2-264-0789-90  
Website : www.ey.com

6) **Legal Advisor**

-None-

7) **Financial institutions that are regularly contacted**

Krungthai Bank Public Company Limited and The Government Savings Bank

**5.2 History of default on principal or interest on debt instruments or default on loans from commercial banks finance company credit foncier company or a financial institution established under a specific law and a breach of conditions in compliance with the terms and conditions of the past 3 years**

-None-

**5.3 Other important information that affects the decision of investors**

As of December 31, 2020, there was no information that could significantly affect investors' decision-making.

**5.4 Legal Disputes**

As of December 31, 2021, the Company or its subsidiaries are not a party or a party to a lawsuit or dispute. Any legal acts that may have a negative impact on the assets of the Company or a subsidiary with an amount greater than 5% of Shareholders' equity in addition, the Company or its subsidiaries do not have any lawsuits affecting the Company's business operations. Significantly, the impact cannot be assessed numerically. including no lawsuits that were not caused by the Company's normal business operations.



# Part 2

---

## Corporate Governance

## 6. Corporate Governance Policy

The Board of Directors has promoted and supported the Company's corporate governance to be in accordance with the Principles of Good Corporate Governance for Listed Companies in 2017 set forth by the Stock Exchange of Thailand, which include rights of shareholders, equitable treatment of shareholders, roles of stakeholders, disclosure and transparency, and responsibilities of the board of directors, as well as to comply with the other regulations related to business operations. Although the Company has not yet listed on the Stock Exchange of Thailand, it nevertheless implements some of the principles of good corporate governance when appropriate. The Company established the Executive Committee to consider, recommend, supervise, and be responsible for the activities assigned by the Board of Directors. The Company has also appointed an Audit Committee, Risk Management Committee and Corporate Governance Committee in order to enhance the management of the Company and its subsidiaries in accordance with the principles of good corporate governance of the Stock Exchange of Thailand.

The Board of Directors considers the importance of corporate governance and understands its functions, duties, and responsibilities to the Company, shareholders and stakeholders. Although the Company has not yet listed on the Stock Exchange of Thailand, the Company has implemented some key corporate governance principles covering five areas, as follows:

### Section 1 Rights of Shareholders

The Company realizes and respects basic shareholder rights and assures that all of its shareholders receive such rights, which include the right to buy, sell or transfer shares, the right to share in the profit of the Company, the right to obtain relevant and adequate information on the Company, the right to participate and vote at shareholder meetings to elect or remove members of the board, appoint the external auditor, and make decisions on any transactions that affect the Company, such as dividend payments, amendments to the Company's Articles of Association and Memorandum of Association, capital increases or decreases, and the approval of extraordinary transactions. Thus, all shareholders have voting rights according to their shareholding, which is one vote per share and equal rights for all.

In addition to aforementioned basic shareholder rights, the Company encourages and facilitates shareholders in the exercise of their rights, as follows:

1. The Company has a policy to provide shareholders with notice of meetings, with information on the venue, date, time and all agenda items, specifying which items are for purposes of information and which require approval, as the case may be, at least seven days prior to the meeting date, and notice of the shareholder meeting will be published in newspapers for at least three consecutive days at least three days prior to the meeting date.
2. The Company schedules annual general meetings of shareholders within four months of the closing date of the Company's accounting period, at convenient venues and with a suitable date and time. In urgent cases, to propose a special agenda affecting shareholders' benefits, or related to conditions, rules and regulations that require shareholder approval, the Company will call for an extraordinary general meeting of shareholders.
3. At shareholders' meetings, shareholders will be given opportunities to freely express their opinions and recommendations, or ask questions before voting begins on each agenda item to assure that shareholders receive adequate information on such item. If there are inquiries, the Company provides persons to respond to them under the authority of the Board of Directors.

## Section 2 Equitable Treatment of Shareholders

The Company treats all shareholders, from major shareholders to minor shareholders to foreign shareholders, fairly and equitably, despite differing shareholding proportions and voting powers. To ensure that all shareholders are treated equally, the Company engages in the following processes:

1. The Company supervises the use of inside information to prevent its misuse for the interests of any party as described in "Supervision of the Use of Inside Information" above.
2. At shareholder meetings, the Company considers only agendas included in the notices of meeting, in order, which are distributed in advance, without any changes to the order of agendas, and there are no additional agendas other than those specified in the notices because all shareholders are entitled to receive equal information when considering agenda items.
3. In the event that shareholders are unable to attend a meeting, the Company allows shareholders to appoint proxies for any director or any person, by using any type of proxy form defined by the Ministry of Commerce, which are enclosed with the distributed notices, on which shareholders can dictate the direction of their voting through proxies. In addition, the Company provides duty stamps to affix on the proxy forms for the convenience of shareholders.
4. Agendas are set to nominate one director at a time, and an agenda on remuneration of directors and executives is presented to shareholders specifying the amount and type of remuneration paid to directors and executives as described in the subsection "Remuneration of Directors, Executive Directors, Business Development Planning Director and Management". The Company has defined the criteria and procedures for fair and sensible compensation to directors and executives that is appropriate to their duties, responsibilities and performance. The salary and remuneration system is in line with peer companies in the same sector to motivate personnel to perform at maximum efficiency.

### Section 3 The Role of Stakeholders in Corporate Governance

The Company established policies to encourage collaboration between the Company and all stakeholders to generate business growth and sustainability in accordance with the legal rights of each stakeholder. These policies were approved by a resolution at Board Meeting No. 1/2015 on January 21, 2015. Similarly, the Corporate Governance Committee has developed a more efficient approach in accordance with the Code of Conduct as follows:

#### To the Shareholders

1. The Company is determined to generate growth based on its potential and competencies to assure that shareholders receive the return on investment that results from its efficiency and good performance.
2. The Company respects its shareholders' rights to receive necessary information for evaluating their investment in the Company equally and discloses its financial performance and position and supplemental information correctly as defined by the Securities and Exchange Commission.
3. The Company treats its shareholders equally, whether at shareholder meetings or other cases, in accordance with the regulations of the Securities and Exchange Commission and other relevant laws.
4. The Company performs its responsibilities with honesty and good faith, and approaches all matters with fairness to its major and minor shareholders to pursue the utmost benefits for all shareholders.
5. The Company manages its business with integrity and morality, and encourages these traits at every level of the organization, in order to manage any conflicts of interest that may arise.

#### To the Customers and Consumers

1. The Company strictly complies with the terms and conditions of its relationships with customers and produces goods and renders services with quality and reliability.
2. The Company advises customers on how to use electricity efficiently and economically.

#### To the Trading Partners and Contracting Parties

1. The Company treats its trading partners with equality and fairness, based on a fair return for both parties, and strictly complies with the agreed terms and conditions.
2. The Company is determined to develop and maintain relationships with its trading partners and contractors that are based on quality and value of goods and services, technical quality, and mutual trust.



#### To the Debtors

1. The Company complies with the terms and conditions in credit facility agreements and does not conceal its actual financial position.
2. In the event of an incident that affects the debtors, for example if the Company's financial position became unstable, the Company will inform the debtors in advance to find solutions together.

#### To the Competitors

The Company adheres to the rules of fair competition, does not exploit any secrets of competitors obtained by dishonest methods such as offering bribes to competitors' employees, and does not disparage competitors.

The Company also reflects equality and fairness to all stakeholders by complying with the principles of good corporate governance, and arranged communication channels for stakeholders to inform, complain and give feedback and suggestions on this matter. Issues can range from people who are affected or at risk from company operations to employees who are involved in dishonesty and inequality, legal offences or code of conduct violations, recklessness or carelessness in the performance of their duties. Stakeholders can contact the Managing Director directly by letter or sending an email to CIA@npp.co.th.

### **Section 4 Disclosure and Transparency**

The Board of Directors emphasizes correct, complete, prompt and transparent disclosure of information. Thus, the Company disclosed financial, general, and other important information in compliance with the regulations of the Securities and Exchange Commission (SEC) and the relevant laws including financial statements, Form 56-1, and the annual report, so that shareholders and other stakeholders can access such information thoroughly, promptly and equally. Moreover, the Company has set up an Investor Relations Office to disseminate useful information to investors. Interested parties can contact the Investor Relations Office and request information by telephoning 1759 and pressing 9, emailing ir@npp.co.th, or searching the Company's information through the Company's website at www.npsplc.com or the SEC's website at www.sec.or.th.

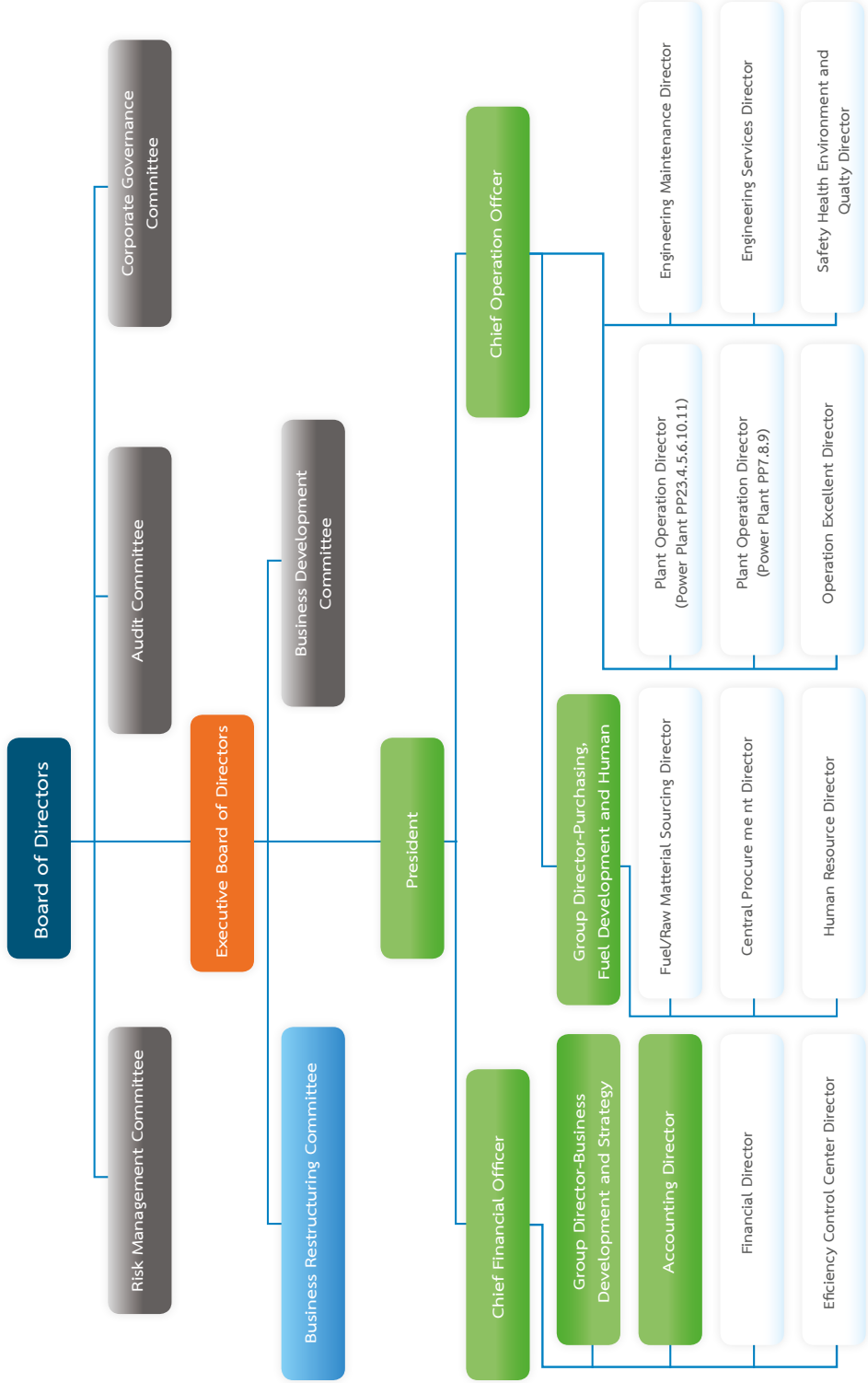
### **Section 5 Responsibilities of the Board of Directors**

The Board of Directors plays an important role in supervising the Company's businesses in order to maximize the benefits to the Company. The Board's structure, authority, duties and responsibilities, as well as details on Board meetings and remuneration, are disclosed in the sections on "Management Structure" and "Corporate Governance".

## 7. Corporate Governance Structure and Key Information about the Board, Sub-committees, Management, Employees, and Others

### 7.1 Corporate Governance Structure

As of December 31, 2021, the company has a management structure consisting of various committees as detailed below:



Notes :   is management team as defined by SEC

## 7.2 Board of Directors

As of December 31, 2021, the Board of Directors consisted of 9 members:

Name	Position
1. Mr. Sitthiporn Ratanopas	Chairman of the Board of Directors
2. Mr. Chainoi Puenkosoom	Director
3. Mr. Yothin Dumnernchanvanit	Director and President
4. General Surapan Poomkeaw	Director
5. Mr. Kasemsit Pathomsak	Director and Chairman of the Audit Committee
6. Mr. Kittiphat Suthisamphat	Director and Audit Committee
7. Mr. IP KA KEUNG PATRICK	Director
8. Mr. Nuttachat Charuchinda	Director
9. Mr. Woravit Chailimpamontri	Director and Audit Committee

### The Company's Authorized Director

Two directors are authorized to sign and seal on behalf of the company.

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

1. The Board of Directors appoints one director to be the chairman and, in the event that the Board of Directors appoints one or more vice-chairmen, the vice-chairmen are responsible for the matters assigned by the chairman in accordance with the Articles of Association.
2. The Board of Directors holds regular meetings at least once every three months. One-half of the total number of directors present at the Board Meeting constitutes a quorum. If at any time the chairman is absent or unable to perform his duties and there is a vice-chairman, the vice-chairman will act as the chairman of the meeting. If there is no vice-chairman or he is unable to perform his duties in this regard, the meeting will elect one of the directors present at the meeting to act as chairman of the meeting.
3. The Board of Directors is empowered to appoint a number of directors to serve on the Executive Committee to operate one or more businesses with conditional authority. The executive director has the right to receive remuneration and benefits as determined by the Board of Directors. However, this shall not prejudice the right of the executive director to receive remuneration and other benefits as a director under the Articles of Association.
4. A Director must notify the Company without delay in the event that he/she has conflict of interest with any contract to which the Company is a party or if there is an increase or decrease in the number of shares held by him/her.
5. The Board of Directors has the authority to specify and alter the names of directors to be authorized directors to sign and act on behalf of the Company.

Thus, the Board of Directors has the authority and responsibility to ensure that all of the Company's businesses comply with laws, objectives, Articles of Association, and resolutions of shareholders' meetings, and the Board of Directors may empower one or more directors or any person to act on its behalf.

## 7.3 Sub-committees

### 7.3.1 Audit Committee

As of December 31, 2021, the Audit Committee consisted of 3 members:

Name	Position
1. Mr. Woravit Chailimpamontri	Chairman of the Audit Committee
2. Mr. Kittiphath Suthisamphat	Audit Committee
3. Mr. Kasemsit Pathomsak	Audit Committee

As the resolution of Board of Directors Meeting No.1/2018 On January 10, 2018, the Audit Committee has been appointed by the Board of Director to specified the scope of authority and responsibilities of Audit Committee and present to the Board of Director for further consideration afterward.

#### Scope of Authority and Responsibilities of the Audit Committee

1. To verify financial reports to ensure their accuracy and reliability as well as adequate disclosure, and coordinate with external auditors and management who conduct quarterly and annual financial reports.
2. To review the Company's internal control system to ensure its appropriateness and effectiveness; to review important matters together with the external auditor and internal audit manager if necessary, and suggest ways to improve the internal control system to the Board of Directors.
3. To review compliance with the Securities and Exchange Act and the rules, regulations and policies of the Stock Exchange of Thailand related to the Company's operations.
4. To examine the evidence if there is any possibility that an action could affect the Company's operating results significantly or become a conflict of interest that could affect the Company's operations.
5. To consider the disclosure of Company information in cases of connected transactions or transactions that could lead to conflicts of interest, in accordance with the rules and regulations of the Stock Exchange of Thailand, and to ensure that the transaction is reasonable and beneficial to the Company.
6. To verify the accuracy and effectiveness of information technology related to financial reports and internal control.
7. To promote the development of financial reporting systems in line with international accounting standards.
8. To select and appoint the Company's auditor, and determine the remuneration of the auditor by considering the reliability, resources and scope of work of the auditing firm, including the experience of the personnel assigned to audit the Company.
9. To advise on the budget and manpower of the Internal Audit Department.
10. To review the Company's internal audit plan to assure compliance with generally accepted standards.
11. To evaluate the performance of the Internal Audit Department.
12. To prepare a report on the performance of the Audit Committee and disclose it in the Company's annual report in accordance with the regulations of the Stock Exchange of Thailand.

13. To seek the opinion of other professional consultants at the Company's expense if necessary in accordance with Company regulations.
14. To attend shareholder meetings and clarify any matters regarding the Audit Committee or appointment of auditors.
15. To review and amend the Charter of the Audit Committee.
16. To perform other tasks as assigned by the Board of Directors within the scope of duties and responsibilities of the Audit Committee.

### 7.3.2 Executive Committee

As of December 31, 2021, the Executive Committee consisted of 5 members:

Name		Position
1. Mr. Sitthiporn	Ratanopas	Chairman of the Executive Committee
2. Mr. Chainoi	Puenkosoom	Executive Director
3. General Surapan	Poomkeaw	Executive Director
4. Mr. Nuttachat	Charuchinda	Executive Director
5. Mr. Yothin	Dumnernchanvanit	Executive Director

A resolution of Executive Committee Meeting No. 9/2013 on August 8, 2013 specified the scope of authority and responsibilities of the Executive Committee as follows:

#### Scope of Authority and Responsibilities of the Executive Committee

1. To review the following matters for the consideration and approval of the Board of Directors:
  - 1.1 Annual budgets.
  - 1.2 Annual capital expenditures exceeding Baht 500.00 million.
  - 1.3 Any activity or operation related to mergers & acquisitions exceeding Baht 500.00 million.
  - 1.4 Policies, directions, strategies, business plans and key management structure as these affect the operation of the Company.
  - 1.5 Issuance and offering or transfer of subsidiaries' shares to other parties, except the shares of the subsidiaries specified in Clause 8.
  - 1.6 Any contracts or obligations that change the Company's nature of business or new business that is not a normal supporting business of the Company and its subsidiaries.
  - 1.7 Distribution, disposal, transfer or rent of the main businesses of over 50% of the total assets of the Company and subsidiaries.
  - 1.8 Connected transactions between the Company or subsidiaries and their shareholders or related companies.
2. To approve internal capital expenditures under Baht 500.00 million.

3. To approve any activity or operation related to mergers & acquisitions or share sales of the subsidiaries valued at less than Baht 500.00 million.
4. To approve the engagement of MOUs and joint venture agreements for investment projects valued at less than Baht 500.00 million.
5. To approve the distribution, disposal, transfer or rent of less than 50% of the total assets of the key businesses of the Company and its subsidiaries.
6. To approve the incorporation of subsidiaries to operate projects.
7. To approve the capital increase or decrease of subsidiaries, including the merger of one subsidiary with another.
8. To issue and offer or transfer shares of subsidiaries under the Company's organizational restructuring policy to related companies or the new companies incorporated to operate the IPP Coal, IPP Gas, SPP and PP9 projects, and other projects under construction/development (if any).
9. To open or close deposit accounts, specify the name(s) of the authorized person(s) who can approve withdrawals or payments from such accounts, and take any necessary action with respect to any matter pertinent to such accounts.
10. To approve any normal business transaction related to banks and financial institutions, including changes in credit line to improve liquidity on specific occasions and to share the Company's credit line with subsidiaries.
11. To approve the engagement of credit facility agreements or financial support agreements between the Company or subsidiaries and banks/financial institutions, provided that the debt to equity ratio is less than 2.5 times.
12. To approve the engagement of guarantee agreements or sponsor undertaking agreements for subsidiaries.
13. To approve the arrangement, increase, decrease or cancellation of accounting provisions, such as allowance for doubtful accounts, allowance for impairment of investments, and allowance for impairment of projects in development, under the budget, not to exceed Baht 100.00 million in each case.
14. To sell movable assets (except goods), not exceeding Baht 100.00 million per transaction.

### 7.7.3 Risk Management Committee

As of December 31, 2021, the Risk Management Committee consisted of 3 members:

Name	Position
1. Mr. Yothin Dumnernchanvanit	Chairman of the Risk Management Committee
2. Mr. Chainoi Puenkosoom	Risk Management Committee
3. Mr. Vachara Tuntariyanond	Risk Management Committee

At Risk Management Committee Meeting No. 1/2018 on March 9, 2018, a resolution was made to determine the scope of authority and responsibilities as follows:

## Scope of Authority and Responsibility of the Risk Management Committee

1. To determine and review policy and approach to risk management in compliance with the strategic plan and objectives of the Company.
2. To ensure policies have been followed and supported, mitigation plans are advised, and a risk management system is well-developed and continuously runs efficiently.
3. To encourage employees at all levels who are involved in risk management, and develop employees in risk management.
4. To consider plans and reports of risk management and provide recommendations ensuring that management works efficiently and complies with policies.
5. To review policies and management including the efficiency of systems and practices that changed in accordance with to specific situations.
6. To report the results of risk management initiatives to the committee to be acknowledged at least once per quarter and as soon as possible when the situation significantly affects the business.
7. To determine and review the Risk Management Committee Charter to comply with policies to ensure it adjusts to specific situations.
8. To allow the chair of the committee appoint a risk management committee at his or her discretion.
9. To perform any activities related to risk management as assigned.

### 7.3.4 Corporate Governance Committee

As of December 31, 2021, the Corporate Governance Committee consisted of 7 members:

Name	Position
1. General Surapan Poomkeaw	Chairman of the Corporate Governance Committee
2. Mr. Nuttachat Charuchinda	Corporate Governance Committee
3. VAdm. Samai Jai-in	Corporate Governance Committee
4. Colonel (Col.) Narongchai Chaichana	Corporate Governance Committee
5. Mr. Weerasak Roongrat	Corporate Governance Committee
6. Police General Wanchai Srinualnad	Corporate Governance Committee
7. General Natthapat Sagulrungsalit	Corporate Governance Committee

A resolution of Governance Committee meeting No. 3/2019 held on March 30, 2019, determined the scope and responsibilities of the Corporate Governance Committee as follows:



## Scope of Authority and Responsibility of the Corporate Governance Committee

1. Propose guidelines and/or practices to the Board of Directors regarding business ethics and policies on anti-corruption measures in accordance with good corporate governance that will become the standard throughout the Company.
2. Evaluate and advise on social responsibility, anti-corruption and business ethics policies.
3. Appoint a governance team to support and guide the committee's performance, and retain experienced independent advisors in cases where the Company requires specific expertise.
4. Support and encourage the Company, employees, and related stakeholders, to comply with corporate governance, social responsibility, anti-corruption and business ethics policies.
5. Review the of the Corporate Governance Committee charter annually, and solicit approval from Board of Directors for amendments.
6. Perform any other tasks assigned by Board of Directors.

### 7.4 Management Team

As of December 31, 2021, the Company's Management Team consisted of 4 individuals as follows:

Name	Position
1. Mr. Yothin Dumnernchanvanit	President
2. Mr. Prayad Champucha	Chief Operation Officer (COO), Acting Group Director – Procurement, Fuel Sourcing and Human Resources
3. Mr. Kritdisorn Kornketkamon <sup>(1)</sup>	Chief Financial Officer (CFO)
4. Mr. Thanarat Wittayatechakul <sup>(2)</sup>	Group Director - Business Development and Strategic Planning

Notes : <sup>(1)</sup> Mr. Kritdisorn Kornketkamon was appointed as Management Team on June 17, 2019.

<sup>(2)</sup> Mr. Thanarat Wittayatechakul was appointed as Management Team on May 27, 2020.

As of December 31, 2021, there are vacant management position and the Company is in the process of recruiting an acting member to serve during the recruitment process:

Name	Position
1. Mr. Prayad Champucha	Acting Group Director – Procurement, Fuel Sourcing and Human Resources
2. Mr. Kritdisorn Kornketkamon	Acting Accounting Director

A resolution of Board Meeting No. 2/2010 on June 25, 2010 specified the scope of authority and responsibilities of the Managing Director as follows:

## Scope of Authority and Responsibilities of President

1. To set organizational structure, define positions, alter and appoint working teams.
2. To appoint or remove any employee in any position.
3. To endorse salaries, wages and bonuses for employees, workers, or any persons rendering services to the Company, whether permanently or temporarily.
4. To prepare annual revenue and expense budgets to propose to the Board of Directors for consideration and approval by November of the year before the fiscal year, as well as to carry out any matter relating to the objectives, business plans, and budgets approved by the Board of Directors.
5. To approve purchasing and hiring, not exceeding Baht 100.00 million per transaction.
6. To sell movable assets (except goods), not exceeding Baht 50.00 million per transaction.
7. To donate money or goods for the public interest, charities and sports, not exceeding Baht 5.00 million per transaction.
8. To empower senior executives and/or other working groups as deemed appropriate.

### 7.4.1 Remuneration of Directors, Audit Committee, Executive Directors, Risk Management Committee, Corporate Governance Committee and Management

#### 7.4.1.1 Monetary Remuneration

##### 1) Remuneration of Director

The Company determines the remuneration of directors based on appropriateness and the responsibilities of each director. Remuneration must be approved by a resolution of the shareholders' meeting. Directors receive a meeting allowance and members of the Board of Directors receive compensation in the form of salary, meeting allowance and bonus, as follows:

Name	Attendance / Total Meetings									
	Board of Directors		Audit Committee		Executive Committee		Risk Management Committee		Corporate Governance Committee	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
1. Mr. Sitthiporn Ratanopas	3.05	2.10	-	-	0.45	0.40	-	-	-	-
2. Mr. Chainoi Puenkosoom	5.05	2.10	-	-	0.45	0.40	0.08	0.08	-	-
3. Mr. Yothin Dumnernchanvanit	3.60	2.70	-	-	0.40	0.40	0.08	0.08	-	-
4. General Surapan Poomkeaw	3.05	2.10	-	-	0.45	0.40	-	-	0.24	0.24
5. Mr. Kasemsit Pathomsak	2.45	1.50	0.10	0.12	-	-	-	-	-	-
6. Mr. Kittiphat Suthisamphat	2.40	1.50	0.10	0.12	-	-	-	-	-	-
7. Mr. IP KA KEUNG PATRICK	0.20	0.24	-	-	-	-	-	-	-	-
8. Mr. Nuttachat Charuchinda	3.00	2.10	-	-	0.40	0.40	-	-	0.20	0.20
9. Mr. Woravit Chailimpamontri	2.40	1.50	0.10	0.12	-	-	-	-	-	-
10. Mr. Vachara Tuntariyanond	-	-	-	-	-	-	0.08	0.08	-	-

Name	Attendance / Total Meetings									
	Board of Directors		Audit Committee		Executive Committee		Risk Management Committee		Corporate Governance Committee	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
11. VAdm. Samai Jai-in	-	-	-	-	-	-	-	-	0.24	0.20
12. Colonel (Col.) Narongchai Chaichana	-	-	-	-	-	-	-	-	0.24	0.24
13. Mr. Weerasak Roongrat	-	-	-	-	-	-	-	-	0.24	0.24
14. Police General Wanchai Srinualnad	-	-	-	-	-	-	-	-	0.24	0.20
15. Major General Suchart Suttipol	-	-	-	-	-	-	-	-	-	-
16. General Natthapat Sagulrungsalit	-	-	-	-	-	-	-	-	0.24	0.24
17. Mr. Kawin Thangsupanich	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	25.20	15.84	0.30	0.36	2.15	2.00	0.24	0.24	1.64	1.62

## 2) Remuneration of Management Team

In 2020 and 2021, the Company paid compensation to all members of the Management Team including salary, bonus, Social Security Fund contribution and other benefits, in the amount of Baht 35.09 million and Baht 18.54.09 million, respectively.

### 7.4.1.2 Other Remuneration

–None–

## 7.5 Human Resources

### 7.5.1 Number of Employees and Employee Benefits

As of December 31, 2021, the Company employed a total of 1,851 people, comprising 12 executive officers and 1,839 employees, classified by department as follows:

Department	Number of Employees			
	The Company	Subsidiaries	Associate	Total
1. Executive Office	9	3	-	12
2. Production	438	1,031	-	1,469
3. Production Support, Administration	190	105	-	295
4. Finance & Accounting, Internal Audit	63	12	-	75
<b>Total</b>	700	1,151	-	1,851

In 2020 and 2021 the Company paid employee remuneration in the form of salary, overtime, bonuses, social security fund contributions and other benefits, and reported employee remuneration, of Baht 393.87 million and Baht 366.73 million respectively, and the Company's subsidiaries paid Baht 567.69 million and Baht 435.89 million respectively in the form of employee remuneration in the same manner.

## 7.5.2 Significant Change in Number of Employees in the Last Three Years

The details on number of employees during the past three years are as follows:

Data as of	Number of Employees			
	The Company <sup>(1)</sup>	Subsidiaries <sup>(1)</sup>	Associate	Total
December 31, 2019	763	1,535	33	2,331
December 31, 2020	764	1,377	29	2,169
December 31, 2021	700	1,151	0	1,851

Notes : <sup>(1)</sup> The Company hired additional maintenance staff and the subsidiary company hired additional transport staff, in both cases to reduce dependence on external services.

## 7.5.3 Significant Labor Disputes in the Last Three Years

-None- as of December 31, 2021.

## 7.5.4 Human Resource Development

The Company has good relations with employees and values human resource development. Realizing that employees are a vital part of the Company's success, the Company focuses on promoting employees to instill a positive attitude toward the Company, and to express their opinions, as well as work as a team. In addition, the Company provides employees with training that aligns with the Company's strategies and goals. The Company also offers competitive compensation and benefits in line with peer companies in the same sector in order to recruit and retain a knowledgeable and motivated workforce

The Company has developed an organizational structure and defined positions, as well as arranged the appropriate manpower by studying and benchmarking with the organizational structures of international companies and applying the findings to its operations.

### 1) Competency Development

The Company continuously focuses on competency development for employees in core, functional and managerial/ leadership competencies. The Company has developed projects and training programs in various forms, including self-study, training by specialists and experts, and knowledge sharing among employees, to enhance employees' competencies in all dimensions.

### 2) Organizational Structure and Manpower Improvement

The Company has improved its organizational structure and manpower in order to cope with the dynamic and competitive environment, implementing a clearer operating system and proper department sizes that are suitable to the function of each. In this manner, the Company maximizes its human resources for the Company's benefit and adds value to its personnel.

## 7.6 Other important information

### 7.6.1 Corporate Secretary

A Corporate Secretary was appointed to supervise document filing including documents pertinent to interested parties and others, to liaise and coordinate with the Securities and Exchange Commission and Stock Exchange of Thailand, and to pursue other matters of compliance with Securities and Exchange Act B.E. 2535 (1992) (As amended).

### 7.6.2 Auditor's Fee

#### (1) Audit Fee

The audit fee of the Company and its subsidiaries in 2019, 2020 and 2021 amounted Baht 8.93 million, Baht 7 million and Baht 7 million, respectively.

#### (2) Non-Audit Fee

-None-

## 8. Highlights of Corporate Governance

### 8.1 Recruitment of Directors and Executives

#### 8.1.1 Recruitment of Directors

Currently there is no Recruitment Committee; therefore, directors are selected and appointed by a resolution of the annual general shareholders' meeting. The Board of Directors selects qualified persons by considering their knowledge and work experience, then nominates candidates at the shareholders meeting for consideration. This is the procedure set forth in the Company's Articles of Association, which grants shareholders the right to vote, as summarized below:

1. A shareholder will have one vote per share.
2. Each shareholder may cast his or her voting rights as per Item 1, either individually or as a group, but may not distribute votes to elect candidate(s).
3. Persons who receive the highest and second highest votes will be appointed as directors, in a number equal to the number of directors required at such time. In the event that more candidates receive equal votes than the number of required directors at such time, the Chairman will have the casting vote.

At every annual ordinary shareholder meeting, one-third of the directors must retire. If the number of directors to retire is not a multiple of three, then the number of directors closest to one-third will retire at due term, and a retiring director at due term shall be eligible for re-election.

If the position of a director is made vacant by means other than due term, the Board of Directors, by a vote of not less than three-fourths of the number of remaining directors, may appoint a person who is qualified and not forbidden by law as a director in his place at the following meeting of the Board of Directors, unless the remaining term of the director is less than two months, and the replaced director will retain the position only for the remaining term of his predecessor.

#### 8.1.2 Recruitment of Executives

The Company currently has not appointed Nomination Committee. Thence, the Executive Committee initially consider the nomination of the President by screening qualified persons with knowledge, skills and experience that are beneficial to the Company's operations, and finding persons who understand business of the Company and be able to manage and achieve the objectives set by the Board of Directors. The Executive Committee then submits candidates to the Board of Directors for consideration and approval of the nomination.

### 8.1.3 Governance of the Company, Subsidiaries, and Associate

#### (1) Governance of Subsidiaries and Associate

The Company has established mechanisms for governing subsidiaries and associates to protect the Company's interests as follows:

The Company appointed representatives whose qualifications do not conflict with any law, Article of Association or regulation of the subsidiaries or associate to serve as directors. Such representatives are involved with implementing all important policies such as investment, business expansion, purchase of assets or financing, as well as govern, administrate, monitor, and recommend guidelines for operating these businesses in their capacity as directors of the subsidiaries or associate.

In important cases such as investment expansion, capital increases, and financing, these representatives will ensure that the subsidiaries or associate bring such matters to the Company's Board Meeting or Executive Committee Meetings, as the case may be, for approval.

In cases where the Company wants to be informed of the operating results of the subsidiaries, the Company can have the subsidiaries report such results at the Company's Board Meeting and Executive Committee Meetings, and the Board and Executive Committee can directly recommend guidelines to the subsidiaries.

The Company prepares the reviewed quarterly consolidated financial statements and audited annual consolidated financial statements to regularly govern the subsidiaries on the disclosure of financial statements.

#### (2) Agreements among Major Shareholders Signed by the Company on Matters Affecting the Issuance and Offer of Company Securities or the Company's Operations.

-None-

### 8.1.4 Monitoring Compliance of Corporate Governance Policy and Guidelines

#### (1) Guidelines for Inside Information

The Company established guidelines and penalties for any disclosure or misuse of confidential information, including important inside information, in order to deter directors, executives and employees from exploiting information and news obtained in the course of performing their job or using their position for their own benefit or the benefit of the persons who receive such information. Such disclosure or misuse of information conflicts with the Company's interests and may cause damage to the Company.

In addition, the Company specifies in the Articles of Association that if any director has interests in any contract, directly or indirectly, or if there is any change in the director's holding of shares or debentures of the Company or its subsidiaries, such director must notify the Company promptly.

#### (2) Prevention of Involvement in Corruption

In order to treat all stakeholders equally and fairly in accordance with the good corporate governance principles, the company has provided channels for whistleblowing or complaints or comments or any suggestions showing that stakeholders are affected or is at risk of being affected which will cause damage to all groups of stakeholders from the company's business operations or from the performance of the company's employees about illegal or unethical acts including behaviors that may imply corruption unequal treatment or actions that lack caution and lack of due diligence. There are guidelines for reporting information or clues about fraud or corruption, (Whistle-blower hotline) as follows:



## 1. Channels for informing information or giving clues about fraud or corruption

All stakeholders can report a clue or complain either openly or anonymously along with the facts and provide evidence that is clear enough to show that there are reasonable grounds to believe that corruption has occurred or affected by the refusal of corruption. The informants can report information or clues through the following channels:

### (1) Letter sent by post to the chairman of the audit committee

National Power Supply Public Company Limited

206 Moo. 4 Thatoom Srimahaphote Prachinburi 25140

However, when the chairman of the audit committee is aware of the matter and sends it to the chairman of the good governance for further investigation.

### (2) Electronic mail sent to mondob\_r@doublea1991.com or CIA@npp.co.th or submit through the Governance Committee by contacting the Secretary of the Corporate Governance Committee

### (3) Tel 085-8350-482 or LINE ID: 085-835-0482

### (4) www.npsplc.com

## 2. Protection of complainants and rewards

The company has protected measures for the whistleblowers or complaints so that they do not suffer. They will receive appropriate protection from the company, such as no change of position, nature of work, workplace, job suspended, intimidation, interference with work, termination of employment or any other unfair treatment to that person. The information about the complaint will be kept confidential and not disclosed to unrelated parties unless required by law. In addition, the company has rewarded for whistleblowers or complaints in return for participation in helping the company in preventing the corruption.

## 8.2 Committee and Subcommittee Meetings

Name	Attendance / Total Meetings									
	Board of Directors		Audit Committee		Executive Committee		Risk Management Committee		Corporate Governance Committee	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
1. Mr. Sitthiporn Ratanopas	5/5	6/6	-	-	9/9	8/8	-	-	-	-
2. Mr. Chainoi Puenkosoom	5/5	6/6	-	-	9/9	8/8	4/4	5/5	-	-
3. Mr. Yothin Dumnernchanvanit	4/5	6/6	-	-	8/9	8/8	4/4	5/5	-	-
4. General Surapan Poomkeaw	5/5	6/6	-	-	9/9	8/8	-	-	12/12	12/12
5. Mr. Kasemsit Pathomsak	4/5	6/6	5/5	5/5	-	-	-	-	-	-
6. Mr. Kittiphath Suthisamphat	5/5	6/6	5/5	5/5	-	-	-	-	-	-
7. Mr. IP KA KEUNG PATRICK	4/5	6/6	-	-	-	-	-	-	-	-
8. Mr. Nuttachat Charuchinda	5/5	6/6	-	-	8/9	8/8	-	-	9/12	11/12
9. Mr. Woravit Chailimpamontri	5/5	6/6	5/5	5/5	-	-	-	-	-	-
10. Mr. Vachara Tuntariyanond	-	-	-	-	-	-	4/4	5/5	-	-
11. VAdm. Samai Jai-in	-	-	-	-	-	-	-	-	12/12	11/12
12. Colonel (Col.) Narongchai Chaichana	-	-	-	-	-	-	-	-	12/12	12/12

Name	Attendance / Total Meetings										
	Board of Directors		Audit Committee		Executive Committee		Risk Management Committee		Corporate Governance Committee		
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	
13. Mr. Weerasak Roongrat <sup>(1)</sup>	-	-	-	-	-	-	-	-	-	12/12	12/12
14. Police General Wanchai Srinualnad <sup>(1)</sup>	-	-	-	-	-	-	-	-	-	12/12	11/12
15. Major General Suchart Suttipol <sup>(2)</sup>	-	-	-	-	-	-	-	-	-	-	-
16. General Natthapat Sagulrungrasit <sup>(2)</sup>	-	-	-	-	-	-	-	-	-	12/12	
17. Mr. Kawin Thangsupanich	-	-	-	-	-	-	-	-	-	-	-
<b>Total number of meetings</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>9</b>	<b>8</b>	<b>4</b>	<b>5</b>	<b>12</b>	<b>12</b>	

Notes : <sup>(1)</sup> Mr. Weerasak Roongrat and Police General Wanchai Srinualnad were appointed as Corporate Governance Committee on July 23, 2018.

<sup>(2)</sup> General Natthapat Sagulrungrasit Srinualnad was appointed as Corporate Governance Committee on December 18, 2018 to replace Major General Suchart Suttipol, who resigned from the position on November 14, 2018.

### (1) Board Meetings

The Board of Directors holds regular meetings at least once every three months each year in accordance with the Articles of Association, and additional meetings may be arranged as necessary. For each meeting, a clear agenda is set, and a meeting notice, along with the agenda and relevant supporting documents, is submitted to each board member at least seven (7) days in advance. For an urgent agenda, the Company may set an earlier meeting and notify board members of the date by other means and if it is in the best interests of the Company.

One-half of the total number of directors' present at the Board Meeting shall constitute a quorum. If at any time the chairman is absent or unable to perform his duties and there is a vice-chairman, the vice-chairman will act as chairman of the meeting. If there is no vice-chairman or he is unable to perform his duties in this regard, the meeting will elect one of the directors' present at the meeting to act as chairman of the meeting. All resolutions of the Board Meeting must be passed by an affirmative vote of a majority of the directors. One director will have one vote, but any director who has an interest in a particular matter does not have the right to vote on such matter. In case of an equality of votes, the chairman has the decisive vote.

### (2) Audit Committee and Risk Management Committee Meetings

Audit Committee and Risk Management Meetings will be held at least once per quarter in compliance with the duties and responsibilities of the Audit Committee and Risk Management Committee as specified in the Charter, and an additional meeting may be arranged if necessary.

### (3) Executive Committee Meetings

The Board of Directors appointed the Executive Committee on August 8, 2013. The Executive Committee holds regular monthly meetings, and additional meetings may be arranged if necessary. One-half of the total number of executive directors' present at Executive Committee Meetings constitutes a quorum.

### (4) Corporate Governance Committee Meetings

The Corporate Governance Committee holds meetings bimonthly. An additional meeting may be arranged if necessary. A quorum constitutes at least one-half of the total number of Corporate Governance Committee members present at the meeting. However, the committee later decided to change the meeting schedule from bimonthly to once a month, effective September 2018.

## 9 Internal Control and Risk Management

### 9.1 Internal Control and Risk Management Policy

The Audit Committee reviewed the adequacy, appropriateness, and efficiency of the Company and its subsidiaries' internal control systems, which had been established by management, to assure that they are sufficient to operate a business in terms of pursuing goals and objectives, adhering to the relevant regulations, and that there is no exploitation or unauthorized use of the assets, as well as to assure accurate and credible bookkeeping and reporting. Most important is the ongoing development and improvement of the internal control systems. The Company applied the Internal Control Adequacy Evaluation Form from the Securities and Exchange Commission (SEC) and the international internal control practices set by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), which cover five components of the integrated framework – Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities. The Audit Committee may advise that a significant activity be examined as well as recommend improvements to the internal control system to be presented to the board following a review by the external auditor and head of internal audit department.

The Company's Internal Audit Department is independent, reports audit results directly to the Audit Committee and summarizes its reports to the board of the Company each quarter, regularly examines and evaluates the sufficiency and appropriateness of the internal control system set by the Company, and maintains it in line with the Company's continual development. The Internal Audit Department considers major risk factors of each company's work processes, as well as changes in the internal environments that may significantly affect each company, in setting up an annual audit plan, and summarizes audit results in compliance with the five components as follows:

#### 1) Control Environment

The Company has established an organizational structure and defined the scope of authority and responsibility systematically and explicitly in a reasonable manner that reflects the organization's management philosophy and supports its operations. Regarding targeting objectives, the Company sets targets and KPIs to evaluate the performance of the Company, departments and individuals to ensure efficient governance and monitoring of operations. The Company has also created an environment that encourages and supports its employees to enhance their capabilities, realizing that this is the factor that will lead to the Company's growth in the long term.

## **2) Risk Assessment**

The Company assesses risks caused by both internal and external factors, beyond exchange risk, interest rate risk, raw material insufficiency risk and in-plant accident risk, in order to promptly prevent, prepare and correct the effects of any changes in these factors, and has established risk management policies specific to each type of risk, which it monitors consistency to mitigate the impact of these risks.

## **3) Control Activities**

The Company has properly, and explicitly, defined the scope of authority and responsibility, and the approval level, of the Board of Directors, as well as management and employees, communicated it, and received acknowledgement from employees that it is understood and will be complied with. The Company has also reviewed the appropriateness of such scope of authority, responsibilities and approval levels in order to ensure that they are sufficient to systematically control and govern management performance and expedite the Company's operations transparently and without conflicts of interest. Additionally, the Company established clear Standards of Operation for all departments to use as reference for supervision, control and internal coordination. Furthermore, the Company maintains ISO9001:2015 certification, which focuses on the continual improvement of processes and management, and implements ISO14001:2015, which focuses on environmental management that is beneficial to society and the community, as well as OHSAS18001:2007, which focus on health and safety to employees and at factories. In addition, the Company set appropriate internal controls for the Finance and Accounting Department, to assure that it reports on operational performance accurately, promptly and adequately to the concerned executives.

## **4) Information and Communication**

The Company has planned and developed information systems for internal and external communications and continuously strives to enhance operational efficiency in order to respond promptly to the dynamic business environment and support the Company's future growth. In addition, the Company has a data security system and an effective contingency plan to secure the safety of its information if and when a serious incident occurs. The Company regularly records accounting information in accordance with accepted standards and systematically files documents, in order to present data to the Board of Directors and shareholders in a timely manner and assure that all parties have adequate time to study pertinent information before making any decision.

The Company provides a whistle-blower communication channel that allows all internal and external stakeholders to safely inform the Company of any fraud or corruption by emailing such information directly to the Managing Director or CIA@npp.co.th, which is published on the Company's website.

## **5) Monitoring Activities**

The Company's Internal Audit Department is assigned to evaluate the adequacy and appropriateness of the internal control system frequently, and submit a monthly internal audit report to the Audit Committee and the board to inform them of the objectives and scope of audits, working procedures, assessments of internal audit performance, and summaries of findings, as well as point out significant risks and controls and provide recom-

recommendations and guidelines to practically resolve and control such risks for effective and efficient risk management, control and governance. Moreover, if there is any incident or any dubious occurrence that may significantly affect the Company's reputation and financial status, the management of the Company and its subsidiaries will promptly inform the Board of Directors, as well as report the key issues, problem-solving guidelines, and progress on resolving the problem to the Board of Directors continuously without delay.

Upon completion of the assessment of the internal control system, the Internal Audit Department reported that the Company has adequate internal control systems in place to properly manage risks at acceptable levels, assure transparency and continuity of managing and monitoring operations, and protect assets on behalf of the Company, shareholders, creditors, and all stakeholders.

### 9.1.1 Internal Audit Chief

Mr. Nitichai Thongpant was appointed an internal audit director, a position of the same level as an internal audit chief, in January 8, 2018.

### 9.1.2 Corporate Compliance Committee

The Corporate Compliance Committee is appointed by the Managing Director and includes:

Name	Position
1. Mr. Prayad Champucha	Chairman of the Corporate Compliance Committee
2. Mr. Nitichai Thongpant	Corporate Compliance Committee Member
3. Mrs. Pranom Wathanapong	Corporate Compliance Committee Member
4. Mr. Singh Neammunee	Secretary

## 9.2 Connected Transactions

In 2020 and 2021, the Company entered into connected transactions that could have led to conflicts of interest. These were disclosed in the notes to the financial statements for 2020 and 2021 for the years ending December 31, 2020 and December 31, 2021, respectively. The details are as follows:

### 9.2.1 Connected transactions that are normal business transactions or transactions that support the Company's business

At Audit Committee Meeting No. 1/2021, held on February 17, 2021, the committee acknowledged the connected transactions that occurred in 2020. Similarly, at Audit Committee Meeting No. 1/2022, held on February 22, 2022, the committee approved the connected transactions that occurred in 2021. Normal business transactions and transactions that support the business of the Company are subject to general trading conditions and market prices. The Audit Committee also emphasized that management shall regularly review the necessity of entering into such transactions on a quarterly basis in order to reduce the value of these transactions and/or unnecessary intercompany transactions going forward.

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
1. Cogen Investments Limited	<ul style="list-style-type: none"> <li>Main shareholder of the Company</li> </ul>	Dividend	55.19	170.24	The Group paid dividend from business operations to shareholder
2. 304 Plaza Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, a main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	3.57	3.24	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA or EASTW - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Wage and other service fees	-	1.80	Rent the asset from related company to support operations and the price is competitively similar to the market
		Rental fees and other services	1.69	-	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	-	0.24	Transaction related to selling products
		Other payable	0.27	0.04	Transaction related to property rental and space
		Security deposit from using electricity and other security deposits	0.29	0.29	Transaction related to selling products
		Rental deposit	0.02	-	Transaction related to rental fees

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
3. 304 Industrial Park 2 Company Limited	<ul style="list-style-type: none"> <li>Director of associated company: Burapa Power Holding Company Limited and Burapa Power Generation Company Limited, is Mr.Kitipun Jitpentham, a director of related company</li> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	185.34	246.51	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA or EASTW - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Revenue from services – research and development	0.71	0.70	Providing service to related company which price is similar to external
		Land lease	3.48	1.84	Asset rent from related company to support business operations which the price is competitive to market
		Water waste treatment service	3.59	2.20	Receiving services from related company to support operations and the price is competitively similar to the market
		Other expenses	0.05	-	It is a penalty fees for terminating land purchase and sale agreement of BPG's power plant project that specified in the agreement.
		Account receivable	311.10	340.95	Transaction related to selling products and performing services
		Other payable	2.02	2.21	Transaction related to rental fees and service fees
		Electricity insurance and other security deposit	0.02	0.02	Transaction related to selling products
		Revenue from selling electricity and water	10.57	22.21	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Revenue from service – research and development	2.68	2.80	Performing services to related company to support operations and the price is competitively similar to the market
4. 304 Industrial Park 7 Company Limited	<ul style="list-style-type: none"> <li>Director of associated company: Burapa Power Holding Company Limited and Burapa Power Generation Company Limited, is Mr.Kitipun Jitpentham</li> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Land lease	2.52	3.06	Asset rent from related company to support business operations which the price is competitive to market
		Account receivable	1.58	20.25	Transaction related to selling products and performing services
		Electricity insurance and other security deposit	0.15	0.15	Transaction related to selling products



Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
5. 304 Industrial Park Company Limited	<ul style="list-style-type: none"> <li>Director of associated company: Burapa Power Holding Company Limited and Burapa Power Generation Company Limited, is Mr.Kitipun Jitpentham</li> <li>Close relative of Mr.Yothin Dumnerchanvanit, committee and director of the Company, is Mrs.Ladawan Dumnerchanvanit, director of related company.</li> </ul>	Revenue from selling electricity and water	77.22	41.64	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Revenue from service – research and development	2.24	2.60	To provide service to related company which the price is similar to external
		Rental fees	6.43	6.32	Asset rent from related company to support business operations which the price is competitive to market
		Service fees	11.45	8.47	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	73.83	41.39	Transaction related to selling products and performing services
		Advance payment for goods and services	0.51	-	Transaction related to purchasing products and receiving services
		Rental deposit	-	0.38	Transaction related to rental fees
		Other payable	1.63	0.04	Transaction related to service fees
		Revenue from selling electricity and water	0.56	0.38	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Purchasing fuel	96.19	121.94	To supply fuel from related company to support business which the price is based on market price
		6. S.V. Progressive Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Purchasing other raw materials for production	-
Purchasing spare parts and equipment	1.78			1.25	To purchase products from related company to support business which the price is competitive to market
Account receivable	0.04			0.03	Transaction related to selling products
Other payable	2.83			4.47	Transaction related to purchasing fuel and natural gas
Electricity insurance and other security deposit	0.02			0.02	Transaction related to selling products

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
7. Laem Khao Woodship Co., Ltd.	<ul style="list-style-type: none"> <li>Close relatives of Mr.Yothin Dumnernchanvanit, committee and director of the Company, are Mr.Kitti Dumnernchanvanit, Mr.Nuttapond Dumnernchanvanit, and Ms. Napat-tanun Dumnernchanvanit, director of related company</li> </ul>	Revenue from selling electricity and water	6.53	7.84	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA or EASTW
		Purchasing biomass materials	6.99	4.68	To purchase products from related company to support business which the price is competitive to market
		Service fees - weighing	2.35	2.41	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	0.70	0.72	Transaction related to selling products
		Account payable	0.07	0.58	Transaction related to selling products and performing services
		Other payable	0.25	0.20	Transaction related to receiving services
		Electricity insurance and other security deposit	1.60	1.60	Transaction related to selling products
		Revenue from selling electricity, steam and water	513.47	-	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Stream: product sold comes from electricity process and the price is based on production cost of natural gas and average consumer price index - Water: selling as regular operations which price refers from EASTW - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Revenue from selling cassava	18.63	-	To sell products to related company which the price is competitive to the price sold to external
		Revenue from service – research and development	0.05	-	To provide service to related company which the price is similar to external
8. Advance Paper Mill 3 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Other receivables	0.01	-	Transaction related to performing services
		Electricity insurance and other security deposit	0.02	0.02	Transaction related to selling products

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
9. Promeco Service Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	1.54	1.13	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Water: selling as regular operations which price refers from PWA</li> <li>Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties</li> </ul>
		Revenue from service – research and development	0.01	0.01	To provide service to related company which the price is similar to external
		Account receivable	0.12	0.05	Transaction related to selling products and performing services
		Electricity insurance and other security deposit	0.02	0.02	Transaction related to selling products
		Revenue from selling electricity and water	3.98	4.14	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Water: selling as regular operations which price refers from PWA</li> <li>Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties</li> </ul>
		Revenue from service – research and development	0.14	0.16	To provide service to related company which the price is similar to external
		Warehouse rental	21.42	6.72	Asset rent from related company to support business operations which the price is competitive to market
		Heavy machine service fees	17.88	14.78	Receiving services from related company to support operations and the price is competitively similar to the market
		Service fees	0.09	-	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	0.32	0.40	Transaction related to selling products and performing services
10. IP 5 Company Limited	<ul style="list-style-type: none"> <li>Associated company of town Holding Company Limited which the director of associated company, Burapa Power Holding and Burapa Power Generation Company Limited, is Mr.Kitiphun Jitpentham</li> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other receivables	0.02	-	Transaction related to performing services
		Other payable	0.29	2.12	Transaction related to receiving services
		Electricity insurance and other security deposit	0.01	0.01	Transaction related to selling products
		Rental deposit	1.68	-	Transaction related to warehouse rental

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
11. Hi-Tech Specialty Mineral Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	6.95	11.38	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Water: selling as regular operations which price refers from PWA</li> <li>Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties</li> </ul>
		Account receivable	0.80	2.46	Transaction related to selling products
12. Double A (1991) Public Company Limited	<ul style="list-style-type: none"> <li>A subsidiary of Sinsukjai company limited, main shareholder of the Company</li> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> <li>Close relatives of Mr.Yothin Dumnernchanvanit, committee and director of the Company, are Mr.Kitti Dumnernchanvanit and Mrs. Pitsamai Supanuntalerk, director of related company</li> </ul>	Electricity insurance and other security deposit	0.01	0.01	Transaction related to selling products
		Revenue from selling electricity and water	2,098.71	2,821.09	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Stream: product sold comes from electricity process and the price is based on production cost of natural gas and average consumer price index</li> <li>Water: selling as regular operations which price refers from PWA or EASTW</li> <li>Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties</li> </ul>
		Revenue from selling cassava	27.49	42.35	Selling products to related company which the price is competitive to the price sold to external
		Revenue from selling biogas	34.52	55.71	Selling products to related company which the price is referred to fuel oil price in the market
		Revenue from selling chemical/ other products	9.69	8.37	Selling products to related company which the price is competitive to the price sold to external
		Revenue from service – research and development	2.21	3.20	To provide service to related company which the price is similar to external
		Other revenue - land lease	1.09	1.09	To provide service to related company which the price is similar to external
		Other revenue	-	20.68	Selling products to related company which the price is competitive to the price sold to external
		Purchasing black rubber oil	286.13	333.00	To supply fuel from related company to support business which the price is based on natural gas and coal

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
		Purchasing biomass materials/ other raw materials for production	147.26	172.35	To purchase products from related company to support business which the price is competitive to market
		Leased asset	0.30	0.30	Asset rent from related company to support business operations which the price is competitive to market
		Water waste treatment services	10.06	14.49	To provide service to related company which the price is similar to external
		Dividend	140.77	434.25	The Group paid dividend from operations to shareholder
		Account receivable	245.27	578.09	Transaction related to selling products and performing services
		Other receivables	4.00	11.21	Transaction related to performing services
		Account payable	249.00	61.22	Transaction related to purchasing products and receiving services
		Other payable	16.45	1.86	Transaction related to receiving services
		Electricity insurance and other security deposit	6.94	6.97	Transaction related to selling products
		Rental deposit	0.22	0.22	Transaction related to rent
13. Double A Namsai Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> <li>Director of a subsidiary is Mr.Payad Champucha, a director of related company</li> </ul>	Revenue from selling electricity	18.69	19.22	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA
		Revenue from services – research and development	0.01	0.01	To provide service to related company which the price is similar to external
		Land lease	0.04	0.02	Asset rent from related company to support business operations which the price is competitive to market
		Account receivable	1.60	1.57	Transaction related to selling products and performing services
14. Double A Specialty Mineral Company Limited	<ul style="list-style-type: none"> <li>A subsidiary of Double A Holding Company Limited, main shareholder of Double A (1991) Public Company Limited</li> </ul>	Revenue from selling electricity	18.45	19.34	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA
		Other revenue - land lease	0.38	0.38	To lease land which the price is competitive to market
		Account receivable	1.65	3.55	Transaction related to selling products and performing services

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
15. D.A. Packaging Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and steam and water	11.82	13.39	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Stream: product sold comes from electricity process and the price is based on production cost of natural gas and average consumer price index - Water: selling as regular operations which price refers from PWA - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Revenue from selling cassava	0.47	0.61	To sell product to related company which the price is similar to external
		Revenue from service – research and development	0.05	0.06	To provide service to related company which the price is similar to external
		Account receivable	1.02	1.22	Transaction related to selling products and performing services
16. Tree Tech Co., Ltd.	<ul style="list-style-type: none"> <li>Director of associated company is Mr.Kitiphun Jitpentham and Mr.Jatupon Dumnernchanvanit, a close relative of Mr. Yothin Dumnernchanvanit. Those are director of Itown Holding Public Company Limited, main shareholder of related company</li> </ul>	Electricity insurance and other security deposit	0.01	0.01	Transaction related to selling products
		Revenue from selling electricity and water	4.96	4.78	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Purchasing biomass materials/ other raw materials for production	0.02	-	To purchase products from related company to support business which the price is competitive to market
		Account receivable	1.08	1.86	Transaction related to selling products and performing services
		Electricity insurance and other security deposit	0.02	0.02	Transaction related to selling products

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
17. Tawarawadee Resort Co., Ltd.	<ul style="list-style-type: none"> <li>Director of associated company is Mr.Kitiphun Jitpentham and Mr.Jatupon Dumnernchanvanit, a close relative of Mr. Yothin Dumnernchanvanit. Those are director of Itown Holding Public Company Limited, main shareholder of related company</li> </ul>	Revenue from selling electricity and water	4.48	4.57	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Water: selling as regular operations which price refers from PWA</li> <li>Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties</li> </ul>
		Service fees	1.94	2.19	Receiving services from related company to support operations which the price is competitive to market
		Account receivable	0.30	0.65	Transaction related to selling products and performing services
		Other receivables	0.01	-	Transaction related to performing services
		Other payable	0.21	0.18	Transaction related to receiving services
		Electricity insurance and other security deposit	-	-	Transaction related to selling products
		Rental deposit	-	0.02	Transaction related to the rent
		Revenue from selling electricity and water	0.80	0.83	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Water: selling as regular operations which price refers from PWA</li> </ul>
		Revenue from service	1.04	-	To provide service to related company to support business which the price is competitive to market
		Transportation fees	63.11	54.31	Receiving services from related company to support operations and the price is competitively similar to the market
18. Talay Thai Transport 2 Co., Ltd.	<ul style="list-style-type: none"> <li>Director of subsidiary, NPS Ocean Star Company Limited, is Mr.Piphat Horadard, a director of related company</li> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> <li>Close relative of Mr.Yothin Dumnernchanvanit, a committee and management of the Company, is Mr. Jatupon Dumnernchanvanit, management of related company.</li> </ul>	Floating service fees	0.96	-	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	0.06	0.08	Transaction related to selling products and performing services
		Other payable	-	1.20	Transaction related receiving management
		Advance payments for goods and services	4.06	18.87	Transaction related to purchasing products and receiving services



Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
19.Future Energy Holding Company Limited	<ul style="list-style-type: none"> <li>Main shareholder of the Company</li> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Dividend	355.93	1,097.94	The Group paid dividend from operations to shareholders
20.My Green Residence Company Limited	<ul style="list-style-type: none"> <li>Mr.Jatupon Dumnarnchanvanit is a main shareholder of indirectly related company, close relative of Mr.Yothin Dumnernchanvanit, director and management of the Company.</li> </ul>	Revenue from selling electricity and water  Revenue from services – research and development  Service fees  Account receivable  Other receivables  Other payable	8.14	5.26	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties  To provide service to related company which the price is similar to external  Receiving services from related company to support operations and the price is competitively similar to the market  Transaction related to selling products and performing services  Transaction related to performing services  Transaction related to receiving services

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
21.Be Professional Consultant Company Limited (Formerly Be Professional Consultant Security Guard Company Limited)	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	1.09	1.02	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Water: selling as regular operations which price refers from PWA or EASTW</li> <li>Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties</li> </ul>
		Revenue from service – research and development	-	0.04	To provide service to related company which the price is similar to external
		Service fees	0.79	0.12	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	0.11	0.22	Transaction related to selling products
		Account payable	0.03	0.03	Transaction related to receiving services
		Other payable	0.17	0.03	Transaction related to receiving services
		Electricity insurance and other security deposit	0.02	0.04	Transaction related to selling products
		Heavy machine service fees	8.86	5.24	Receiving services from related company to support operations and the price is competitively similar to the market
		Other payable	0.65	-	Transaction related to receiving services
		22. Siam Pattana Machinery Co., Ltd.	<ul style="list-style-type: none"> <li>Close relatives of Mr.Yothin Dumnerchanvanit, committee and director of the Company, are Ms. Napattanun Dumnerchanvanit and Mr.Nuttapond Dumnerchanvanit, director of related company and shareholder of Suan Mai Business Holding Company Limited, shareholder of related company</li> <li>Close relatives of Mr.Yothin Dumnerchanvanit, committee and director of the Company, are Ms. Napattanun Dumnerchanvanit and Mr.Nuttapond Dumnerchanvanit, director of related company</li> </ul>		

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
23. Agro Fiber Company Limited	<ul style="list-style-type: none"> <li>Close relative of Mr. Yothin Dumnernchanvanit, committee and director of the Company, is Mr. Jatupon Dumnernchanvanit a director of related company</li> </ul>	Revenue from selling electricity, steam and water	83.84	105.19	Selling products to related company <ul style="list-style-type: none"> <li>Electricity: selling product to regular customer which price refers from PEA</li> <li>Stream: product sold comes from electricity process and the price is based on production cost of natural gas and average consumer price index</li> <li>Water: selling as regular operations which price refers from PWA or EASTW</li> <li>Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties</li> </ul>
		Revenue from services – research and development	0.11	0.11	To provide service to related company which the price is similar to external
		Purchasing biomass materials/ other raw materials for production	7.53	8.20	Purchasing biomass materials/ other raw materials for product from related company where the price is competitive to market
		Account receivable	41.32	33.45	Transaction related to selling products and performing services
		Other receivables	0.02	-	Transaction related to performing services
		Account payable	0.31	-3.36	Transaction related to biomass materials/ other raw materials for production
		Electricity insurance and other security deposit	0.07	0.07	Transaction related to selling products
		Revenue from floating service	20.33	-	To provide service to related company which the price is similar to external
		Towing service fees	1.37	1.88	Receiving services from related company to support operations and the price is competitively similar to the market
		Transportation fees	7.61	19.62	Receiving services from related company to support operations and the price is competitively similar to the market
24. Inter Stevedoring 7 Co., Ltd.	<ul style="list-style-type: none"> <li>Director of subsidiary, NPS Ocean Star Company Limited, is Mr. Piphat Horadard, a director of related company</li> </ul>	Other payable	-	7.03	Transaction related to receiving services

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
25. Inter Thai Development Company Limited	<ul style="list-style-type: none"> <li>Director of associated company is Mr.Kitiphun Jitpentham and Mr.Jatupon Dumnernchanvanit, close relative of Mr. Yothin Dumnernchanvanit. Those are director of Itown Holding Public Company Limited, main shareholder of related company</li> </ul>	Revenue from selling electricity and water	0.29	0.26	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
		Revenue from services – research and development	0.03	0.05	To provide service to related company which the price is similar to external
		Heavy machine service fees	0.21	4.99	Receiving services from related company to support operations and the price is competitively similar to the market
		Well drilling service	2.16	4.99	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	0.02	0.02	Transaction related to selling products and performing services
		Other payable	0.03	5.37	Transaction related to receiving services
		Electricity insurance and other security deposit	0.04	0.04	Transaction related to selling products
		Revenue from selling electricity, steam and water	103.26	116.83	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Stream: product sold comes from electricity process and the price is based on production cost of natural gas and average consumer price index - Water: selling as regular operations which price refers from PWA or EASTW - Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Revenue from selling cassava flour	0.06	0.06	Selling products to related company which the price is competitive to the price sold to external
		Revenue from services – research and development	0.05	-	To provide service to related company which the price is similar to external
26.Green Fiber Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Purchasing biomass materials/ other raw materials for production	0.66	0.92	To purchase products from related company to support business which the price is competitive to market
		Account receivable	49.38	125.01	Transaction related to selling products and performing services
		Other receivables	0.01	-	Transaction related to selling products and performing services
		Electricity insurance and other security deposit	0.06	0.06	Transaction related to selling products
		Account payable	0.04	0.16	Transaction related to biomass materials/ other raw materials for production

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
27. Ua Sap Co., Ltd.	<ul style="list-style-type: none"> <li>Director of associated company: Burapa Power Holding Company Limited and Burapa Power Generation Company Limited, is Mr.Kitipun Jitpentham and Mr. Jatupon Dumnerchanvanit. Both are close relative of Mr.Yothin Dumnamchanvanit and are director of Itown Holding Company Limited, main shareholder of the Company</li> </ul>	Revenue from selling electricity and water	5.46	6.49	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA or EASTW
		Space rent fees	0.05	-	Asset rent from related company to support business operations which the price is competitive to market
		Account receivable	0.21	0.48	Transaction related to selling products
		Other payable	0.21	0.12	Transaction related to receiving services
		Electricity insurance and other security deposit	0.45	0.45	Transaction related to selling products
		Warehouse rental	20.27	22.92	Asset rent from related company to support business operations which the price is competitive to market
		Other service fees	-	0.75	Transaction related to receiving services
28.Smart Place 304 IP 3 Co., Ltd. (Former name 304 IP 3 Co., Ltd.)	<ul style="list-style-type: none"> <li>Close relatives of Mr.Yothin Dumnerchanvanit, committee and director of the Company, are Ms. Napattanun Dumnerchanvanit and Mr.NuttapondDumnerchanvanit, director of related company</li> </ul>	Other expenses	0.53	-	Transaction related to receiving services
		Account payable	-	0.12	Transaction related to receiving services
		Other payable	0.17	0.13	Transaction related to receiving services
		Revenue from selling electricity and water	0.40	0.13	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA or EASTW
		Purchasing fuel	11.73	27.22	To purchase products from related company to support production process which the price is competitive to market
		Electricity insurance and other security deposit	0.01	0.01	Transaction related to selling products
		Account payable	2.04	2.96	Transaction related to receiving services
29.Turbonext Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other payable	0.58	0.67	Transaction related to receiving services
		Other receivables	0.01	-	Transaction related to performing services
		Account receivable	0.01	0.02	Transaction related to selling products and performing services

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
30. Inter Stevedoring 8 Co., Ltd.	<ul style="list-style-type: none"> <li>Director of subsidiary, NPS Ocean Star Company Limited, is Mr. Piphat Horadard, director of related company</li> <li>Director and management of the Company are Mr. Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from floating services	0.02	-	To provide service to related company to support business which the price is competitive to market
		Transportation fees	35.47	-	Receiving services from related company to support operations and the price is competitively similar to the market
		Acquiring assets	141.52	-	Transaction related to acquiring asset which the price is estimated from estimator who certifies from SEC: Advance Appraisal Company Limited
		Selling assets	121.39	-	Transaction related to acquiring asset which the price is estimated from estimator who certifies from SEC: Advance Appraisal Company Limited
31. Golden Crane Prachinburi Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr. Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	0.59	67.68	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
		Other revenue-meter installation fees	1.11	0.58	Transaction related to selling products
		Revenue from services and logistic	-	21.79	To offer logistic service to related company which the price is competitive to market
		Account receivable	7.92	6.04	Transaction related to selling product and provide services
		Other receivables	-	17.97	Transaction related to performing services
		Electricity insurance and other security deposit	7.44	7.44	Transaction related to selling products
32. Power Root 2020 Co., Ltd.	<ul style="list-style-type: none"> <li>Management of the Company is Mr. Kritdisorn Komkedkamol, a director of related company</li> </ul>	Advance payment of goods and services	10.78	-	To provide service to related company to support business which the price is competitive to market
		Other receivables	13.35	1.35	Transaction related to power plant construction
33. Burapha Power Generation Company Limited	<ul style="list-style-type: none"> <li>Director of associated company: Burapha Power Holding Company Limited, is Mr. Kitipun Jitpentham</li> <li>Director of subsidiary is Mr. Thanongsak Srisongmueng, a director of related company</li> </ul>	Other receivables	13.35	1.35	Transaction related to power plant construction

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
34.304 Plaza 2 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	1.09	0.82	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
		Electricity insurance and other security deposit	-	0.01	Transaction related to selling products
		Service fees	1.15	1.07	Receiving services from related company to support operations and the price is competitively similar to the market
		Account receivable	0.08	0.03	Transaction related to selling products
		Other payable	0.19	0.06	Transaction related to receiving services
35. 304 Industrial Park 19 Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> <li>Director of associated company: Burapa Power Holding Company Limited and Burapa Power Generation Company Limited, are Mr.Kitipun Jitpentham</li> </ul>	Revenue from selling electricity	0.11	0.10	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA
		Account receivable	0.06	0.01	Transaction related to selling products
		Service fees	1.02	0.42	Receiving services from related company to support operations and the price is competitively similar to the market
		Revenue from selling water	0.22	0.67	Water: selling as regular operations which price refers from PWA
		Account receivable	0.01	0.09	Transaction related to selling products
36.Green Housing Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	0.34	0.52	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
		Electricity insurance and other security deposit	0.02	0.02	Transaction related to selling products
37.Good View Village Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Account receivable	0.10	0.06	Transaction related to selling products
		Other receivables	0.01	-	Transaction related to selling products



Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
38.Kanna Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other revenue – Result from selling chicken manure Other receivables	1.10	3.80	Selling products to related company which the price is competitive to the price sold to external
39.BSNS 2 Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water Electricity insurance and other security deposit	0.08	0.10	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
40.Baan Suay Namsai 18 Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling water Other receivables	0.12	0.14	- Water: selling as regular operations which price refers from PWA Transaction related to selling products
41.BSNS 10 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water Electricity insurance and other security deposit Account receivable Other revenue – meter installment fees	0.16	0.16	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
42.Inter Thai Construction Co., Ltd. (Formerly Book Tower (Thailand) Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Wage and other fees	-	91.16	Transaction related receiving management
43.Future Port Company Limited	<ul style="list-style-type: none"> <li>A subsidiary of Sinsukjai company limited, main shareholder of the Company</li> </ul>	Revenue from service – research and development	0.08	0.04	To provide service to related company to support business which the price is similar to external

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
44. My Green Property Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr. Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	0.47	0.54	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from Water: selling as regular operations which price refers from PWA
		Other revenue – meter installment fees	-	0.03	Transaction related to selling products
		Electricity insurance and other security deposit	-	0.10	Transaction related to selling products
		Account receivable	0.07	0.08	Transaction related to selling products
45. My Green Village Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr. Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling water	0.83	0.55	- Water: selling as regular operations which price refers from PWA
		Revenue from service – research and development	0.01	-	To provide service to related company to support business which the price is similar to external
		Account receivable	0.05	0.05	Transaction related to selling products
		Other receivables	0.03	-	Transaction related to selling products
46. Eucalyptus Technology Company Limited	<ul style="list-style-type: none"> <li>Close relatives of Mr. Yothin Dumnernchanvanit, committee and director of the Company, are Mr. Kitti Dumnernchanvanit, Ms. Napattanun Dumnernchanvanit and Mr. Nuttapond Dumnernchanvanit, director of related company</li> </ul>	Revenue from selling electricity and water	0.20	0.36	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
		Account receivable	0.03	0.06	Transaction related to selling products
47. Lake home1 (Suvarnabhumi) Company Limited	<ul style="list-style-type: none"> <li>Director of subsidiary of Industrial Water Supply is Mr. Piyachai Sangonchit, a director of related company</li> </ul>	Selling drinking water	-	0.01	Selling products to related company which the price is competitive to the price sold to external
48. Suan Mai Tawanork Company Limited	<ul style="list-style-type: none"> <li>Close relatives of Mr. Yothin Dumnernchanvanit, committee and director of the Company, are Mr. Kitti Dumnernchanvanit, Ms. Napattanun Dumnernchanvanit and Mr. Nuttapond Dumnernchanvanit, director of related company</li> </ul>	Revenue from selling electricity and water	0.04	0.03	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA
		Electricity insurance	0.01	0.01	Transaction related to purchasing products and receiving services

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
49.Sirarom 8 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	0.08	0.07	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
		Electricity insurance and other security deposit	-	0.05	Transaction related to selling products
		Account receivable	0.02	-	Transaction related to selling products
50.Sukhumvit 1 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling water	0.03	0.02	- Water: selling as regular operations which price refers from PWA
51.Sukhumvit 3 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling electricity and water	0.04	0.03	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA
		Electricity insurance and other security deposit	-	0.02	Transaction related to selling products
		Account receivable	0.01	-	Transaction related to selling products
52.MGC Logistics Center Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Other revenues – meter installation fees	0.01	-	Transaction related to selling products
		Revenue from selling water	0.02	-	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction		
			December 31, 2020	December 31, 2021			
53.MGT Dap Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Revenue from selling water	0.24	0.18	- Water: selling as regular operations which price refers from PWA		
		Revenue from service – research and development	0.01	0.01	To provide service to related company to support business which the price is similar to external		
		Rental fees	0.48	0.57	Asset rent from related company to support business operations which the price is competitive to market		
		Service fees	0.82	0.68	Receiving services from related company to support operations and the price is competitively similar to the market		
		Other receivables	0.03	-	Transaction related to selling products		
		Account receivable	-	0.02	Transaction related to selling products		
		Electricity insurance and other security deposit	-	0.03	Transaction related to selling products		
		Other payable	0.12	-	Transaction related to purchasing products and receiving services		
		Revenue from selling electricity and water	0.71	0.49	Selling products to related company - Electricity: selling product to regular customer which price refers from PEA - Water: selling as regular operations which price refers from PWA		
		Service fees	-	0.15	Transaction related to purchasing products and receiving services		
54.MGT Plaza Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Electricity insurance and other security deposit	-	0.01	Transaction related to selling products		
		Account receivable	-	0.02	Transaction related to selling products		
		Other payable	0.04	0.02	Transaction related to purchasing products and receiving services		
		Revenue from service – research and development	0.06	0.06	To provide service to related company to support business which the price is similar to external		
		Account receivable	0.03	0.06	Transaction related to performing services		
		55.Advance Pulp Mill 3 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> <li>Director of associated company: Burapa Power Holding Company Limited and Burapa Power Generation Company Limited, are Mr.Kitipun Jitpentham</li> </ul>	Revenue from service – research and development	0.06	0.06	To provide service to related company to support business which the price is similar to external
				Account receivable	0.03	0.06	Transaction related to performing services
				Revenue from service – research and development	0.06	0.06	To provide service to related company to support business which the price is similar to external
				Account receivable	0.03	0.06	Transaction related to performing services
				Revenue from service – research and development	0.06	0.06	To provide service to related company to support business which the price is similar to external
Account receivable	0.03			0.06	Transaction related to performing services		

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
56.I-Townland Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Selling drinking water	0.01	0.01	Drinking water: selling as regular operations which price is based on market price and as a similar rate with external parties
		Other payable	0.01	-	Transaction related to selling products
57.Double A Digital Synergy Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other revenues – Selling cleaning products	1.63	0.23	Selling products to related company which the price is competitive to the price sold to external
		Service fees	3.17	2.62	Receiving services from related company to support operations and the price is competitively similar to the market
58.Claremorris Consultants Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other receivables	0.30	-	Transaction related to selling products
		Other payable	0.30	0.24	Transaction related to purchasing products and receiving services
59.304 Industrial Park 12 Company Limited	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other expenses - transportation	14.56	-	Receiving services from related company to support operations and the price is competitively similar to the market
		Rental fees	0.308	-	Receiving services from related company to support operations and the price is competitively similar to the market
60.Paper Tree Chainat Company Limited.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other service fees	1.11	-	Receiving services from related company to support operations and the price is competitively similar to the market
		Purchasing biomass materials	6.57	1.83	To purchase products from related company to support production process which the price is competitive to market
61.Chao Suan Kaset Co.,Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Other revenues – By product (Chicken manure)	-	0.54	Selling products to related company which the price is competitive to the price sold to external
		Other receivables	-	0.46	Transaction related to selling products
62.Mai Dee Sriprachin Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr.Yothin Dumnerchanvanit, main shareholder of indirectly related company</li> </ul>	Account payable	1.24	-	Transaction related to purchasing products and receiving services
		Purchasing biomass materials	0.02	0.03	To purchase products from related company to support production process which the price is competitive to market
		Purchasing biomass materials	0.03	0.07	To purchase products from related company to support production process which the price is competitive to market
		Account payable	0.01	-	Transaction related to purchasing products and receiving services

Related Company	Relevance	Transaction	Value (Million Baht)		Reason and Necessity of Connected Transaction
			December 31, 2020	December 31, 2021	
63. Biomass Supply Co., Ltd.	<ul style="list-style-type: none"> <li>Director and management of the Company are Mr. Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Service fees	0.04	-	Receiving services from related company to support operations and the price is competitively similar to the market
64. Double A Group Cooperative Limited	<ul style="list-style-type: none"> <li>A subsidiary of Sinsukjai company limited, main shareholder of the Company</li> <li>Director and management of the Company are Mr. Yothin Dumnernchanvanit, main shareholder of indirectly related company</li> </ul>	Other payable	1.30	0.70	Transaction related to receiving services
65. Future Resources Technology Company Limited (Formerly Paper Tree Holding Company Limited)	<ul style="list-style-type: none"> <li>Director/ management and main shareholder of the Company are Mr. Yothin Dumnernchanvanit, director and main shareholder of related company</li> </ul>	Other revenues – By product (Chicken manure)	-	9.61	Selling products to related company which the price is competitive to the price sold to external
		Purchasing biomass materials/ raw materials for production	-	42.90	To purchase products from related company to support production process which the price is competitive to market
		Account payable	-	1.10	Transaction related to selling products
		Advance payment of goods and services to related company	-	22.92	Transaction related to raw materials in production
		Other receivables	-	9.61	Transaction related to selling products
		Account receivable	-	0.03	Transaction related to selling products
66. Inter Stevedoring 5 Company Limited	<ul style="list-style-type: none"> <li>Director/ management and main shareholder of the Company are Mr. Yothin Dumnernchanvanit, director and main shareholder of indirect related company</li> </ul>	Revenue from service – research and development	-	0.02	To provide service to related company to support business which the price is similar to external
67. 304 Industrial Park 18 Company Limited (Formerly Biomass Electricity Company Limited)	<ul style="list-style-type: none"> <li>Director of associated company is Mr. Kitiphun Jitpentham and Mr. Jatupon Dumnernchanvanit, close relative of Mr. Yothin Dumnernchanvanit. Those are director of Itown Holding Public Company Limited, main shareholder of related company</li> </ul>	Land lease	-	2.30	Asset rent from related company to support business operations which the price is competitive to market
		Other payable	-	2.30	Transaction related to purchasing products and receiving services

## 9.2.2 Connected transactions that are not normal business transactions or transactions that support the Company's business

At the end of 2020, the Company had 1 connected transaction pending which is not main or supporting business. Yet, at the end of 2021, there is no outstanding pending as follow:

### 9.2.2.1 Reversal of assets are classified as held for sale assets – investments in associates as “share receivables from related parties.

Related Company	Relevance	Transaction	Value (Million Baht)	
			December 31, 2020	December 31, 2021
1. Paper Tree Holding Company Limited (“PTH”)	• The director, managing director, and the main shareholder of the Company - Mr. Yothin Dumnernchanvanit	Common share payable from related business	667.20	-

Ordinary shares receivable from related parties are transactions arising from the reversal of assets. They are classified as held for sale asset which was caused by the company is in the process of entering into a transaction for disposing of investment in Kanna Company Limited ordinary shares. It is an associated company since 2019. However, the transaction is not completed. At the Extraordinary Meeting of Shareholders of Kanna Company Limited held on September 16, 2020, the resolution is to do specific capital reduction of the Company with the amount of THB 667 million and registered the capital reduction with the Ministry of Commerce on November 2, 2020. Therefore, the investment in Kanna Company Limited valued of THB 667 million was reversed as ordinary shares receivable from related parties. On February 17, 2021, they propose to the Board of Directors' meeting to consider and approve the disposal of all KN ordinary shares to Paper Tree Holding Company Limited (“PTH”), a connected person of the Company. The Company owns 25,400,000 shares at a par value of THB 10 per share, totaling 20.31% of the registered and paid-up capital of KN. They are worth of THB 1 million. The Committee considered and reviewed the reasons and necessity of the transaction as well as the price for entering into the said transaction. The reason is because KN has a continuous operating loss and the KN investment value in book values equivalent to THB 0 which the auditor has set a deficit since 2017

In regard to this transaction, the Corporate Group practiced the guidelines stated in the Stock Exchange of Thailand as well as rules and regulation of The Securities and Exchange Commission. The Corporate Group also disclosed the connected transactions according to The Securities and Exchange Commission announcement, Tor-jor 21/2008, It refers from “Connected Transaction” and Stock Exchange of Thailand, “Disclosure and Connected Transaction Practice 2013” (“Connected Transaction Announcement”) categorized in 4th Type. This type describes acquiring or selling assets and services which size is less than 3.0% of a net tangible asset, 3% of NTA – THB 327 Million. As of Quarter 4/2020, the medium-size consolidated financial statement must get approval to the connected transaction from the Board of Director Meeting.



A close-up photograph of two people in business attire reviewing documents. One person is holding a pen over a document, while the other is holding a sheet of paper. The scene is set on a reflective white surface. A large blue hexagonal graphic is overlaid on the bottom left, containing the text 'Part 3' and 'Financial Statements'.

# Part 3

---

## Financial Statements

# Independent Auditor's Report

To the Shareholders of National Power Supply Public Company Limited

## Opinion

I have audited the accompanying consolidated financial statements of National Power Supply Public Company Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2021, and the related consolidated statements of comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and have also audited the separate financial statements of National Power Supply Public Company Limited for the same period.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of National Power Supply Public Company Limited and its subsidiaries and of National Power Supply Public Company Limited as at 31 December 2021, their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

## Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I am independent of the Group in accordance with the Code of Ethics for Professional Accountants as issued by the Federation of Accounting Professions as relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

## Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group'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 management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the 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 Thai Standards on Auditing 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 financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's 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 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 to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the 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 those charged with governance 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 am responsible for the audit resulting in this independent auditor's report.



Supanee Triyantakul  
Certified Public Accountant (Thailand) No. 4498

EY Office Limited  
Bangkok: 22 February 2022

## National Power Supply Public Company Limited and its subsidiaries

### Statement of financial position

As at 31 December 2021

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
<b>Assets</b>					
<b>Current assets</b>					
Cash and cash equivalents	7	3,588,253,281	721,924,539	3,154,620,559	133,607,247
Restricted bank deposits within one year		-	92,427,830	-	16,375,997
Trade and other receivables					
Related parties	6	1,196,976,614	747,439,092	908,994,390	660,139,186
Unrelated parties		1,737,982,811	1,883,098,200	885,044,586	872,783,877
Total trade and other receivables	8	2,934,959,425	2,630,537,292	1,794,038,976	1,532,923,063
Share capital receivables from related party	14.2	-	667,200,000	-	667,200,000
Dividend receivable from subsidiary		-	-	9,000,000	-
Short-term loans to related parties	6	-	-	75,014,486	-
Advances for goods and services paid to related parties	6	44,380,827	14,837,244	44,402,251	14,837,244
Advances for goods paid to unrelated parties		1,045,517	259,895,141	-	-
Inventories	9	1,551,533,760	804,894,001	882,905,577	327,363,449
Current tax assets		62,220,719	57,969,614	26,177,953	28,839,676
Current financial assets	10	327,499,274	297,693	-	-
Other current assets	11	248,847,379	295,684,563	157,266,613	121,225,146
		8,758,740,182	5,545,667,917	6,143,426,415	2,842,371,822
Assets held for sale	14.1	680,127,869	-	700,000,000	-
<b>Total current assets</b>		<b>9,438,868,051</b>	<b>5,545,667,917</b>	<b>6,843,426,415</b>	<b>2,842,371,822</b>
<b>Non-current assets</b>					
Restricted bank deposits		-	55,621,279	-	-
Pledged bank deposits	12	276,929,224	271,564,312	270,000,000	270,000,000
Long-term loans to related party	6	-	-	-	2,500,000
Non-current financial assets	10	223,318,930	126,472,267	-	-
Investments in subsidiaries	13	-	-	17,218,699,648	16,196,942,425
Investment in joint ventures	15	355,230,786	221,628,762	399,637,470	268,499,970
Investment properties - land for rent	16	14,647,500	14,647,500	88,890,000	88,890,000
Property, plant and equipment	17	19,532,002,206	20,734,009,162	5,865,984,583	5,992,204,576
Intangible assets - computer software		3,647,723	4,697,809	1,781,433	2,026,593
Right to operate a coal mining business	18	315,539,080	315,539,080	-	-
Deferred tax assets	29	553,133,265	413,252,124	212,165,458	218,865,157
Other non-current assets					
Guarantee for power purchase agreement		63,232,000	62,632,000	-	-
Deferred expenses	19	46,267,387	45,480,752	35,179,168	39,839,652
Others		28,348,685	23,354,267	22,484,639	21,563,698
Total other non-current assets		137,848,072	131,467,019	57,663,807	61,403,350
<b>Total non-current assets</b>		<b>21,412,296,786</b>	<b>22,288,899,314</b>	<b>24,114,822,399</b>	<b>23,101,332,071</b>
<b>Total assets</b>		<b>30,851,164,837</b>	<b>27,834,567,231</b>	<b>30,958,248,814</b>	<b>25,943,703,893</b>

The accompanying notes are an integral part of the financial statements.

## National Power Supply Public Company Limited and its subsidiaries

### Statement of financial position (continued)

As at 31 December 2021

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
<b>Liabilities and shareholders' equity</b>					
<b>Current liabilities</b>					
Bank overdrafts and short-term loans from financial institutions	20	-	123,578,420	-	123,578,420
Trade and other payables					
Related parties	6	87,710,084	280,497,808	481,850,513	241,143,536
Unrelated parties		1,126,357,384	1,014,781,826	755,219,173	388,687,250
Total trade and other payables	21	1,214,067,468	1,295,279,634	1,237,069,686	629,830,786
Dividend payables to related parties	6	1,000,882,194	-	1,000,882,194	-
Short-term loans from related parties	6	131,137,500	-	1,722,350,563	1,508,491,279
Current portion of long-term lease liabilities		10,019,275	9,902,942	5,535,719	4,400,406
Current portion of long-term loans	23	-	677,788,176	-	-
Current portion of long-term debentures	24	1,729,785,916	3,896,973,980	1,753,285,916	3,896,973,980
Income tax payable		12,224,720	7,604,625	-	-
Current financial liabilities		-	50,793,584	-	50,793,584
Other current liabilities	22	216,995,275	158,942,462	74,842,898	67,329,312
		4,315,112,348	6,220,863,823	5,793,966,976	6,281,397,767
Liabilities directly associated with the assets held for sale	14.1	41,455,591	-	-	-
<b>Total current liabilities</b>		<b>4,356,567,939</b>	<b>6,220,863,823</b>	<b>5,793,966,976</b>	<b>6,281,397,767</b>
<b>Non-current liabilities</b>					
Long-term lease liabilities - net of current portion		192,285,869	164,694,287	36,586,503	37,670,270
Long-term loans - net of current portion	23	-	1,406,841,008	-	-
Long-term debentures - net of current portion	24	14,767,335,717	8,345,401,268	14,837,935,717	8,345,401,268
Provision for long-term employee benefits	25	184,930,661	204,067,873	77,653,384	84,303,491
Electricity usage and other guarantees		59,558,604	41,311,616	48,585,106	30,327,998
Deferred tax liabilities	29	21,144,621	94,185,560	-	-
Other non-current liabilities		24,543,783	33,026,614	-	-
<b>Total non-current liabilities</b>		<b>15,249,799,255</b>	<b>10,289,528,226</b>	<b>15,000,760,710</b>	<b>8,497,703,027</b>
<b>Total liabilities</b>		<b>19,606,367,194</b>	<b>16,510,392,049</b>	<b>20,794,727,686</b>	<b>14,779,100,794</b>

The accompanying notes are an integral part of the financial statements.

## National Power Supply Public Company Limited and its subsidiaries

### Statement of financial position (continued)

As at 31 December 2021

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
<b>Shareholders' equity</b>					
<b>Share capital</b>					
Registered					
1,000,000,000 ordinary shares of Baht 10 each		10,000,000,000	10,000,000,000	10,000,000,000	10,000,000,000
Issued and fully paid					
935,403,920 ordinary shares of Baht 10 each		9,354,039,200	9,354,039,200	9,354,039,200	9,354,039,200
Differences on reorganisation of business					
of group companies	27	(350,701,581)	(336,813,880)	2,258,395	16,146,096
Retained earnings					
Appropriated - statutory reserve	26	353,623,282	318,809,521	353,623,282	318,809,521
Unappropriated		1,871,529,266	2,021,293,012	453,600,251	1,475,608,282
Other component of equity					
Exchange differences on translation					
of financial statements in foreign currency		16,307,476	(33,152,671)	-	-
<b>Total shareholders' equity</b>		<b>11,244,797,643</b>	<b>11,324,175,182</b>	<b>10,163,521,128</b>	<b>11,164,603,099</b>
<b>Total liabilities and shareholders' equity</b>		<b>30,851,164,837</b>	<b>27,834,567,231</b>	<b>30,958,248,814</b>	<b>25,943,703,893</b>
		-	-	-	-

The accompanying notes are an integral part of the financial statements.

## National Power Supply Public Company Limited and its subsidiaries

### Statement of comprehensive income

For the year ended 31 December 2021

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
<b>Continuing operations</b>					
<b>Profit or loss:</b>					
<b>Revenues</b>					
Sales of electricity, steam and water		13,277,918,712	12,539,933,005	8,749,861,537	8,477,111,304
Sales of ethanol		1,877,930,073	2,841,972,938	-	-
Sales of other goods		392,599,347	172,744,350	2,088,323,999	1,936,871,937
Service income		99,746,244	62,672,041	191,737,480	114,478,083
Other income					
Dividend income	13	-	-	475,643,927	832,755,367
Exchange gains		-	-	-	7,363,850
Gain on sale of investment in subsidiary		-	25,476,777	-	-
Others		5,349,697	101,955,877	41,755,978	41,253,161
<b>Total revenues</b>		<b>15,653,544,073</b>	<b>15,744,754,988</b>	<b>11,547,322,921</b>	<b>11,409,833,702</b>
<b>Expenses</b>					
Cost of electricity, steam and water sold		10,393,730,350	9,044,463,899	7,367,681,227	6,677,649,322
Cost of ethanol sold		1,926,162,734	2,609,436,011	-	-
Cost of other goods sold		344,743,997	164,032,428	2,075,909,274	1,917,642,748
Cost of services		175,156,530	66,412,800	215,994,990	177,143,644
Selling and distribution expenses		35,476,254	37,204,053	-	-
Administrative expenses		463,840,542	505,702,606	311,940,475	339,346,608
Factory overheads during the production halt		114,821,077	168,374,073	-	-
Loss on sales of investment in subsidiary		-	-	-	121,424,769
Impairment loss on investments in subsidiaries	13	-	-	53,145,457	70,000,000
Exchange losses		4,056,490	22,531,455	29,969,702	-
Impairment loss (reversal) on financial assets		(8,007,104)	15,546,767	(6,818,628)	12,289,405
<b>Total expenses</b>		<b>13,449,980,870</b>	<b>12,633,704,092</b>	<b>10,047,822,497</b>	<b>9,315,496,496</b>
<b>Profit from operating activities</b>		<b>2,203,563,203</b>	<b>3,111,050,896</b>	<b>1,499,500,424</b>	<b>2,094,337,206</b>
Share of profits from investment in joint venture	15.2	2,464,524	442,777	-	-
Finance income		22,880,353	13,863,397	6,671,588	6,017,576
Finance cost		(848,363,833)	(913,976,708)	(804,466,569)	(794,242,615)
<b>Profit before income tax</b>		<b>1,380,544,247</b>	<b>2,211,380,362</b>	<b>701,705,443</b>	<b>1,306,112,167</b>
Income tax benefits (expenses)	29	173,953,918	19,950,124	(5,430,215)	138,057,499
<b>Profit for the year from continued operation</b>		<b>1,554,498,165</b>	<b>2,231,330,486</b>	<b>696,275,228</b>	<b>1,444,169,666</b>
<b>Discontinued operation</b>					
Loss for the year from discontinued operation		-	(53,854,314)	-	-
<b>Profit for the year</b>		<b>1,554,498,165</b>	<b>2,177,476,172</b>	<b>696,275,228</b>	<b>1,444,169,666</b>

The accompanying notes are an integral part of the financial statements.



## National Power Supply Public Company Limited and its subsidiaries

### Statement of comprehensive income (continued)

For the year ended 31 December 2021

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
<b>Other comprehensive income:</b>					
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>					
Exchange differences on translation of financial statements in foreign currency		49,460,147	(8,452,340)	-	-
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods</i>					
Actuarial gain	25	23,874,196	-	6,347,419	-
Less: Income tax effect	29	(4,774,839)	-	(1,269,484)	-
		19,099,357	-	5,077,935	-
<b>Other comprehensive income for the year</b>		68,559,504	(8,452,340)	5,077,935	-
<b>Total comprehensive income for the year</b>		1,623,057,669	2,169,023,832	701,353,163	1,444,169,666
<b>Basic earnings per share</b>					
Profit attributable to equity holders of the Company	31	1.66	2.33	0.74	1.54
<b>Basic earnings per share from continued operation</b>					
Profit attributable to equity holders of the Company		1.66	2.39	0.74	1.54

The accompanying notes are an integral part of the financial statements.

## National Power Supply Public Company Limited and its subsidiaries

### Cash flow statement

For the year ended 31 December 2021

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
<b>Cash flows from (used in) operating activities</b>				
Profit before tax	1,380,544,247	2,211,380,362	701,705,443	1,306,112,167
Loss before tax from discontinued operation	-	(53,854,314)	-	-
Profit before tax	1,380,544,247	2,157,526,048	701,705,443	1,306,112,167
Adjustments to reconcile profit before income tax to net cash provided by (paid) from operating activities:				
Depreciation expenses	1,540,973,175	1,510,243,092	555,958,116	528,551,046
Amortisation expenses and amortisation of prepaid expenses	41,313,918	40,224,988	34,600,789	35,333,463
Impairment loss (reversal) on financial assets	(8,007,104)	15,546,767	(6,818,628)	12,289,405
Reduction of inventories to net realisable value (reversal)	11,820,000	4,545,643	108,272	(763,100)
(Gain) loss on sales of investment in subsidiary	-	(25,476,777)	-	121,424,769
Impairment loss on investments in subsidiaries	-	-	53,145,457	70,000,000
Share of profits from investment in joint venture	(2,464,524)	(442,777)	-	-
(Gain) loss from disposal/write-off of machinery and equipment	4,627,324	(15,342,398)	(2,012,074)	1,070,444
Revenue from financial support from the Energy Conservation Promotion Fund	(4,272,049)	(4,273,799)	-	-
Provision for long-term employee benefits	20,015,895	13,039,107	6,858,066	6,841,840
Gain on disposal assets held for sale	(1,000,000)	-	(1,000,000)	-
Unrealised exchange (gains) losses	4,069,423	32,536,283	34,898,079	(11,650,125)
Unrealised loss on changes in fair value of forward contracts	-	50,793,584	-	50,793,584
Dividend income	-	-	(475,643,927)	(832,755,367)
Finance income	(22,880,353)	(13,863,397)	(6,671,588)	(6,017,576)
Finance cost	816,566,492	888,565,055	767,673,828	763,468,588
Profit from operating activities before changes in operating assets and liabilities	3,781,306,444	4,653,621,419	1,662,801,833	2,044,699,138
Operating assets (increase) decrease				
Trade and other receivables	(320,517,685)	(373,110,787)	(255,282,420)	549,415,153
Advances for goods and services	229,306,041	9,030,049	(29,565,007)	8,458,881
Inventories	(820,297,296)	203,934,563	(555,650,400)	155,457,293
Other current assets	34,134,723	207,365,131	(32,690,407)	(2,602,373)
Other non-current assets	(19,197,418)	(3,403,877)	804,058	1,918,473
Operating liabilities increase (decrease)				
Trade and other payables	(204,767,238)	(3,806,413)	536,665,378	(206,640,444)
Other current liabilities	8,261,463	(9,695,097)	(43,279,997)	(1,486,212)
Provision for long-term employee benefits	(10,067,348)	(11,835,606)	(7,160,754)	(2,259,280)
Electricity usage and other guarantees	18,246,988	14,937,105	18,257,108	14,871,465
Cash flows from operating activities	2,696,408,674	4,687,036,487	1,294,899,392	2,561,832,094
Interest received	22,880,353	13,863,397	7,656,723	5,860,898
Interest paid	(800,261,362)	(876,443,292)	(747,563,217)	(764,544,958)
Cash received from income tax refundable	73,985,552	56,639,039	25,488,618	35,029,255
Cash paid for corporate income tax	(85,909,898)	(64,400,262)	(26,177,953)	(28,839,676)
<b>Net cash flows from operating activities</b>	<b>1,907,103,319</b>	<b>3,816,695,369</b>	<b>554,303,563</b>	<b>1,809,337,613</b>

The accompanying notes are an integral part of the financial statements.

## National Power Supply Public Company Limited and its subsidiaries

### Cash flow statement (continued)

For the year ended 31 December 2021

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
<b>Cash flows from (used in) investing activities</b>				
(Increase) decrease in restricted bank deposits	148,049,109	(48,922,337)	16,375,997	(9,383,336)
Increase in pledged bank deposits	(5,364,912)	(8,725)	-	-
Increase in short-term loans to related parties	-	-	(73,956,750)	-
Decrease in long-term loans to related party	-	-	2,500,000	-
Cash paid for acquisition of current financial assets	(421,301,581)	-	-	-
Cash paid for acquisition of non-current financial assets	(97,627,793)	-	-	-
Cash received from capital decrease in subsidiary	-	-	-	134,500,000
Cash paid for additional investments in subsidiaries	-	-	(1,777,770,470)	(1,254,755,297)
Cash received from sale of a subsidiary, net of cash disposed	-	120,750,000	-	1,603,179,980
Cash received from the discontinued subsidiaries	2,761,170	-	2,761,170	36,924,824
Cash paid for additional investment in joint venture	(131,137,500)	(44,250,000)	(131,137,500)	(44,250,000)
Cash received from share capital receivables - related party	667,200,000	-	667,200,000	-
Cash received from disposals of assets held for sale	1,000,000	-	1,000,000	-
Cash paid for acquisitions of property, plant and equipment	(737,048,678)	(871,368,352)	(375,828,301)	(512,613,535)
Cash received from disposals of machinery and equipment	4,624,603	443,431,597	5,758,240	965,283
Cash paid for deposit	(5,406,866)	381,688	(2,028,780)	1,060,900
Dividend received	-	-	466,643,927	832,755,367
<b>Net cash flows from (used in) investing activities</b>	<b>(574,252,448)</b>	<b>(399,986,129)</b>	<b>(1,198,482,467)</b>	<b>788,384,186</b>
<b>Cash flows from (used in) financing activities</b>				
Decrease in bank overdrafts and short-term loans				
from financial institutions	(123,578,420)	(770,981,796)	(123,578,420)	(665,444,792)
Increase (decrease) in short-term loans from related parties	131,137,500	-	178,207,766	(499,202,397)
Repayment of liabilities under lease agreements	(24,658,983)	(20,339,244)	(7,445,830)	(5,712,165)
Repayment of long-term loans from financial institutions	(2,089,935,339)	(704,244,286)	-	-
Repayment of long-term debentures	(3,900,000,000)	(4,706,700,000)	(3,900,000,000)	(4,706,700,000)
Cash paid for issuance of long-term debentures	(80,438,360)	(36,146,272)	(80,438,360)	(36,146,272)
Cash received from issuance of long-term debentures	8,300,000,000	3,681,900,000	8,300,000,000	3,681,900,000
Dividend paid	(701,553,014)	(551,888,313)	(701,552,940)	(551,888,313)
<b>Net cash flows from (used in) financing activities</b>	<b>1,510,973,384</b>	<b>(3,108,399,911)</b>	<b>3,665,192,216</b>	<b>(2,783,193,939)</b>
<b>Decrease in translation adjustments</b>	<b>48,850,670</b>	<b>1,261,201</b>	<b>-</b>	<b>-</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>2,892,674,925</b>	<b>309,570,530</b>	<b>3,021,013,312</b>	<b>(185,472,140)</b>
Cash and cash equivalents at the beginning of the year	721,924,539	412,354,009	133,607,247	319,079,387
Cash and cash equivalents at the end of the year of assets held for sale	(26,346,183)	-	-	-
<b>Cash and cash equivalents at the end of the year</b>	<b>3,588,253,281</b>	<b>721,924,539</b>	<b>3,154,620,559</b>	<b>133,607,247</b>
	-	-	-	-
<b>Supplemental cash flows information</b>				
Non-cash items consist of:				
Decrease in account payable from purchases of				
machinery and equipment	(121,173,795)	(163,210,219)	(52,535,708)	(86,057,840)
Transfer of inventories to machinery and equipment	-	39,209,688	-	37,922,543
Additions to right-of-use assets and lease liabilities	42,100,584	9,445,104	5,120,280	9,445,104

The accompanying notes are an integral part of the financial statements.

# National Power Supply Public Company Limited and its subsidiaries

Statement of changes in shareholders' equity  
For the year ended 31 December 2021

(Unit: Baht)

		Consolidated financial statements					Total shareholders' equity
		Equity attributable to the parent's shareholders			Other component of equity		
Note		Issued and fully paid share capital	Differences on reorganisation of business of group companies	Retained earnings	Exchange differences on translation of financial statements in foreign currency		
				Appropriated - statutory reserve	Unappropriated		
	<b>Balance as at 1 January 2020</b>	9,354,039,200	(336,813,880)	246,601,038	467,913,769	(24,700,331)	9,707,039,796
	Profit for the year	-	-	-	2,177,476,172	-	2,177,476,172
	Other comprehensive income for the year	-	-	-	-	(8,452,340)	(8,452,340)
	Total comprehensive income for the year	-	-	-	2,177,476,172	(8,452,340)	2,169,023,832
26	Transfer of unappropriate retained earnings to statutory reserve	-	-	72,208,483	(72,208,483)	-	-
32	Dividend paid	-	-	-	(551,888,446)	-	(551,888,446)
	<b>Balance as at 31 December 2020</b>	9,354,039,200	(336,813,880)	318,809,521	2,021,293,012	(33,152,671)	11,324,175,182
	<b>Balance as at 1 January 2021</b>	9,354,039,200	(336,813,880)	318,809,521	2,021,293,012	(33,152,671)	11,324,175,182
	Profit for the year	-	-	-	1,554,498,165	-	1,554,498,165
	Other comprehensive income for the year	-	-	-	19,099,357	49,460,147	68,559,504
	Total comprehensive income for the year	-	-	-	1,573,597,522	49,460,147	1,623,057,669
13	Transfer differences on reorganisation of business of group companies to retained earnings	-	(13,887,701)	-	13,887,701	-	-
26	Transfer of unappropriate retained earnings to statutory reserve	-	-	34,813,761	(34,813,761)	-	-
32	Dividend paid	-	-	-	(1,702,435,208)	-	(1,702,435,208)
	<b>Balance as at 31 December 2021</b>	9,354,039,200	(350,701,581)	353,623,282	1,871,529,266	16,307,476	11,244,797,643

The accompanying notes are an integral part of the financial statements.

## National Power Supply Public Company Limited and its subsidiaries

### Statement of changes in shareholders' equity (continued)

For the year ended 31 December 2021

(Unit: Baht)

	Note	Separate financial statements					Total shareholders' equity
		Issued and fully paid share capital	Differences on reorganisation of business of group companies	Appropriated - statutory reserve	Retained earnings - Unappropriated	Unappropriated	
<b>Balance as at 1 January 2020</b>		9,354,039,200	16,146,096	246,601,038	655,535,411	10,272,321,745	
Profit for the year		-	-	-	1,444,169,666	1,444,169,666	
Other comprehensive income for the year		-	-	-	-	-	
Total comprehensive income for the year		-	-	-	1,444,169,666	1,444,169,666	
Transfer of inappropriate retained earnings to statutory reserve	26	-	-	72,208,483	(72,208,483)	-	
Dividend paid	32	-	-	-	(551,888,312)	(551,888,312)	
<b>Balance as at 31 December 2020</b>		9,354,039,200	16,146,096	318,809,521	1,475,608,282	11,164,603,099	
<b>Balance as at 1 January 2021</b>		9,354,039,200	16,146,096	318,809,521	1,475,608,282	11,164,603,099	
Profit for the year		-	-	-	696,275,228	696,275,228	
Other comprehensive income for the year		-	-	-	5,077,935	5,077,935	
Total comprehensive income for the year		-	-	-	701,353,163	701,353,163	
Transfer differences on reorganisation of business of group companies to retained earnings	13	-	(13,887,701)	-	13,887,701	-	
Transfer of inappropriate retained earnings to statutory reserve	26	-	-	34,813,761	(34,813,761)	-	
Dividend paid	32	-	-	-	(1,702,435,134)	(1,702,435,134)	
<b>Balance as at 31 December 2021</b>		9,354,039,200	2,258,395	353,623,282	453,600,251	10,163,521,128	

The accompanying notes are an integral part of the financial statements.

# National Power Supply Public Company Limited and its subsidiaries

## Notes to consolidated financial statements

For the year ended 31 December 2021

### 1. General information

National Power Supply Public Company Limited (“the Company”) is a public company incorporated and domiciled in Thailand. Its major shareholders are Future Energy Holdings Company Limited and Sinsukjai Company Limited, which were incorporated in Thailand, and Cogen Investments Limited, which was incorporated in British Virgin Islands, holding 64 percent, 26 percent and 10 percent of the Company’s share capital, respectively. The Company is principally engaged in the generation and supply of electricity, steam and water for industrial use and its registered address is 206, Moo 4, Tha Toom, Sri Maha Phote, Prachinburi.

### 2. Basis of preparation

2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Professions Act B.E. 2547 and their presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development, issued under the Accounting Act B.E. 2543.

The financial statements in Thai language are the official statutory financial statements of the Company. The financial statements in English language have been translated from the Thai language financial statements.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

### 2.2 Basis of consolidation

a) The consolidated financial statements include the financial statements of National Power Supply Public Company Limited (“the Company”) and the following subsidiary companies (“the subsidiaries”) (collectively as “the Group”):

Company’s name	Nature of business	Country of incorporation	Percentage of shareholding	
			2021 Percent	2020 Percent
<b><u>Subsidiaries held directly by the Company</u></b>				
E 85 Company Limited	Production and distribution of ethanol	Thailand	99.99	99.99
National Power Plant 5 Company Limited	Generation and supply of electricity and steam for industrial use and leaching characteristics of fly ash	Thailand	99.99	99.99
National Power Plant 5A Company Limited	Generation and supply of electricity and steam for industrial use	Thailand	99.99	99.99

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2021 Percent	2020 Percent
NPS Ocean Star Company Limited (Liquidation has been completed on 27 January 2021)	Overseas transportation by vessel	Thailand	-	99.99
National Power Plant 2 Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
Future Greenergy Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
Namsai 304 Company Limited	Production and sale of water for industrial use	Thailand	99.99	99.99
Integrated Research Center Company Limited	Provision of research, development and testing services to improve efficiency and quality in industry	Thailand	99.99	99.99
National Power Plant 12 Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
NPS Solar Rooftop Company Limited (Liquidation has been completed on 8 July 2021)	Generation and supply of electricity	Thailand	-	99.99
CHP 1 Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
CHP 3 Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
CHP 5 Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
IPP IP 7 Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
Sonish Starch Technology Company Limited	Production and distribution of tapioca starch products	Thailand	99.99	99.99
PT Utami Jaya Mulia	Production and distribution of coal	Indonesia	99.00	99.00
Ocean Star Holding Company Limited	Holding investment	Hongkong	100.00	100.00
Tha Toom Biogas Community Power Plant	Generation and supply of electricity	Thailand	99.99	99.99
Phanom Sarakham Biogas Community Power Plant Company Limited	Generation and supply of electricity	Thailand	99.99	99.99
Tha Toom Community Power Plant	Generation and supply of electricity	Thailand	99.99	99.99
Lam Sonthi Community Power Plant	Generation and supply of electricity	Thailand	99.99	99.99
Lan Sak Community Power Plant	Generation and supply of electricity	Thailand	99.99	99.99
NPS Solar Company Limited	Generation and supply of electricity	Thailand	99.99	-
<b><u>Subsidiary held through National Power Plant 5 Company Limited</u></b>				
National Power Plant 3 Company Limited	Generation and supply of electricity and steam for industrial use and stevedoring service	Thailand	99.99	99.99
<b><u>Subsidiary held through Namsai 304 Company Limited</u></b>				
Industrial Water Supply Company Limited	Production and sale of water for industrial use	Thailand	99.99	-
<b><u>Subsidiary held through Ocean Star Holding Company Limited</u></b>				
Ocean Cape Company Limited	Overseas transportation by vessel	Hongkong	100.00	100.00
Alizay 2 Shipping S.A.	Overseas transportation by vessel	The Republic of Panama	100.00	100.00
NPS Cape Shipping S.A.	Overseas transportation by vessel	The Republic of Panama	100.00	100.00

- b) The Company is deemed to have control over an investee or subsidiaries if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.
- c) Subsidiaries are fully consolidated, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases.



- d) The financial statements of the subsidiaries are prepared using the same significant accounting policies as the Company.
  - e) The assets and liabilities in the financial statements of overseas subsidiary companies are translated to Baht using the exchange rate prevailing on the end of reporting period, and revenues and expenses translated using monthly average exchange rates. The resulting differences are shown under the caption of “Exchange differences on translation of financial statements in foreign currency” in the statement of changes in shareholders’ equity.
  - f) Material balances and transactions between the Group have been eliminated from the consolidated financial statements.
  - g) Non-controlling interests represent the portion of profit or loss and net assets of the subsidiaries that are not held by the Company and are presented separately in the consolidated profit or loss and within equity in the consolidated statement of financial position.
- 2.3 The separate financial statements present investments in subsidiaries and joint ventures under the cost method.

### 3. New financial reporting standards

#### a) Financial reporting standards that became effective in the current year

During the year, the Group has adopted the revised financial reporting standards and interpretations which are effective for fiscal years beginning on or after 1 January 2021. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The adoption of these financial reporting standards does not have any significant impact on the Group’s financial statements.

#### b) Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2022

The Federation of Accounting Professions issued a number of revised financial reporting standards, which are effective for fiscal years beginning on or after 1 January 2022. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and, for some standards, providing temporary reliefs or temporary exemptions for users.

The management of the Group believes that adoption of these amendments will not have significant impact on the Group’s financial statements.

#### **4. Significant accounting policies**

##### **4.1 Revenue recognition**

###### *Sales of goods*

Sales of goods are recognised when the significant risks and rewards of ownership of the goods have passed to the buyer. Sales are the invoiced value, excluding value added tax, of goods supplied after deducting discounts and allowances.

###### *Rendering of services*

Service revenue is recognised when services have been rendered taking into account the stage of completion.

###### *Interest income*

Interest income is calculated using the effective interest method and recognised on an accrual basis. The effective interest rate is applied to the gross carrying amount of a financial asset, unless the financial assets subsequently become credit-impaired when it is applied to the net carrying amount of the financial asset (net of the expected credit loss allowance).

###### *Finance cost*

Interest expense from financial liabilities at amortised cost is calculated using the effective interest method and recognised on an accrual basis.

###### *Dividends*

Dividends are recognised when the right to receive the dividends is established.

##### **4.2 Cash and cash equivalents**

Cash and cash equivalents consist of cash in hand and at banks, and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.

##### **4.3 Inventories**

Finished goods are valued at the lower of cost (under the weighted average method) and net realisable value and includes all production costs and attributable factory overheads.

Raw materials, chemicals, spare parts and factory supplies are valued at the lower of cost (under the first-in, first-out method for coal and weighted average method for other parts of inventories) and net realisable value and are charged to production costs whenever consumed.

#### 4.4 Investments in subsidiaries and joint ventures

Investments in joint ventures are accounted for in the consolidated financial statements using the equity method.

Investments in subsidiaries and joint ventures are accounted for in the separate financial statements using the cost method.

#### 4.5 Investment properties

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost less accumulated depreciation and allowance for loss on impairment (if any).

On disposal of investment properties, the difference between the net disposal proceeds and the carrying amount of the asset is recognised in profit or loss in the period when the asset is derecognised.

#### 4.6 Property, plant and equipment/Depreciation

Land is stated at cost. Buildings and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any).

Depreciation of plant and equipment are calculated by reference to their costs, on the straight-line basis over the following estimated useful lives:

Land improvement	20 years and 30 years
Power plant, buildings and machinery	10 - 40 years
Tools and equipment	5 - 20 years
Furniture, fixtures and office equipment	5 years and 10 years
Vehicles	3 - 5 years, 8 - 12 years and 19 years

Depreciation is recognised as expense in profit or loss.

No depreciation is provided on land and assets under installation and construction.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in profit or loss when the asset is derecognised.

#### 4.7 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective assets. All other borrowing costs are expensed in the period they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

#### 4.8 Intangible assets

Intangible assets acquired through business combination are initially recognised at their fair value on the date of business acquisition while intangible assets acquired in other cases are recognised at cost. Following the initial recognition, the intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses (if any).

Computer software with a finite life is amortised on a systematic basis over the economic useful life of 10 years. Right to operate a coal mining business is amortised using the units-of-production method. The amortisation expense is charged to profit or loss.

Intangible assets are tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end.

#### 4.9 Leases

At inception of contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

##### **The Group as a lessee**

The Group applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. At the commencement date of the lease (i.e. the date the underlying asset is available for use), the Group recognises right-of-use assets representing the right to use underlying assets and lease liabilities based on lease payments.

##### ***Right-of-use assets***

Right-of-use assets are measured at cost, less accumulated depreciation, any accumulated impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities initially recognised, initial direct costs incurred, and lease payments made at or before the commencement date of the lease less any lease incentives received.

Depreciation of right-of-use assets are calculated by reference to their costs or the revalued amount, on the straight-line basis over the shorter of their estimated useful lives and the lease term.

Land improvement	2 - 30 years
Buildings	5 years
Vehicles	5 years

If ownership of the leased asset is transferred to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

Right-of-use assets are presented as part of property, plant and equipment in the statement of financial position.

#### ***Lease liabilities***

Lease liabilities are measured at the present value of the lease payments to be made over the lease term. The lease payments include fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be payable under residual value guarantees. Moreover, the lease payments include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising an option to terminate.

The Group discounted the present value of the lease payments by the interest rate implicit in the lease or the Group's incremental borrowing rate. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

#### ***Short-term leases and leases of low-value assets***

A lease that has a lease term less than or equal to 12 months from commencement date or a lease of low-value assets is recognised as expenses on a straight-line basis over the lease term.

#### **4.10 Unamortised costs and unamortised financial service fees**

Expenses incurred in connection with the debentures issued are capitalised and amortised to interest expenses using the effective interest rate over the term of the debentures. Unamortised costs relating to the issuance of debentures are shown as a deduction from such debentures in the statement of financial position.

#### **4.11 Related party transactions**

Related parties comprise individuals or enterprises that control, or are controlled by, the Company, whether directly or indirectly, or which are under common control with the Company.

They also include associates, and individuals or enterprises which directly or indirectly own a voting interest in the Company that gives them significant influence over the Company, key management personnel, directors, and officers with authority in the planning and direction of the Company's operations.

#### 4.12 Foreign currencies

The consolidated and separate financial statements are presented in Baht, which is also the Company's functional currency. Items of each entity included in the consolidated financial statements are measured using that functional currency of that entity.

Transactions in foreign currencies are translated into Baht at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into Baht at the exchange rate ruling at the end of reporting period.

Gains and losses on exchange are included in profit or loss.

#### 4.13 Impairment of non-financial assets

At the end of each reporting period, the Group performs impairment reviews in respect of the property, plant and equipment, right-of-use assets, investment properties and other intangible assets whenever events or changes in circumstances indicate that an asset may be impaired. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount. In determining value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used. These calculations are corroborated by a valuation model that, based on information available, reflects the amount that the Group could obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal.

An impairment loss is recognised in profit or loss.

In the assessment of asset impairment if there is any indication that previously recognised impairment losses may no longer exist or may have decreased, the Group estimate the asset's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The increased carrying amount of the asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in profit or loss.

#### 4.14 Employee benefits

##### *Short-term employee benefits*

Salaries, wages, bonuses and contributions to the social security fund are recognised as expenses when incurred.

##### *Post-employment benefits*

##### *Defined benefit plans*

The Group has obligations in respect of the severance payments they must make to employees upon retirement under labor law. The Group treats these severance payment obligations as a defined benefit plan.

The obligation under the defined benefit plan is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from defined benefit plans are recognised immediately in other comprehensive income.

#### **4.15 Assets held for sale and discontinued operations**

The Group classifies disposal assets as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. The criteria for held for sale classification is regarded as met only when the sale is highly probable and the disposal assets are available for immediate sale in its present condition. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Disposal groups classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell.

Gain or loss from discontinued operations are excluded from the results of continuing operations and are presented as a single amount in the profit or loss.

#### **4.16 Provisions**

Provisions are recognised when the Group has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

#### **4.17 Income tax**

Income tax expense represents the sum of corporate income tax currently payable and deferred tax.

##### **Current tax**

Current income tax is provided in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legislation.

Overseas subsidiaries calculate current income tax at the rate that identify in tax legislation of its own counting.

##### **Deferred tax**

Deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.



The Group recognises deferred tax liabilities for all taxable temporary differences while it recognises deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Group reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

The Group records deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.

#### **4.18 Financial instruments**

The Group initially measures financial assets at its fair value plus transaction costs, only in the case of financial assets that are not measured at fair value through profit or loss. However, trade receivables, that do not contain a significant financing component, are measured at the transaction price as disclosed in the accounting policy relating to revenue recognition.

##### **Classification and measurement of financial assets**

Financial assets are classified, at initial recognition, as to be subsequently measured at amortised cost, fair value through other comprehensive income (“FVOCI”), or fair value through profit or loss (“FVTPL”). The classification of financial assets at initial recognition is driven by the Group’s business model for managing the financial assets and the contractual cash flows characteristics of the financial assets.

##### ***Financial assets at amortised cost***

The Group measures financial assets at amortised cost if the financial asset is held in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest rate (“EIR”) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

##### ***Financial assets at FVTPL***

Financial assets measured at FVTPL are carried in the statement of financial position at fair value with net changes in fair value recognised in profit or loss.

These financial assets include derivatives and debt security investments held for trading which the Group has not irrevocably elected to classify at FVOCI and financial assets with cash flows that are not solely payments of principal and interest.

### **Classification and measurement of financial liabilities**

Except for derivative liabilities, at initial recognition the Group's financial liabilities are recognised at fair value net of transaction costs and classified as liabilities to be subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are derecognised as well as through the EIR amortisation process. In determining amortised cost, the Group takes into account any fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance costs in profit or loss.

### **Regular way purchases and sales of financial assets**

Regular way purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace are recognised on the trade date, i.e., the date on which the Group commits to purchase or sell the asset.

### **Derecognition of financial instruments**

A financial asset is primarily derecognised when the rights to receive cash flows from the asset have expired or have been transferred and either the Group has transferred substantially all the risks and rewards of the asset, or the Group has transferred control of the asset.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in profit or loss.

### **Impairment of financial assets**

The Group recognises an allowance for expected credit losses ("ECLs") for all debt instruments not held at FVTPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate.

For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-month (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure (a lifetime ECL).

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. ECLs are calculated based on its historical credit loss experience and adjusted for forward-looking factors specific to the debtors and the economic environment.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

#### **Offsetting of financial instruments**

Financial assets and financial liabilities are offset, and the net amount is to be reported in the statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

#### **4.19 Derivatives**

The Group uses derivatives, such as forward currency contracts to hedge its foreign currency risks.

Derivatives are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. The subsequent changes are recognised in profit or loss. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

Derivatives are presented as non-current assets or non-current liabilities if the remaining maturity of the instrument is more than 12 months and it is not due to be realised or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

#### **4.20 Fair value measurement**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Group measures fair value using valuation technique that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categorise of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.

## 5. Significant accounting judgements and estimates

The preparation of financial statements in conformity with financial reporting standards at times requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

### **Allowance for expected credit losses of trade receivables**

In determining an allowance for expected credit losses of trade receivables, the management needs to make judgement and estimates based upon, among other things, past collection history, aging profile of outstanding debts and the forecast economic condition for groupings of various customer segments with similar credit risks. The Group's historical credit loss experience and forecast economic conditions may also not be representative of whether a customer will actually default in the future.

### **Net realisable value of inventories**

In determining net realisable value of inventories, the management makes judgement and estimates expected loss from stock obsolescence based upon past sales history and the prevailing economic condition.

### **Leases**

#### ***Determination of the lease term with the option to extend the lease term or terminate the lease - the Group as a lessee***

In determining the lease term, the management needs to use judgement in determining whether the Group is reasonably certain to exercise its options to extend the lease term or to terminate the lease, taking into account all relevant facts and circumstances that create economic incentives for The Group to exercise or not exercise that option.

#### ***Determination of Marginal Borrowing Rates - Group Companies as Lessees***

The Group is unable to determine the interest rate implied by the lease, therefore management is required to use judgement in determining the incremental borrowing rate of the Group for the discounting of lease liabilities. The marginal borrowing rate is the interest rate the Group would have to pay to borrow the amount required to acquire assets of value approximate to the right-of-use assets in a similar economic environment, with similar loan term and collateral.

## **Property, plant and equipment/Depreciation**

In determining depreciation of plant and equipment, the management is required to make estimates of the useful lives and residual values of the plant and equipment and to review estimate useful lives and residual values when there are any changes.

In addition, the management is required to review property, plant and equipment for impairment on a periodical basis and records impairment losses when it is determined that their recoverable amount is lower than the carrying amount. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

## **Right to operate a coal mining business**

In testing impairment of the right to operate a coal mining business on a periodical basis, the management is required to estimate a fair value less costs to sell, by using an appropriate valuation model. The main assumptions used in the valuation are the entity's size and coal reserves.

## **Deferred tax assets**

Deferred tax assets are recognised for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of estimate future taxable profits.

## **Post-employment benefits under defined benefit plans**

The obligation under the defined benefit plan is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.

## 6. Related party transactions

During the years, the Group had significant business transactions with related parties. Such transactions, which are summarised below, were concluded on terms and bases agreed upon between the Company and those related parties.

(Unit: Million Baht)

	Consolidated		Separate		Pricing policies
	financial statements		financial statements		
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>	
<b><u>Transactions with subsidiaries</u></b>					
(eliminated from the consolidated financial statements)					
<b>Sales of goods</b>					
Sales of electricity, steam and water	-	-	1,129	940	Market price and contract price referred to fuel price announcement
<b>Other income</b>					
Service income	-	-	191	171	As agreed and with reference to market price
Sales of raw materials	-	-	2,088	1,937	As agreed
Dividend income	-	-	476	833	As announcement
Other income	-	-	107	91	Contract price and as agreed
<b>Purchases of goods</b>					
Purchase of electricity	-	-	2,228	2,417	Market price
Purchase of steam	-	-	67	274	Contract price referred to fuel price announcement
Purchase of water	-	-	248	231	Market price
<b>Service and other expenses</b>					
Transportation expenses	-	-	149	148	With reference to market price
Service expenses	-	-	131	196	Contract price and as agreed
Interest expenses	-	-	18	39	At rates of 0.4 - 3.9 percent per annum (2020: At rates of 1.2 - 1.5 percent per annum)
<b><u>Transactions with related companies</u></b>					
<b>Sales of goods</b>					
Sales of electricity, steam and water	3,529	3,175	1,136	1,110	Market price and contract price referred to fuel price announcement
Sales of equipment	-	121	-	-	Contract price referred to appraisal report
Sales of tapioca starch	43	47	-	-	With reference to market price
Sales of biogas	56	35	-	-	Contract price referred to fuel price announcement
<b>Other income</b>					
Service income	32	30	22	-	With reference to market price

(Unit: Million Baht)

	Consolidated		Separate		Pricing policies
	financial statements	financial statements	financial statements	financial statements	
	2021	2020	2021	2020	
<b>Purchases of goods</b>					
Purchases of black liquor	333	286	-	-	Contract price referred to fuel price announcement
Purchases of fuel oil	149	108	125	77	Market price
Purchases of other raw materials	234	169	40	13	Contract price referred to fuel price announcement and with reference to market price
<b>Service and other expenses</b>					
Transportation expenses	74	106	74	106	With reference to market price
Rental expenses	46	55	20	42	Contract price with reference to market price
Mechanical service expenses	20	27	15	17	With reference to market price
Labour and other service expenses	136	54	14	18	Contract price with referred to market price
Dividend payment	1,702	552	1,702	552	As announcement
<b>Purchases of assets</b>					
Purchases of spare parts and equipment	-	143	-	-	Contract price referred to appraisal report

Set out below are brief summaries of the major agreements made with related companies, giving rise to the above-mentioned transactions.

(a) Power Purchase Agreements with related parties

The Group entered into the following power purchase agreements with related companies to sell electricity.

Company's name	Contracting party	Date of agreement	Period (Years)	End of period	Contracted capacity
National Power Supply Public Company Limited	Double A (1991) Public Company Limited	30 November 2009	5	30 November 2014 (automatically renew for a further period of 5 years)	18.00 MW
National Power Supply Public Company Limited	Double A (1991) Public Company Limited	27 August 2014	5	2 March 2020 (automatically renew for a further period of 5 years)	9.90 MW
National Power Supply Public Company Limited	Double A (1991) Public Company Limited	15 May 2019	5	14 May 2024	11.80 MW
National Power Supply Public Company Limited	Double A (1991) Public Company Limited	15 May 2019	5		18.00 MW

Company's name	Contracting party	Date of agreement	Period		Contracted capacity
			(Years)	End of period	
National Power Supply Public Company Limited	Argo fiber Company Limited	15 May 2019	5	(one-time renewal for a further period of 1 year)	5.60 MW
National Power Plant 5A Company Limited	Double A (1991) Public Company Limited	20 September 2013	10	30 June 2023	60.00 MW
National Power Plant 3 Company Limited	304 Industrial Park 2 Company Limited	1 August 2011	1	31 July 2012 (automatically renew for a further period of 1 year)	50,000 KVA
National Power Plant 3 Company Limited	Double A (1991) Public Company Limited	1 August 2011	1	31 July 2012 (automatically renew for a further period of 1 year)	3.42 MW

The Group entered into power purchase agreements with related companies, to sell electricity at a price based on the electricity pricing schedule announced by the Provincial Electricity Authority. If the Provincial Electricity Authority announces changes to the electricity schedule, the rate charged by the seller will be modified based on the new price in the following month.

(b) Steam Supply Agreements with related parties

The Group entered into the following steam supply agreements with related companies to sell steam at specified quantities and prices.

Company's name	Contracting party	Date of agreement	Period		Contracted capacity (Tonnes per annum)	
			(Years)	End of period	Low-power steam	Medium-power steam
National Power Supply Public Company Limited	Double A (1991) Public Company Limited	10 February 1997	25	11 March 2023	553,632	35,040
National Power Supply Public Company Limited	Double A (1991) Public Company Limited	1 June 2016	7	31 March 2023	320,000	32,000
National Power Plant 5 Company Limited	Double A (1991) Public Company Limited	26 June 2009	19	4 November 2028	-	200,000
National Power Plant 5 Company Limited	Double A (1991) Public Company Limited	26 June 2009	19	1 December 2028	507,500 in total	
National Power Plant 5A Company Limited	Double A (1991) Public Company Limited	1 April 2012	10	6 July 2022	610,000 in total	
National Power Plant 3 Company Limited	Double A (1991) Public Company Limited	1 August 2011	1	31 July 2012 (automatically renew for a further period of 1 year)	61,700	-



The Company sells steam to related companies at base prices, which will escalate in line with the coal price, the Baht to US dollar exchange rate and freight charges. The base price for capacity payment is based on the consumer price index.

The subsidiaries sell steam to related companies at base prices, which will escalate in line with natural gas prices. The base price for capacity payment is based on the consumer price index.

In addition, if Double A (1991) Public Company Limited, the purchaser, purchases more than the minimum trading volume, the Group will grant discounts at rates ranging from 2 percent to 6 percent of the purchase price, depending on the purchased quantity.

(c) The agreements related to water supply with related parties

1. Namsai 304 Company Limited entered into water for industrial use supply agreements with related companies and industrial customers in the 304 Industrial Park, Prachinburi, whereby water is to be supplied at selling prices based on the treated water supply schedule announced by the Provincial Waterworks Authority.
2. National Power Plant 3 Company Limited entered into water for industrial use supply agreement with Double A (1991) Public Company Limited to sell water at selling price stipulated in the agreement dated 1 August 2011. The agreement is for one year, ending on 31 July 2012 and will automatically renew for a further period of one year.
3. National Power Plant 3 Company Limited entered into raw water and cold water supply agreements with Double A (1991) Public Company Limited to sell water at selling prices stipulated in the agreements dated 1 August 2011. The agreements are for one year, ending on 31 July 2012 and will automatically renew for a further period of one year.

*\* On 31 December 2021, Namsai 304 Company Limited would received the transfer of related rights and obligations related to acquisition of fixed assets under the condition specified in the raw water and cold water supply agreements from National Power Plant 3 Company Limited.*

(d) Biogas Supply Agreement with related party

E 85 Company Limited entered into a biogas supply agreement with Double A (1991) Public Company Limited to sell biogas at specified quantities and prices as stipulated in the agreement dated 25 September 2017. The term of the agreement is five years, beginning on 1 January 2017 and ending on 31 December 2021. If the agreement is not terminated at the end of its term, the agreement will be renewed for successive terms of 5 years each.

(e) Black Liquor Supply Agreements with related party

The subsidiary entered into the following agreements to purchase black liquor for use in their electricity generation operations with Double A (1991) Public Company Limited at specified quantities and prices.

Company's name	Date of agreement	Period (Years)	End of period	Contracted capacity
				(Tonnes per annum)
National Power Plant 5 Company Limited	26 June 2009	19	4 November 2028	500,000
National Power Plant 5 Company Limited	26 June 2009	19	1 December 2028	450,000

The subsidiary purchase black liquor at selling prices based on the natural gas price, reduced in accordance with the heating value ratio between diluted black liquor and natural gas, offset by the cost of diluted black liquor evaporation.

(f) Bark Supply Agreements with related party

The subsidiaries entered into the following agreements to purchase bark for use in their electricity generation operations with Double A (1991) Public Company Limited at specified quantities and prices.

Company's name	Date of agreement	Period (Years)	End of period	Contracted capacity
				(Tonnes per annum)
National Power Plant 5 Company Limited	26 June 2009	19	4 November 2028	165,000
National Power Plant 5A Company Limited	1 April 2011	10	30 June 2023	350,000

The subsidiaries purchase bark at selling prices based on coal price, reduced in accordance with the heating value ratio between bark and coal, with a deduction for bark depreciation.

(g) Land Rental Agreements with related parties

The Group entered into the following land rental agreements with many related parties which rental charges are made at contract rates and with reference to market price.

Company's name	Contracting party	Date of agreement	Period (Years)	End of period
National Power Supply Public Company Limited	304 Industrial Park 7 Company Limited	1 March 2018	3 (automatically renew for 5 further periods of 3 years)	28 February 2021
National Power Plant 5 Company Limited	304 Industrial Park Company Limited	14 December 2020	3 (automatically renew for 5 further periods of 3 years)	31 March 2020
Namsai 304 Company Limited	304 Industrial Park Company Limited	1 September 2019	3 (automatically renew for 4 further periods of 3 years)	31 January 2022
Namsai 304 Company Limited	304 Industrial Park Company Limited	1 September 2019	15	31 December 2034
Namsai 304 Company Limited	304 Industrial Park 18 Company Limited	1 March 2021	3 (automatically renew for 9 further periods of 3 years)	29 February 2024

(h) Warehouse Rental Agreements with related parties

The Group entered into the following warehouse rental with many related parties which rental charges are made at contract rates and with reference to market price.

Company's name	Contracting party	Date of agreement	Period (Years)	End of period
National Power Supply Public Company Limited	IP 5 Company Limited	15 September 2021	1	14 September 2022
National Power Supply Public Company Limited	Smart Place 304 IP3 Company Limited	1 January 2022	1	31 December 2022
National Power Supply Public Company Limited	Smart Place 304 IP3 Company Limited	1 January 2022	1	31 December 2022

The balances of the accounts between the Group and those related companies as at 31 December 2021 and 2020 are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
<b><u>Trade and other receivables - related parties</u></b>				
<b><u>Trade receivables - related parties (Note 8)</u></b>				
Subsidiaries	-	-	463	438
Related companies (Co-director)	1,160	742	366	189
Total trade receivables	1,160	742	829	627
Less: Allowance for expected credit losses	(2)	(12)	(4)	(12)
Total trade receivables - related parties, net	1,158	730	825	615
<b><u>Other receivables - related parties (Note 8)</u></b>				
Subsidiaries	-	-	65	32
Joint ventures	1	13	1	13
Related companies (Co-director)	39	5	19	-
Total other receivables	40	18	85	45
Less: Allowance for expected credit losses	(1)	-	(1)	-
Total other receivable - related parties, net	39	18	84	45
Total trade and other receivables - related parties	1,197	748	909	660
<b><u>Advances for goods and services paid to related parties</u></b>				
Joint ventures	-	11	-	11
Related companies (Co-director)	44	4	44	4
Total advances for goods and services paid to related parties	44	15	44	15

The balance of Baht 44 million represented advance payments for the Company's operation expenses, consisting of biomass fuel and transportation costs for the period from January to March 2022.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
<b><u>Other current financial asset</u></b>				
Related companies (Co-director)	84	-	-	-

As at 31 December 2021, five subsidiaries have investment in marketable corporate debentures of Double A (1991) Public Company Limited, totaling 85,000 unit with average unit price of Baht 1,003 each. Measured at fair value through profit or loss.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
<b><u>Trade and other payables - related parties</u></b>				
<b><u>Trade payables - related parties (Note 21)</u></b>				
Subsidiaries	-	-	447	202
Related companies (Co-director)	68	253	7	4
Total trade payables - related parties	68	253	454	206
<b><u>Other payables - related parties (Note 21)</u></b>				
Subsidiaries	-	-	15	31
Related companies (Co-director)	20	27	13	4
Total other payables - related parties	20	27	28	35
Total trade and other payables - related parties	88	280	482	241
<b><u>Dividend payable to related parties</u></b>				
Related companies (Co-director)	1,001	-	1,001	-

During the current year, movements of long-term loans to subsidiaries and short-term loans from related parties were as follows:

(Unit: Million Baht)

	Separate financial statements				Balance as at 31 December 2021
	Balance as at 1 January 2021	Increase during the year	Decrease during the year	Gain from unrealised exchange rate	
<b><u>Short-term loans to related parties</u></b>					
<b><u>Subsidiaries</u></b>					
National Power Plant 5 Company Limited	-	3,251	(3,251)	-	-
P.T. Utami Jaya Mulia Company Limited	-	44	-	1	45

(Unit: Million Baht)

	Separate financial statements				Balance as at 31 December 2021
	Balance as at 1 January 2021	Increase during the year	Decrease during the year	Gain from unrealised exchange rate	
Sonish Strarch Technology Company Limited	-	30	-	-	30
Total short-term loans to related parties	-	3,325	(3,251)	1	75
<b>Long-term loans to subsidiary</b>					
Future Greenery Company Limited	2	-	(2)	-	-
Total short-term loans from subsidiary	2	-	(2)	-	-

The above loans carry interest at the rate of 0.6 percent per annum (31 December 2020: 6.3 percent per annum).

(Unit: Million Baht)

	Consolidated financial statements			Balance as at 31 December 2021
	Balance as at 1 January 2021	Increase during the year	Decrease during the year	
<b>Short-term loans from related party</b>				
<b>Joint ventures</b>				
Burapa Power Generation Company Limited	-	131	-	131

The above loan carries interest at the rate of 0.6 percent per annum, with on collateral.

(Unit: Million Baht)

	Separate financial statements				Balance as at 31 December 2021
	Balance as at 1 January 2021	Increase during the year	Decrease during the year	Unrealised exchange gain	
<b>Short-term loans from related parties</b>					
<b>Subsidiaries</b>					
CHP 1 Company Limited	619	503	(503)	-	619
Ocean Star Holding Company Limited	462	55	-	22	539
National Power Plant 12 Company Limited	281	-	(2)	-	279
National Power Plant 2 Company Limited	117	90	(111)	-	96
NPS Solar Company Limited	-	44	-	-	44
CHP 3 Company Limited	16	-	(2)	-	14
Integrated Research Center Company Limited	12	-	(12)	-	-
CHP 5 Company Limited	1	-	(1)	-	-
Total short-term loans from subsidiaries	1,508	692	(631)	22	1,591

(Unit: Million Baht)

	Separate financial statements				Balance as at 31 December 2021
	Balance as at 1 January 2021	Increase during the year	Decrease during the year	Unrealised exchange gain	
<b>Joint ventures</b>					
Burapa Power Generation Company Limited	-	131	-	-	131
Total short-term loans from joint ventures	-	131	-	-	131
Total short-term loans from related parties	1,508	823	(631)	22	1,722

The above loans, which were loans in the form of promissory notes with no collateral, are repayable at call and carry interest at the rate of 0.4 - 0.7 percent per annum (2020: 0.6 - 3.9 percent per annum).

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
<b><u>Lease liability</u></b>				
Related companies (Co-director)	155	163	29	31

#### Directors and management's benefits

During the years ended 31 December 2021 and 2020, the Group had employee benefit expenses of their directors and management as below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Short-term employee benefits	48	46	42	43

## 7. Cash and cash equivalents

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Bank deposits in current accounts	1	1	-	-
Bank deposits in saving accounts	3,587	721	3,155	134
Total	3,588	722	3,155	134

As at 31 December 2021, bank deposits in saving accounts carried interests between 0.1 to 0.5 percent per annum (2020: 0.1 to 0.6 percent per annum).

## 8. Trade and other receivables

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	2021	2020	2021	2020
<u>Trade receivables - related parties</u> (Note 6)				
Aged on the basis of due dates				
Not yet due	522	308	455	380
Past due				
Up to 3 months	296	129	300	198
3 - 6 months	81	89	55	36
6 - 12 months	194	111	19	-
Over 12 months	67	105	-	13
Total	1,160	742	829	627
Less: Allowance for expected credit losses	(2)	(12)	(4)	(12)
Total trade receivables - related parties, net	1,158	730	825	615
<u>Trade receivables - unrelated parties</u>				
Aged on the basis of due dates				
Not yet due	1,142	1,490	657	602
Past due				
Up to 3 months	467	364	209	249
Total trade receivables - unrelated parties	1,609	1,854	866	851
Total trade receivables - net	2,767	2,584	1,691	1,466
<u>Other receivables</u>				
Other receivables - related parties (Note 6)	40	18	85	45
Other receivables - unrelated parties	131	32	19	22
Total	171	50	104	67
Less: Allowance for expected credit losses	(3)	(3)	(1)	-
Total other receivables - net	168	47	103	22
Total trade and other receivables	2,935	2,631	1,794	1,533

## 9. Inventories

(Unit: Million Baht)

Consolidated financial statements						
	Cost		Reduce cost to net realisable value		Inventories - net	
	2021	2020	2021	2020	2021	2020
Raw materials						
Coal	229	84	-	-	229	84
Biomass	343	282	(3)	(3)	340	279
Casava chip	230	76	(10)	-	220	76
Others	79	51	-	-	79	51
	881	493	(13)	(3)	868	490
Finished goods						
Ethanol	43	35	-	-	43	35
Tapioca starch products	-	51	-	(1)	-	50
	43	86	-	(1)	43	85
Work in process	66	36	-	-	66	36
Goods in transit	319	7	-	-	319	7
Spare parts and factory supplies	273	206	(17)	(19)	256	187
Total	1,582	828	(30)	(23)	1,552	805

(Unit: Million Baht)

Separate financial statements						
	Cost		Reduce cost to net realisable value		Inventories - net	
	2021	2020	2021	2020	2021	2020
Raw materials						
Coal	218	81	-	-	218	81
Biomass	206	142	-	-	206	142
Others	15	6	-	-	15	6
	439	229	-	-	439	229
Goods in transit	313	7	-	-	313	7
Spare parts and factory supplies	138	98	(7)	(7)	131	91
Total	890	334	(7)	(7)	883	327

During the current year, the Group reduced cost of inventories by Baht 12 million (2020: Baht 4 million) (Separate financial statements: Nil, 2020: Nil), to reflect the net realisable value. This was included in cost of sales. In addition, the Group not have reversed the write-down of cost of inventories (2020: Baht 2 million) (Separate financial statements: Nil, 2020: Baht 1 million), and reduced the amount of inventories recognised as expenses during the year.



On 31 December 2021, the Group classified reduction of inventory to net realisable value as assets held for sale amounting to Baht 5 million.

## 10. Other financial asset

(Unit: Million Baht)

	Consolidated financial statement	
	31 December 2021	31 December 2020
<u>Debt instruments at amortised cost</u>		
Government bond		
<u>Financial assets measured at fair value through profit of loss</u>	223	126
Marketable corporate debentures	327	-
Total other financial assets	550	126
Current assets	327	-
Non-current assets	223	126
	550	126

Investments in government bonds pledged as a performance guarantee in accordance with the power purchase agreements made between the Electricity Generating Authority of Thailand are measured at fair value through profit or loss. The government bonds consist of 4 year and 15 year bonds, reaching maturing in December 2024 and June 2029, respectively.

## 11. Other current assets

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Value added tax refundable	31	6	19	-
Prepaid expenses	75	100	31	33
Deferred input tax	71	60	43	27
Income tax refundable	72	90	61	58
Others	-	40	3	3
Total other current assets	249	296	157	121

## 12. Restricted bank deposit

The Company pledged bank deposits of Baht 270 million with a commercial bank to secure a bank guarantee for Power Purchase Agreement between a subsidiary and Electricity Authority of Thailand, as described in Note 34.5 to the financial statements.

### 13. Investments in subsidiaries

Details of investments in subsidiaries as presented in separate financial statements as at 31 December 2021 and 2020 are as follows:

Company's name	Paid-up capital		Currency	Shareholding percentage		Cost		Differences on reorganisation of business of group companies		Allowance for impairment loss on investments		Classified as asset held for sale (Note 14.1)		Carrying amounts based on cost method - net		Dividends received during the year	
	2021	2020		2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020		
				Percent	Percent												
E 85 Company Limited	5,150	4,854	Million Baht	99.99	99.99	5,150	4,854	(54)	(54)	(1,230)	(1,230)	-	-	3,866	3,570	-	-
National Power Plant 5 Company Limited	3,600	3,600	Million Baht	99.99	99.99	3,604	3,604	-	-	-	-	-	-	3,604	3,604	9	-
National Power Plant 5A Company Limited	2,250	2,250	Million Baht	99.99	99.99	2,250	2,250	-	-	-	-	-	-	2,250	2,250	-	-
NPS Ocean Star Company Limited	-	175	Million Baht	-	99.99	-	175	-	-	-	(173)	-	-	-	-	2	-
National Power Plant 2 Company Limited	370	370	Million Baht	99.99	99.99	370	370	-	-	(280)	(280)	-	-	90	90	-	-
Future Greenery Company Limited	3,600	2,642	Million Baht	99.99	99.99	3,600	2,642	-	-	-	-	-	-	3,600	2,642	-	-
Nansai 304 Company Limited	462	462	Million Baht	99.99	99.99	478	478	14	14	-	-	-	-	492	492	375	656
Integrated Research Center Company Limited	50	50	Million Baht	99.99	99.99	50	50	42	42	-	-	-	-	92	92	86	157
National Power Plant 12 Company Limited	379	379	Million Baht	99.99	99.99	379	379	-	-	-	-	-	-	379	379	1	10
NPS Solar Rooftop Company Limited	-	1	Million Baht	-	99.99	-	1	-	-	-	-	-	-	-	-	1	-
CHP 1 Company Limited	721	721	Million Baht	99.99	99.99	721	721	-	-	-	-	-	-	721	721	5	10
CHP 3 Company Limited	250	250	Million Baht	99.99	99.99	250	250	-	-	-	-	-	-	250	250	-	-
CHP 5 Company Limited	346	346	Million Baht	99.99	99.99	346	346	-	-	-	-	-	-	346	346	-	-
IPP IP 7 Company Limited	630	630	Million Baht	99.99	99.99	630	630	-	-	-	-	-	-	630	630	-	-
Sonish Starch Technology Company Limited	740	270	Million Baht	99.99	99.99	759	289	-	14	(73)	(20)	(700)	-	-	283	-	-
PT Utami Jaya Mulia	34,000	34,000	Million Rupiah	99.99	99.99	545	545	-	-	(194)	(194)	-	-	351	351	-	-
Ocean Star Holding Company Limited	33	33	Million US Dollar	99.99	100.00	1,077	1,077	-	-	(595)	(595)	-	-	482	482	-	-
The Toom Blogs Community Power Plant	5	2	Million Baht	99.99	99.99	5	2	-	-	-	-	-	-	5	2	-	-
Phanom Sanakhom Biogas Community Power Plant Company Limited	5	1	Million Baht	99.99	99.99	5	1	-	-	-	-	-	-	5	1	-	-
The Toom Community Power Plant	7	7	Million Baht	99.99	99.99	7	7	-	-	-	-	-	-	7	7	-	-
Lam Sorothi Community Power Plant	1	1	Million Baht	99.99	99.99	1	1	-	-	-	-	-	-	1	1	-	-
Lan Sak Community Power Plant	1	1	Million Baht	99.99	99.99	1	1	-	-	-	-	-	-	1	1	-	-
NPS Solar Company Limited	47	-	Million Baht	99.99	-	47	-	-	-	-	-	-	-	47	-	-	-
<b>Total investments in subsidiaries</b>	<b>20,275</b>	<b>18,673</b>				<b>2</b>	<b>16</b>	<b>(2,372)</b>	<b>(2,492)</b>	<b>(700)</b>	<b>(700)</b>	<b>17,219</b>	<b>16,197</b>	<b>476</b>	<b>833</b>		

(Unit: Million Baht)

**Movements of the investments in subsidiaries during the year ended 31 December 2021 are summarised below.**

Investment in Future Greenergy Company Limited

On 21 May 2021, the Extraordinary General Meeting No. 2/2021 of shareholders of the subsidiary, passed a special resolution to approve an increase in its share capital from Baht 2,900 million to Baht 3,600 million by issuing 70 million ordinary shares with a par value of Baht 10 per share, totaling Baht 700 million, to be offered to the existing shareholders. The subsidiary registered the capital increase with the Ministry of Commerce on 27 May 2021.

In addition, the subsidiary also additionally called up share capital with respect to shares issued in the previous capital increase amounting to Baht 258 million, and received the payment in full.

Investment in Sonish Starch Technology Company Limited

On 23 June 2021, the Extraordinary General Meeting No. 2/2021 of shareholders of the subsidiary, passed a special resolution to approve an increase in its share capital from Baht 270 million to Baht 740 million by issuing 0.47 million ordinary shares with a par value of Baht 1,000 per share, totaling Baht 470 million, to be offered to the existing shareholders. The subsidiary registered the capital increase with the Ministry of Commerce on 24 June 2021.

Investment in E85 Company Limited

During the second quarter of 2021, the subsidiary additionally called up share capital amounting to Baht 296 million and received the payment in full.

Investment in NPS Solar Company Limited

On 16 March 2021, NPS Solar Company Limited was incorporated in Thailand, with registered capital of Baht 1 million, consisting of 100,000 ordinary shares at a par value of Baht 10 per share. The Company has 99.99 percent interest in such company. The subsidiary is principally engaged in the business of solar power generation.

Subsequently, on 29 September 2021, the Extraordinary General Meeting No. 1/2021 of shareholders of the subsidiary passed a special resolution approving the increase of its registered share capital, from Baht 1 million to Baht 184.45 million, by issuing 18.345 million ordinary shares with a par value of Baht 10 per share, totaling Baht 183.45 million. The shares are to be offered to the subsidiary's existing shareholders. The subsidiary registered the capital increase with the Ministry of Commerce. The subsidiary gradually called for share payments and all payments were settled on 18 February 2022.

## 14. Assets held for sale

### 14.1 Assets held for sale - investments in subsidiaries

On 8 November 2021, the Boarding of Directors' meeting No. 5/2021 of the Company resolved to approve the disposal of 0.74 million ordinary shares of Sonish Starch Technology Company Limited to a related company at the price of Baht 946 per share, totaling Baht 700 million. To comply with the requirements of TFRS 5 (revised 2019) Non-current Assets Held for Sale and Discontinued Operations, the Company separately presented the assets and liabilities relating to Sonish Starch Technology Company Limited under the caption of "Assets held for sale" and "Liabilities directly associated with assets held for sale" in the statement of financial position as at 31 December 2021. The Company did not separately presented the profit and loss from discontinued operation and that from continued operations in the statement of profit and loss as such subsidiary is not significant business line of the Group.

Details of assets and liabilities relating to Sonish Starch Technology Company Limited as at 31 December 2021 are as follows:

	(Unit: Million Baht)	
	Consolidated financial statement	Separate financial statements
<b><u>Statement of financial position</u></b>		
<b>Assets</b>		
Cash and cash equivalents	26	-
Trade and other receivables	24	-
Inventories	62	-
Other current assets	15	-
Property, plant and equipment	553	-
Investments in subsidiary	-	700
<b>Assets held for sale</b>	<b>680</b>	<b>700</b>
<b>Liabilities</b>		
Trade and other payables	6	-
Provision for long-term employee benefits	5	-
Deferred tax liabilities	22	-
Other non-current assets	8	-
<b>Liabilities directly associated with assets held for sale</b>	<b>41</b>	<b>-</b>

## 14.2 Assets held for sale - investments in associated company

On 21 January 2019, the Executive Board of Directors' meeting of the Company resolved to approve the sale of investment in Khanna Company Limited to a related company at the bid price specified in the letter of intent for acquisition of investment in Khanna Company Limited of Baht 667 million, with the net book value of Baht 667 million. Subsequently, on 16 September 2020, the Extraordinary General Meeting of shareholders of Khanna Company Limited, passed a resolution to approve a selective capital reduction of Baht 667 million. Khanna Company Limited registered the capital reduction with the Ministry of Commerce on 2 November 2020. Therefore, the Company reversed the investment in Khanna Company Limited of Baht 667 million under "Share capital receivables from related party".

Subsequently, on 17 February 2021, the Board of Directors' meeting of the Company resolved to approve the disposal of remaining investment in Khanna Company Limited at an amount of Baht 1 million to the related company with the net book value of Baht 254 million, already fully recognised impairment loss. In February 2021, the Company received full payments for the capital reduction and disposal of investment of Baht 667 million, and Baht 1 million, respectively.

## 15. Investments in joint ventures

### 15.1 Details of investments in joint ventures

Investments in joint ventures represent investments in entity which are jointly controlled by the Company and other companies. Details of these investments is as follows:

(Unit: Thousand Baht)

Company's name	Nature of business	Shareholding percentage		Consolidated financial statement			
				Cost		Carrying amounts based on equity method	
		2021	2020	2021	2020	2021	2020
		Percent	Percent				
Burapa Power Holding Company Limited	Investment	65.00	65.00	397,637	266,500	353,162	220,506
Power Root 2020 Company Limited	Fuel processing	40.00	40.00	2,000	2,000	2,069	1,123
Total				399,637	268,500	355,231	221,629

(Unit: Thousand Baht)

Company's name	Nature of business	Separate financial statement					
		Shareholding percentage		Cost		Carrying amounts based on cost method	
		2021	2020	2021	2020	2021	2020
		Percent	Percent				
Burapa Power Holding Company Limited	Investment	65.00	65.00	397,637	266,500	397,637	266,500
Power Root 2020 Company Limited	Fuel processing	40.00	40.00	2,000	2,000	2,000	2,000
Total				399,637	268,500	399,637	268,500

On 28 September 2021, the Extraordinary General Meeting No. 1/2021 of shareholders of Burapa Power Holding Company Limited, passed a special resolution to approve an increase in its share capital from Baht 605 million to Baht 1,412 million by issuing 80.7 million ordinary shares with a par value of Baht 10 each, totaling Baht 807 million. The shares are to be allocated to the subsidiary's existing shareholders, and 25 percent of the shares were called up, for a total amount of Baht 131 million. The subsidiary registered the capital increase with the Ministry of Commerce on 29 September 2021.

## 15.2 Share of profit and dividend received

(Unit: Thousand Baht)

Company's name	Consolidated financial statement				Separate financial statement	
	Share of profit (loss) from investment in joint venture during the period		Share of other comprehensive income from investment in joint venture during the period		Dividend received during the year	
	2021	2020	2021	2020	2021	2020
Burapa Power Holding Company Limited	1,519	1,320	-	-	-	-
Power Root 2020 Company Limited	946	(877)	-	-	-	-

## 15.3 Commitments and contingent liabilities

### Guarantees

As at 31 December 2021, the Company had savings deposits amounting to Baht 270 million pledged as collateral to issue the letter of guarantee for Burapa Power Generation Company Limited to provide guarantees to the Electricity Generating Authority of Thailand under the electricity purchase agreements.

## 16. Investment properties

During the current year, there are rental and service income from investment properties amounting to Baht 1 million (2020: Baht 1 million) (Separate financial statement: Baht 3 million, 2020: Baht 3 million).

The Company has pledged their land, as described in Note 17 to the financial statements.

## Consolidated financial statements

	Assets under										Total		
	Furniture, fixtures and office equipment					Right of use							
	Land	Land improvement	Power plant, buildings and machinery	Tools and equipment	Power plant, buildings and office equipment	Land improvement	Bearer plant	Vehicles	Power plant, buildings and machinery	Vehicles		installation and construction	
<b>Cost:</b>													
As at 1 January 2020	3,176	828	33,526	567	111	167	9	2,051	5	6	350	40,796	
Reclassification	-	-	17	-	-	-	-	-	-	-	22	39	
Additions	-	-	217	13	1	-	-	54	-	12	424	721	
Disposals/Write-off	-	-	(343)	(2)	(1)	-	(9)	(915)	-	-	-	(1,270)	
Reclassify investment in subsidiary to investment in joint venture	(147)	-	-	-	-	-	-	-	-	-	(122)	(269)	
Transfer in (out)	-	52	439	12	-	-	-	10	-	-	(513)	-	
Translation adjustment	-	-	-	-	-	-	-	(4)	-	-	-	(4)	
As at 31 December 2020	3,029	880	33,856	590	111	167	-	1,196	5	18	161	40,013	
Reclassification	-	3	5	13	-	-	-	-	-	-	(21)	-	
Additions	-	-	155	3	3	36	-	19	-	6	679	906	
Disposals/Write-off	-	-	(15)	(2)	(1)	-	-	(6)	-	-	(2)	(26)	
Classified as asset held for sale (Note 14.1)	(51)	(60)	(848)	(38)	(9)	-	-	-	-	-	-	(1,006)	
Transfer in (out)	-	135	193	3	-	-	-	24	-	-	(355)	-	
As at 31 December 2021	2,978	958	33,346	569	104	203	-	1,233	5	24	462	39,882	

(Unit: Million Baht)

## Consolidated financial statements

	Furniture, fixtures and office equipment				Right of use Assets under				Total
	Land	Land improvement	Power plant, buildings and machinery	Tools and equipment	Power plant, buildings and machinery	Land improvement	Vehicles	installation and construction	
<b>Accumulated depreciation:</b>									
As at 1 January 2020	-	384	15,572	528	93	7	1,097	-	17,681
Reclassification	-	3	(3)	-	-	-	-	-	-
Depreciation for the year	-	29	1,380	12	6	1	66	2	1,509
Depreciation on disposals/write-off	-	-	(26)	-	(1)	(8)	(274)	-	(309)
Translation adjustment	-	-	-	-	-	-	(9)	-	(9)
As at 31 December 2020	-	416	16,923	540	98	-	880	2	18,872
Reclassification	-	(2)	3	(1)	-	-	-	-	-
Depreciation for the year	-	31	1,406	13	4	-	70	1	1,541
Depreciation on disposals/write-off	-	-	(3)	(11)	(1)	-	(2)	-	(17)
Classified as asset held for sale (Note 14.1)	-	(25)	(386)	(33)	(9)	-	-	-	(453)
As at 31 December 2021	-	420	17,943	508	92	-	948	3	19,943



(Unit: Million Baht)

## Consolidated financial statements

	Furniture, fixtures and equipment					Right of use					Total	
	Power plant, buildings and machinery		Tools and equipment		Furniture, fixtures and office equipment		Vehicles		Assets under			
	Land improvement	Land	improvement	Land	improvement	Land	improvement	Land	improvement	installation and construction		
<b>Allowance for impairment loss:</b>												
As at 1 January 2020	-	-	404	-	-	-	296	-	-	-	3	703
Increase during the year	-	-	-	-	-	-	(49)	-	-	-	-	(49)
Decrease from asset disposals	-	-	-	-	-	-	(258)	-	-	-	-	(258)
Translation adjustment	-	-	-	-	-	-	11	-	-	-	-	11
As at 31 December 2020	-	-	404	-	-	-	-	-	-	-	3	407
As at 31 December 2021	-	-	404	-	-	-	-	-	-	-	3	407
<b>Net book value:</b>												
As at 31 December 2020	3,029	464	16,529	50	13	316	157	15	3	158	20,734	
As at 31 December 2021	2,978	538	14,999	61	12	285	181	17	2	459	19,532	

**Depreciation for the year:**

2021 (Baht 1,508 million included in manufacturing cost and service cost, and the balance in selling and administrative expenses)

2020 (Baht 1,490 million included in manufacturing cost and service cost, and the balance in selling and administrative expenses)

1,541

1,509

(Unit: Million Baht)

## Separate financial statements

	Assets under										Total	
	Right of use					Assets under						
	Furniture, fixtures and office equipment		Power plant, buildings and machinery		Land improvement		Power plant, buildings and machinery		Vehicles		installation and construction	
	Land	Land improvement	Tools and equipment	Power plant, buildings and machinery	Land	Bearer plant	Land improvement	Power plant, buildings and machinery	Vehicles	installation and construction		
<b>Cost:</b>												
As at 1 January 2020	1,002	282	218	12,676	29	2	29	4	6	40	14,866	
Additions	-	-	4	36	-	-	-	-	12	331	437	
Disposals/Write-off	-	-	-	(4)	-	(2)	-	-	-	-	(6)	
Transfer in (out)	-	-	-	324	-	-	-	-	-	(334)	-	
Reclassification	-	-	-	16	-	-	-	-	-	21	37	
As at 31 December 2020	1,002	282	222	13,048	29	-	29	4	18	58	15,334	
Additions	-	-	2	36	-	-	-	-	6	377	434	
Disposals/Write-off	-	-	-	(5)	-	-	-	-	-	(2)	(12)	
Transfer in (out)	-	-	-	45	-	-	-	-	-	(68)	-	
As at 31 December 2021	1,002	282	224	13,124	29	-	29	4	24	365	15,756	

(Unit: Million Baht)

	Separate financial statements										
	Furniture, fixtures and office equipment					Right of use			Assets under		
	Land improvement	Power plant, buildings and machinery	Tools and equipment	Land improvement	Bearer plant	Land improvement	Power plant, buildings and machinery	Vehicles	installation and construction	vehicles	Total
<b>Accumulated depreciation:</b>											
As at 1 January 2020	-	182	203	31	392	1	-	-	-	-	8,817
Depreciation for the year	-	5	4	1	39	-	2	1	-	3	528
Depreciation on disposals/write-off	-	-	-	-	-	(1)	-	-	-	-	(3)
As at 31 December 2020	-	187	207	32	431	-	2	1	-	3	9,342
Depreciation for the year	-	5	4	1	48	-	2	1	-	4	555
Depreciation on disposals/write-off	-	-	-	-	(5)	-	-	-	-	-	(7)
As at 31 December 2021	-	192	211	33	474	-	4	2	-	7	9,890
<b>Netbook value:</b>											
As at 31 December 2020	1,002	95	15	1	207	-	27	3	58	15	5,992
As at 31 December 2021	1,002	90	13	2	193	-	25	2	365	17	5,866
<b>Depreciation for the year:</b>											
2021 (Baht 549 million included in manufacturing cost and service cost, and the balance in selling and administrative expenses)											555
2020 (Baht 524 million included in manufacturing cost and service cost, and the balance in selling and administrative expenses)											528

As at 31 December 2021, the Group has pledged their land together with buildings constructed thereon and to be constructed in the future, and certain machinery with net book value totaling Baht 3,839 million (2020: Baht 14,046 million) (Separate financial statements: Baht 3,839 million (2020: Baht 4,259 million)) as collateral against credit facilities and loans from commercial banks, during the year, loan collaterals pledged by three subsidiaries to commercial banks with a total net book value of Baht 9,030 million were released and discharged as the subsidiaries made full repayments for the long-term loans before their maturity, as described in Note 23 to the financial statements.

Furthermore, the Company sent a letter to commercial banks requesting the release of collaterals pledged for credit facilities loans from the commercial banks, which are currently in the process of releasing the pledged land with construction thereon and certain machinery and equipment as described in Notes 20 and 23 to the financial statements.

As at 31 December 2021, certain items of plant and equipment were fully depreciated but are still in use. The gross carrying amount before deducting accumulated depreciation and allowance for impairment loss of those assets amounted to Baht 2,663 million (2020: Baht 2,453 million) (Separate financial statements: Baht 1,374 million, 2020: Baht 1,348 million).

#### **18. Right to operate a coal mining business**

On 8 June 2011, the Company invested in PT Utami Jaya Mulia with a license to operate a coal mining business in Indonesia by entering into a novation agreement to novate to the Company all rights, titles, interests and obligations of the share purchase agreement between PT Advance Marketing and Services, a related company, and the former shareholders, for a total purchase price of USD 13 million (equivalent to Baht 396 million).

Such transaction reflects the Company expects from investing to secure a reliable source of coal to support the Company's operations. The Company therefore presented such investment amounting to Baht 396 million, as a separate item in the consolidated statement of financial position under the caption of "Right to operate a coal mining business". The right will be amortised as a cost of operation in profit or loss, using the units of production method over the life of the mining operation, beginning when the subsidiary commences the mining operation.

The balance of the right to operate a coal mining business account as at 31 December 2021 and 2020 are as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	<u>2021</u>	<u>2020</u>
Right to operate a coal mining business	396	396
Less: Allowance of impairment of right to operate a coal mining business	(80)	(80)
Right to operate a coal mining business - net	<u>316</u>	<u>316</u>

## 19. Deferred expenses

Details of deferred expenses as at 31 December 2021 and 2020 are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Cost of substation				
- Cost of substation equipment	131	131	131	131
- Land	9	9	9	9
Cost of coal mine exploration	43	37	15	15
Total	<u>183</u>	<u>177</u>	<u>155</u>	<u>155</u>
Less: Accumulated amortisation	(105)	(100)	(105)	(100)
Allowance for impairment loss on cost of coal mine exploration	(32)	(32)	(15)	(15)
Deferred expenses - net	<u>46</u>	<u>45</u>	<u>35</u>	<u>40</u>

Movements of the deferred expense account during the years ended 31 December 2021 and 2020 are summarised below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Net book value at beginning of the year	45	48	40	45
Add: Cost of coal mine exploration increased for the year	5	-	-	-
Less: Amortisation for the year	(5)	(5)	(5)	(5)
Translation adjustment	1	2	-	-
Net book value at end of the year	<u>46</u>	<u>45</u>	<u>35</u>	<u>40</u>

### Cost of substation

The Company had an agreement to transfer all equipment of an electrical power distribution substation and certain land to the Electricity Generating Authority of Thailand (“EGAT”), and transferred ownership of these assets on 28 May 2008 and 30 September 2008. However, the Company continues to use the equipment and land in the course of its business. Cost of substation is amortised on a systematic basis over its economic useful life, with reference to the useful lives of the power plant and related equipment.

### Cost of coal mine exploration

On 26 April 2011, the Company entered into an agreement to engage PT Advance Marketing and Services, a related company, to explore the area for coal mine of PT Utami Jaya Mulia, a subsidiary. The Company will amortise such costs using the units of production method over the life of the mining operations through the Company’s consolidated statement of comprehensive income, when the subsidiary commences its mining operations.

## 20. Bank overdrafts and short-term loans

Details of bank overdrafts and short-term loans as at 31 December 2021 and 2020 are as follows:

		(Unit: Million Baht)			
		Consolidated		Separate	
		financial statements		financial statements	
Interest rate (percent per annum)		2021	2020	2021	2020
Trust receipt	3.1 and 3.7	-	124	-	124

The short-term credit facilities from a financial institution of the Company are secured by the mortgage of the Company’s land and premises, the land of the four subsidiaries and the two related parties, the pledge of the Company’s machinery, the assignment of rights under the power purchase agreement, including the back-up power purchase agreement between the Company and the Electricity Generating Authority of Thailand, the assignment of rights in a bank deposit, and guarantees provided by the Company’s directors and a subsidiary. In addition, the Company is subject to certain restrictive covenants identified in the agreement including financial conditions concerning the maintenance of financial ratio.

During the second quarter of the current year, the Company submitted a letter of intent to cancel the activation of working capital facilities and trust receipt, and to request the pledged collaterals under the facility agreements be discharged. The bank has already canceled the working capital facilities and the trust receipt, and is in the process of releasing the pledged collaterals under the facility agreements.

## 21. Trade and other payables

Details of trade and other payables as at 31 December 2021 and 2020 are as follows:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Trade payables - related parties (Note 6)	68	253	454	206
Trade payables - unrelated parties	529	371	447	147
Other payables - related parties (Note 6)	20	27	28	35
Other payables - unrelated parties	203	243	101	90
Accrued expenses	285	317	100	75
Interest payables	98	77	98	72
Power development fund payables	3	3	3	3
Retention payables	8	4	6	2
Total trade and other payables	<u>1,214</u>	<u>1,295</u>	<u>1,237</u>	<u>630</u>

## 22. Other current liabilities

Details of other current liabilities as at 31 December 2021 and 2020 are as follows:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Deferred output tax	182	125	73	61
Value added tax payable	31	34	2	6
Others	4	-	-	-
Total other current liabilities	<u>217</u>	<u>159</u>	<u>75</u>	<u>67</u>

## 23. Long-term loans

As at 31 December 2021 and 2020, its subsidiaries have long-term loan agreements with commercial banks as follows:

(Unit: Million Baht)

Facilities	Credit facilities	Date of agreement	Interest rate (% per annum)	Repayment condition	Consolidated financial statements						
					2021			2020			
					Current portion	Long-term portion	Total	Current portion	Long-term portion	Total	
<b>National Power Plant 5A Company Limited</b>											
Loan	Baht 886 million	27 August 2013 with amendment agreement on 8 June 2015, on 28 August 2019 and on 21 March 2019	(a) MLR for loans incurred before operating date (b) MLR - 0.50 for the loans incurred after operating date	The loan and its interest are repayable in monthly installments, in a total of 67 installments with the final installments within January 2022.	-	-	-	127	3	130	The mortgage of the subsidiary's land and premises with current or future construction thereon, the assignment of rights under the premises lease agreement, the power and steam sale and purchase agreements and related projects agreements together with bank deposit, including guarantees provided by the Company and the Company's directors.
Less: Deferred financial service fees					-	-	-	(2)	-	(2)	
Loans - net					-	-	-	125	3	128	
<b>E 85 Company Limited</b>											
Loan	Baht 2,300 million	8 December 2011 with amendment agreement No. 1 - 3 from 2012 to 2015 and No. 4 - 7 from 2017 to 2020	MLR - 0.50	Interest is payable monthly and principal is to be repaid in quarterly installments, commencing in March 2014 with the final installment due in January 2024.	-	-	-	-	837	837	The mortgage of the subsidiary's land, premises and machinery, together with bank deposit
Less: Deferred financial service fees					-	-	-	-	(1)	(1)	
Loans - net					-	-	-	-	836	836	



(Unit: Million Baht)

## Consolidated financial statements

Facilities	Credit facilities	Date of agreement	Interest rate (% per annum)	Repayment condition	2021		2020		Securities	
					Current portion	Long-term portion	Current portion	Long-term portion		Total
<b>Future Greenery Company Limited</b>										
Tranche A	Baht 3,343 million	31 July 2013 with amendment on agreement on 11 April 2014, 28 August 2017, 12 March 2019, and on 24 December 2020	(a) MLR for the loans incurred before operating date (b) MLR - 0.50 for the loans incurred after the date of the third loan amendment	Interest is payable monthly and principal is to be repaid in quarterly instalments, commencing in December 2015 with the final instalment due in December 2022.	-	-	554	569	1,123	The mortgage of the subsidiary's land, premises and machinery and the assignment of rights under a land lease agreement, the project agreement, the insurance policy for the related assets and the bank deposit, including guarantees provided by the Company and the Company's directors.
Less: Deferred financial service fees					-	-	(1)	(1)	(2)	
Loan - net					-	-	553	568	1,121	
<b>Total long-term loans of the subsidiaries - net</b>					-	-	678	1,407	2,085	

Movements in the long-term loan account during the years ended 31 December 2021 and 2020 are summarised below.

(Unit: Million Baht)

	Consolidated financial statements	
	<u>2021</u>	<u>2020</u>
<b>Balance at beginning of the year</b>	2,085	2,786
Add: Amortisation of deferred financial service fees during the year	5	3
Less: Repayment during the year	(2,090)	(704)
<b>Balance at end of the year</b>	<u>-</u>	<u>2,085</u>

#### National Power Plant 5A Company Limited

On 25 February 2021, the subsidiary made early repayment of a long-term loan from a financial institution amounting to Baht 119 million in full. Furthermore, the subsidiary requested the cancellation of working capital and forward contract facilities and proceeded to release the collateral pledged under such credit facility agreement. At present, the bank has released all the mortgaged land and buildings, machinery and equipment of the subsidiary.

#### Future Greenergy Company Limited

On 31 May 2021, the subsidiary made early repayment of a long-term loan from a financial institution amounting to Baht 985 million in full and proceeded to release the collateral pledged under such credit facility agreement. At present, the bank has released all the mortgaged land and buildings, machinery and equipment of the subsidiary.

#### E85 Company Limited

On 30 June 2021, the subsidiary made early repayment of a long-term loan from a financial institution amounting to Baht 837 million in full and proceeded to release the collateral pledged under such credit facility agreement. At present, the bank has released all the mortgaged land and buildings, machinery and equipment of the subsidiary.

## 24. Long-term baht debentures

Details of long-term baht debentures as at 31 December 2021 and 2020 are as follows:

Debentures	Term	Issued date	Maturity date	Interest rate (% per annum)	Interest payment condition	Separate financial statements					
						2021			2020		
						Current portion	Long-term portion	Total	Current portion	Long-term portion	Total
1/2016	5 years	5 August 2016	5 August 2021	4.80	Interest is repayable every three months, commencing November 2016 through August 2021	-	-	-	3,900	-	3,900
1/2017 tranche 2	5 years 5 months	24 February 2017	24 July 2022	5.15	Interest is repayable every three months, commencing May 2017 through July 2022	982	-	982	-	982	982
2/2017 tranche 3	5 years 3 months	27 April 2017	24 July 2022	5.50	Interest is repayable every three months, commencing July 2017 through July 2022	773	-	773	-	773	773
1/2019	3 years 6 months	27 September 2019	27 March 2023	5.50	Interest is repayable every three months, commencing December 2020 through March 2023	-	2,968	2,968	-	2,968	2,968
1/2020	3 years 6 months	7 August 2020	7 February 2024	4.70	Interest is repayable every three months, commencing August 2020 through February 2024	-	1,384	1,384	-	1,384	1,384
2/2020	5 years	7 August 2020	7 August 2025	5.20	Interest is repayable every three months, commencing August 2020 through August 2025	-	2,298	2,298	-	2,298	2,298

(Unit: Million Baht)

(Unit: Million Baht)

## Separate financial statements

Debtentures	Term	Issued date	Maturity date	Interest rate (% per annum)	Interest payment condition	2021			2020		
						Current portion	Long-term portion	Total	Current portion	Long-term portion	Total
1/2021 tranche 1	3 years 6 months	12 May 2021	12 November 2024	4.50	Interest is repayable every three months, commencing August 2021 through November 2024	-	1,250	1,250	-	-	-
1/2021 tranche 2	5 years	12 May 2021	12 May 2026	5.00	Interest is repayable every three months, commencing August 2021 through May 2026	-	2,000	2,000	-	-	-
1/2021 tranche 3	5 years 10 months	12 May 2021	12 March 2027	5.35	Interest is repayable every three months, commencing August 2021 through March 2027	-	2,250	2,250	-	-	-
2/2021	7 years	12 November 2021	11 May 2028	4.75	Interest is repayable every three months, commencing February 2022 through November 2028	-	2,800	2,800	-	-	-
Less: Unamortised costs relating to the issuance of the debtentures						(2)	(112)	(114)	(3)	(60)	(63)
Debtentures - net from unamortised costs relating to the issuance of the debtentures						1,753	14,838	16,591	3,897	8,345	12,242

Debenture no.1/2017, no.2/2017, no.1/2019, no.1/2020, no/2020, no.1/2021 and no.2/2021 of the Company are unsecured, registered, senior debentures with trustees and have a face value of Baht 1,000 each. Interest is payable every three months throughout the life of the debentures and the Company has an option to redeem the debentures or repay the principal, in full or in part and on one or more occasions, before the maturity date. The debenture holders have an option to early redeem the debentures once before the maturity set by the Company.

The debenture has covenants with respect to rights and duties of debenture issuers and debenture holders which must be followed by the Company such as a requirement to maintain certain financial ratios, and restrictions on payment of dividends in case the Company cannot repay any payables under the debenture and transactions with related parties must have fair conditions.

As at 31 December 2021, five subsidiaries purchased 94,000 units of debentures no. 1/2017 tranche 2, no.1/2019, no. 1/2020 tranche 2, no. 1/2021 tranche 1, no. 1/2021 tranche 2 and no. 1/2021 tranche 3 debentures issued by the Company for the total amount of approximately Baht 94 million. The debentures carry interest at the rates of 4.50 - 5.50 percent per annum.

Movements in the debenture account for the years ended 31 December 2021 and 2020 are summarised below.

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	2021	2020	2021	2020
<b>Balance at beginning of the year</b>	12,242	13,277	12,242	13,277
Add: Issuance of debentures during the year	8,300	3,682	8,300	3,682
Amortisation of unamortised costs relating to the issuance of the debentures	29	30	29	30
Less: Repayment of debentures during the year	(3,900)	(4,707)	(3,900)	(4,707)
Increase in unamortised costs relating to the issuance of the debentures	(80)	(40)	(80)	(40)
<b>Total</b>	<b>16,591</b>	<b>12,242</b>	<b>16,591</b>	<b>12,242</b>
Less: Debentures held by subsidiaries	(94)	-	-	-
<b>Balance at end of the year</b>	<b>16,497</b>	<b>12,242</b>	<b>16,591</b>	<b>12,242</b>

## 25. Provision for long-term employee benefits

Provision for long-term employee benefits as at 31 December 2021 and 2020, which represents compensation payable to employees after they retire, were as follows:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
<b>Balance at beginning of the year</b>	204	203	84	80
Included in profit or loss:				
Current service cost	17	14	6	5
Interest cost	3	3	1	1
Included in other comprehensive income:				
Actuarial gain arising from				
Financial assumptions changes	(13)	-	(5)	-
Experience adjustments	(11)	-	(1)	-
Decrease in past service cost	-	(4)	-	-
Benefits paid during the year	(10)	(12)	(7)	(2)
Reclassified to liabilities directly associated with assets held for sale (Note 14.1)	(5)	-	-	-
<b>Balance at end of the year</b>	<b>185</b>	<b>204</b>	<b>78</b>	<b>84</b>

The Group expect to pay Baht 13 million (2020: Baht 17 million) of long-term employee benefits during the next year (Separate financial statements: Baht 5 million, 2020: Baht 12 million).

As at 31 December 2021, the weighted average duration of the liabilities for long-term employee benefit is 13 years (2020: 13 years) (Separate financial statements: 12 years, 2020: 13 years).

Significant actuarial assumptions are summarised below:

(Unit: Percent per annum)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Discount rate	2.1 - 2.8	1.5 - 1.9	2.2	1.5
Future salary increase rate (depending on the age of the employee)	4.0 - 6.0	4.0 - 6.0	4.0	4.0

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2021 and 2020 are summarised below:

(Unit: Million Baht)

	As at 31 December 2021			
	Consolidated financial statements		Separate financial statements	
	<u>Increase 1%</u>	<u>Decrease 1%</u>	<u>Increase 1%</u>	<u>Decrease 1%</u>
Discount rate	(15)	17	(6)	7
Salary increase rate	17	(15)	7	(6)

(Unit: Million Baht)

	As at 31 December 2020			
	Consolidated financial statements		Separate financial statements	
	<u>Increase 1%</u>	<u>Decrease 1%</u>	<u>Increase 1%</u>	<u>Decrease 1%</u>
Discount rate	(17)	19	(7)	8
Salary increase rate	20	(18)	7	(6)

## 26. Statutory reserve

Pursuant to Section 116 of the Public Limited Companies Act B.E. 2535, the Company is required to set aside a statutory reserve equal to at least 5 percent of its net profit after deducting accumulated deficit brought forward (if any) until the reserve reaches 10 percent of the registered share capital. The statutory reserve is not available for dividend payment.

According to Section 1202 of the Thai Civil and Commercial Code, a subsidiary (incorporated under Thai Laws) is required to set aside a statutory reserve equal to at least 5 percent of its profit each time the company pays out a dividend, until such reserve reaches 10 percent of its registered share capital. The statutory reserve is not available for dividend payment.

## 27. Differences on reorganisation of business of group companies

The differences on reorganisation of business of group companies as at 31 December 2021 and 2020 have the following details.

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Differences on purchases of investments in subsidiaries	(2)	(16)	(2)	(16)
Differences on acquisitions of related properties and power businesses	353	353	-	-
Total	351	337	(2)	(16)

The Company recorded the differences on purchases of investments in ordinary shares in its separate financial statements in shareholders' equity under the caption of "Differences on reorganisation of business of group companies". In this respect, the Company adopted "Accounting Treatment Guidance for Business Combination under Common Control" as the same as the consolidated financial statements.

### Differences on purchases of investments in subsidiaries

(Unit: Million Baht)

Consolidated financial statements / Separate financial statements					
Subsidiary's name	Acquisition date	Acquisition cost	Attributable net	Differences on reorganisation	
			book value	of business of group companies	
				2021	2020
			<u>As at acquisition date</u>		
E 85 Company Limited					
No. 1	28 October 2009	412	392	20	20
No. 2	30 July 2010	612	578	34	34
Namsai 304 Company Limited	16 August 2011	176	190	(14)	(14)
Integrated Research Center Company Limited	9 December 2011	4	46	(42)	(42)
Sonish Starch Technology Company Limited	25 March 2014	167	181	-	(14)
Total				(2)	(16)

### Differences on acquisitions of related properties and power businesses.

(Unit: Million Baht)

Consolidated financial statements					
Subsidiary's name	Acquisition date	Acquisition cost	Attributable net	Differences on reorganisation	
			book value	of business of group companies	
				2021	2020
			<u>As at acquisition date</u>		
National Power Plant 2 Company Limited	1 August 2011	162	4	158	158
National Power Plant 3 Company Limited	1 August 2011	526	331	195	195
Total				353	353



## 28. Expenses by nature

Significant expenses classified by nature are as follows:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Raw materials and consumables used	8,697	6,696	3,615	2,436
Depreciation, amortisation and amortised expenses	1,588	1,550	596	564
Purchases of electricity, water and steam	676	663	3,593	2,424
Salaries, wages and other employee benefits	752	887	347	383
Repair and maintenance expenses	658	718	127	190
Transportation and freight expenses	357	379	243	190
Changes in inventories of finished goods	(12)	(48)	-	-
Research and development expenses	-	-	130	190

## 29. Income tax

Income tax for the years ended 31 December 2021 and 2020 are made up as follows:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
<b>Current income tax:</b>				
Current income tax charge	20	11	-	-
Adjustment in respect of income tax of previous year	1	-	-	-
<b>Deferred income tax:</b>				
Relating to origination and reversal of temporary differences	(217)	(31)	5	(138)
Classify deferred tax asset as liability that is directly related to the asset held for sale (Note 14.1).	22	-	-	-
<b>Income tax (benefits) expense reported in profit or loss</b>	<b>(174)</b>	<b>(20)</b>	<b>5</b>	<b>(138)</b>

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2021 and 2020 are as follows:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
Deferred tax relating to actuarial gain	5	-	1	-

The reconciliation between accounting profit and income tax expenses is shown below:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	2021	2020	2021	2020
Accounting profit before tax from continued operation	1,381	2,211	702	1,306
Accounting loss before tax from discontinued operation	-	(54)	-	-
	<u>1,381</u>	<u>2,157</u>	<u>702</u>	<u>1,306</u>
Applicable tax rate (percent)	20	20	20	20
Accounting profit before tax multiplied by income tax rate	276	432	140	261
Adjustment in respect of income tax of previous year	1	-	-	-
Effects of:				
Promotional privileges (Note 30)	(150)	(125)	1	7
Incomes and expenses that are not taxable income or not deductible in determining taxable profit	1	19	(94)	(145)
Additional expenses deductions allowed	(85)	(269)	(45)	(227)
Temporary difference which recorded in deferred tax assets and deferred tax liabilities	(63)	26	2	(34)
Previously unrecognised tax losses that is used to reduce deferred tax expenses	(193)	(59)	-	-
Unused tax loss in the current year	23	10	-	-
Others	16	(54)	-	-
Total	<u>(451)</u>	<u>(452)</u>	<u>(135)</u>	<u>(399)</u>
Income tax (benefits) expense reported in profit or loss	<u>(174)</u>	<u>(20)</u>	<u>5</u>	<u>(138)</u>

The components of deferred tax assets and deferred tax liabilities are as follows:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	2021	2020	2021	2020
<b>Deferred tax assets (liabilities)</b>				
Allowance for impairments loss on investment	15	85	15	85
Provision for long-term employee benefits	36	40	16	17
Unrealised profit from inter-sales transactions	43	40	-	-
Unrealised loss from translation of financial instrument	-	10	-	10
Unrealised profit from inter-sales of fixed assets	46	16	-	-
Unused tax loss	632	356	229	137
Differences of depreciation for accounting and tax purpose	(223)	(222)	(27)	(21)
Long-term baht debentures	(23)	(13)	(23)	(12)
Others	6	7	2	3
<b>Total</b>	<b>532</b>	<b>319</b>	<b>212</b>	<b>219</b>
<b>Presented as</b>				
Deferred tax assets	553	413	212	219
Deferred tax liabilities	(21)	(94)	-	-
<b>Total</b>	<b>532</b>	<b>319</b>	<b>212</b>	<b>219</b>

As at 31 December 2021, the subsidiaries have deductible temporary differences and unused tax losses totaling Baht 2,412 million (2020: Baht 4,008 million) (Separate financial statements: Baht 2,299 million, 2020: Baht 2,319 million), No deferred tax assets have been recognised on these amounts as the subsidiaries believe future taxable profits may not be sufficient to allow utilisation of the temporary differences and unused tax losses.

Details of expiry date of unused tax loss are summarised as below:

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	2021	2020	2021	2020
31 December 2021	143	454	-	-
31 December 2022	584	679	-	-
31 December 2023	208	250	97	97
31 December 2024	16	16	-	-
31 December 2025	2,313	2,530	476	476
31 December 2026	579	15	487	-
31 December 2027	86	89	86	80
31 December 2028	1,232	976	-	-
31 December 2029	296	296	-	-
	<b>5,457</b>	<b>5,305</b>	<b>1,146</b>	<b>653</b>

### 30. Promotional privileges

The Group was granted investment promotional privileges and must comply with certain conditions and restrictions stipulated in the investment promotion certificates by the Board of Investment (BOI). Significant tax privileges granted to the Company and its subsidiaries are summarised below.

	Promotion certificate no.	Exemption from corporate income tax for 8 years commencing from	50 percent reduction of corporate income tax rate for 5 years commencing from
<b>National Power Supply Public Company Limited</b>			
Steam based electricity generation	1752(2)/2557	31 July 2014	31 July 2022
<b>Namsai 304 Company Limited</b>			
Manufacture of treated water	58-2006-0-00-1-0	30 April 2016	30 April 2024
Manufacture of treated water	2193(2)/2548	30 June 2007	30 June 2020
<b>Integrated Research Center Company Limited</b>			
Research and development	61-0229-1-00-2-0	31 January 2019	Non-granted
<b>National Power Plant 3 Company Limited</b>			
Loading goods for cargo ship	1485(2)/2552	30 April 2010	Non-granted
<b>NPS Ocean Star Company Limited</b>			
Sea transportation - public and large container ships	1375(2)/2553	13 April 2010	Non-granted
<b>National Power Plant 5A Company Limited</b>			
Biomass based steam generation	2365(9)/Ao./2553	25 July 2012	25 July 2020
Biomass steam based electricity generation	2641(1)/2556	30 June 2015	30 June 2023
<b>E 85 Company Limited</b>			
Manufacture of alcohol and fuel from agricultural products	1043(9)/2551	6 December 2012	6 December 2020
Manufacture of electricity from biogas	2091(1)/2557	Not yet commenced its operation	Not yet commenced its operation
Manufacture of electricity from biogas	2092(1)/2557	Not yet commenced its operation	Not yet commenced its operation
<b>Sonish Starch Technology Company Limited</b>			
Manufacture of modified starch	1462(2)/2550	1 August 2011	Non-granted
Manufacture of biogas	1153(1)/2556	1 April 2013	1 April 2021
<b>National Power Plant 5 Company Limited</b>			
Manufacture of Sodium sulfate leaching from fly ash	2682(2)/2555	30 June 2015	30 June 2023
<b>Future Greenergy Company Limited</b>			
Manufacture of electricity and steam	1987(9)/Ao./2556	1 June 2016	1 June 2024
<b>National Power Plant 12 Company Limited</b>			
Manufacture of electricity and steam	58-2145-0-00-1-0	Not yet commenced its operation	Not yet commenced its operation

The Company's operating revenues for the years ended 31 December 2021 and 2020, divided between promoted and non-promoted operations, are summarised below.

	(Unit: Million Baht)	
	<u>2021</u>	<u>2020</u>
Promoted operations	22	133
Non-promoted operations	8,728	8,344
<b>Total</b>	<b>8,750</b>	<b>8,477</b>

All of the Company's sales are made solely in the local market.

### 31. Basic earnings per share

Basic earnings per share is calculated by dividing profit for the year attributable to equity holders of the Company (excluding other comprehensive income) by the weighted average number of ordinary shares in issue during the year.

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
<b>Earnings per share</b>				
Profit attributable to equity holders of the Company	1,554	2,177	696	1,444
Weighted average number of ordinary shares (Million shares)	935	935	935	935
Earnings per share (Baht)	1.66	2.33	0.74	1.54
<b>Earnings per share from continued operation</b>				
Profit attributable to equity holders of the Company	1,554	2,231	696	1,444
Weighted average number of ordinary shares (Million shares)	935	935	935	935
Earnings per share (Baht)	1.66	2.39	0.74	1.54

### 32. Dividend

(Unit: Million Baht)

Dividends	Approved by	Total dividends	Dividend per share
Interim dividend for 2019	The Board of Directors' meeting held on 23 April 2020	522	0.59
Total for 2020		522	0.59
Interim dividend for 2021 no. 1	The Board of Directors' meeting held on 10 August 2021	702	0.75
Interim dividend for 2021 no. 2	The Board of Directors' meeting held on 28 December 2021	1,000	1.07
Total for 2021		1,702	1.82

### 33. Segment information

Operating segment information is reported in a manner consistent with the internal reports that are regularly reviewed by the chief operating decision maker in order to make decisions about the allocation of resources to the segment and assess its performance.

For management purposes, the Company and its subsidiaries are organised into business units based on its products and services and have two reportable segments as follows:

- (1) the generation and supply of electricity, steam and water
- (2) the manufacture and distribution of ethanol

Other segments are the production and distribution of tapioca starch products, the leaching chemicals from fly ash and the research and development service.

The chief operating decision maker monitors the operating results of the business units separately for the purpose of making decisions about resource allocation and assessing performance. Segment performance is measured based on operating profit or loss and on a basis consistent with that used to measure operating profit or loss in the financial statements.

The basis of accounting for any transactions between reportable segments is consistent with that for third party transactions.

The basis of pricing policies for the inter-segment transfer are at the prices as described in Note 6 to the financial statements.

The following tables present revenue and profit (loss) information regarding the Company and its subsidiaries' operating segments for the years ended 31 December 2021 and 2020, respectively.

(Unit: Million Baht)

2021

	Generation and supply of electricity, steam and water	Manufacture and distribution of ethanol	Others	Total	Elimination of inter-segment transactions	Consolidated financial statements
<b>Revenues</b>						
Revenues from external customers	13,278	1,877	492	15,648	-	15,648
Inter-segment revenues	294	-	2,964	3,258	(3,258)	-
Total revenues	13,572	1,877	3,456	18,906	(3,258)	15,648
<b>Information about profit (loss)</b>						
Segment profit (loss)	3,632	(70)	198	3,760	(19)	3,741
Unallocated income and expenses:						
Depreciation and amortisation						(1,546)
Other income						27
Exchange losses						(4)
Reversal of impairment loss on financial assets						8
Share of profit from investments in joint ventures						2
Finance cost						(848)
Income tax benefits						174
Loss for the year from discontinued operation						-
Profit attributable to equity holders of the Company						1,554

(Unit: Million Baht)

2020

	Generation and supply of electricity, steam and water	Manufacture and distribution of ethanol	Others	Total	Elimination of inter-segment transactions	Consolidated financial statements
<b>Revenues</b>						
Revenues from external customers	12,540	2,842	235	15,617	-	15,617
Inter-segment revenues	314	-	2,706	3,020	(3,020)	-
Total revenues	12,854	2,842	2,941	18,637	(3,020)	15,617
<b>Information about profit</b>						
Segment profit	4,321	124	120	4,565	(27)	4,538
Unallocated income and expenses:						
Depreciation and amortisation						(1,516)
Gain on liquidation of subsidiary						25
Other income						116
Exchange losses						(23)
Impairment loss on financial assets						(16)
Share of profit from investments in joint ventures						1
Finance cost						(914)
Income tax benefits						20
Loss for the year from discontinued operation						(54)
Profit attributable to equity holders of the Company						2,177

## Geographic information

The Group is operated in Thailand only. As a result, all of the revenues as reflected in these financial statements pertain to the geographical reportable segment.

## Major customers

For the year 2021, the Group has revenues from two major customers in amount of Baht 4,896 million and Baht 2,457 million, respectively, arising from sales by the manufacture and distribution of electricity, steam and water segment (2020: Baht 5,013 million and Baht 2,099 million, respectively).

## 34. Commitments and contingent liabilities

### 34.1 Power Purchase Agreement

The Group entered into the following Power Purchase Agreements (“PPAs”) with the Electricity Generating Authority of Thailand (“EGAT”) to sell electricity at a specified quantities and prices as defined in the agreements.

Company's name	Date of agreement	Period (Years)	Commencement date	End of period	Contracted capacity (MW)
National Power Supply Public Company Limited	6 January 1998	25	12 March 1999	11 March 2024	90
National Power Supply Public Company Limited	6 January 1998	25	12 July 1999	11 July 2024	90
National Power Plant 5 Company Limited	22 September 2003	24	5 November 2003	15 October 2027	50
National Power Plant 5 Company Limited	22 September 2003	24	2 December 2003	15 October 2027	25
National Power Plant 3 Company Limited	16 April 1999	26	21 April 1999	15 December 2024	41

On 12 July 2019, Burapa Power Generation Company Limited (Formerly known as "IPP IP 2 Company Limited") entered into a power purchase agreement with the Electricity Authority of Thailand to secure 540 megawatts of electricity. The term of the agreement is 25 years, starting from the first day of commercial operations.

### 34.2 Back-up Power Purchase Agreement

The Group entered into the following back-up power purchase agreements with EGAT to purchase back-up power at specified quantities and prices as defined in the agreements.

Company's name	Date of agreement	Number of agreement	Period (Years)
National Power Supply Public Company Limited	19 February 2004	2	1
National Power Plant 5 Company Limited	19 February 2004	1	1

The terms of the agreements are one year. However, the agreements renew automatically for further periods of one year each time, unless one party provides a notice of its intention to terminate the agreements to the other party. In the event the relevant power purchase agreements are terminated before the mentioned termination dates, the agreements will be consequently terminated.



### 34.3 The Agreement relating to purchase of natural gas

On 24 July 2019, Burapha Power Generation Company Limited (Formerly known as "IPP IP 2 Company Limited") entered into one natural gas purchase agreement with PTT Public Company Limited to support the production and sale of electricity to the Electricity Generating Authority of Thailand in accordance with the Power Purchase Agreement dated 12 July 2019. The term of the natural gas purchase agreement is 25 years, starting from the first day of commercial operations.

### 34.4 Capital commitments

As at 31 December 2021 and 2020, the outstanding balances of capital commitments of the Group is summarised below.

(Unit: Million)

Currency	Consolidated financial statements		Separate financial statements	
	Purchase of machinery and equipment	Purchase of machinery and equipment	Purchase of machinery and equipment	Purchase of machinery and equipment
	2021	2020	2021	2020
Baht	61	13.3	60	13.3
USD	0.3	-	0.3	-
Total in (Million Baht)	71	13.3	70	13.3

### 34.5 Guarantees

As at 31 December 2021 and 2020, there were outstanding bank guarantees issued by local financial institutions on behalf of the Group in respect of certain performance bonds as required in normal course of business as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
<b>Electricity Generating Authority of Thailand</b>				
Guarantee for power purchase agreements	456	550	456	456
Guarantee for purchase of power back-up agreements	181	282	181	282
<b>Provincial Electricity Authority</b>				
Guarantee for power usage	54	61	-	-
<b>Others</b>	5	5	4	4

As at 31 December 2021, the Company, together with its three subsidiaries utilised Baht 54 million of the Company's guarantee facilities to provide guarantees under power purchase agreements with the Electricity Generating Authority of Thailand and guarantees for electricity usage to the Provincial Electricity Authority (2020: Baht 148 million)

In addition, two subsidiaries invested in government bonds amounting to Baht 217 million (2020: baht 120 million) as to provide guarantees under power purchase agreements with the Electricity Generating Authority of Thailand.



## 36. Financial instruments

### 36.1 Derivatives

(Unit: Million Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
<b>Derivative liabilities</b>				
Foreign exchange forward contracts	-	51	-	51

### 36.2 Financial risk management objectives and policies

The Group's financial instruments principally comprise cash and cash equivalents, trade and other receivables, pledged bank deposits, investments, trade and other payables, short-term loans from related parties, lease liabilities and long-term baht debentures. The financial risks of the Group associated with these financial instruments and how they are managed is described below.

#### *Credit risk*

The Group is exposed to credit risk primarily with respect to trade and other receivables, long-term loans to subsidiaries, deposits with banks and financial institutions and other financial instruments. Except for derivatives, the maximum exposure to credit risk is limited to the carrying amounts as stated in the statement of financial position. The Group's maximum exposure relating to derivatives is noted in the liquidity risk topic.

#### *Trade receivables*

The Group manages the risk by adopting appropriate credit control policies and procedures and therefore does not expect to incur material financial losses. Outstanding trade receivables are regularly monitored.

An impairment analysis is performed at each reporting date to measure expected credit losses. The provision rates are based on days past due for groupings of various customer segments with similar credit risks. The Group classifies customer segments by customer type and rating. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

#### *Market risk*

There are two types of market risk comprising currency risk and interest rate. The Group enters into foreign exchange forward contracts to mitigate the risk arising on the import of goods.

### Foreign currency risk

The Group's exposure to the foreign currency risk relates primarily to its trading transactions and loans that are denominated in foreign currencies. Mostly the Group, the Group seeks to reduce this risk by entering into foreign exchange forward contracts when it considers appropriate. Generally, the forward contracts mature within one year.

As at 31 December 2021 and 2020, the balances of financial assets and liabilities denominated in foreign currencies are summarised below.

Consolidated financial statements						
Foreign currency	Financial assets		Financial liabilities		Average exchange rate	
	<u>2021</u> (Million)	<u>2020</u> (Million)	<u>2021</u> (Million)	<u>2020</u> (Million)	<u>2021</u> (Baht per 1 foreign currency unit)	<u>2020</u>
USD	-	-	-	2.9	33.4199	30.0371
CNY	-	-	-	0.6	5.2507	4.6187

Separate financial statements						
Foreign currency	Financial assets		Financial liabilities		Average exchange rate	
	<u>2021</u> (Million)	<u>2020</u> (Million)	<u>2021</u> (Million)	<u>2020</u> (Million)	<u>2021</u> (Baht per 1 foreign currency unit)	<u>2020</u>
USD	-	-	16.1	18.3	33.4199	30.0371
CNY	-	-	-	0.4	5.2507	4.6187

The balances of forward contract of the Group as at 31 December 2021 and 2020 are summarised below.

Consolidated financial statements / Separate financial statements						
Foreign currency	Bought amount		Average exchange rate		Contractual maturity date	
	<u>2021</u> (Million)	<u>2020</u> (Million)	<u>2021</u> (Baht per 1 foreign currency unit)	<u>2020</u>	<u>2021</u>	<u>2020</u>
USD	-	38.4	-	30.9725 - 31.6190	-	4 January 2021 - 3 March 2021

### Interest rate risk

The Group's exposure to interest rate risk relates primarily to its short-term loans from financial institutions short-term loans from related companies, lease liabilities, and long-term baht debentures. Most of the Group's financial assets and liabilities bear fixed interest rates which are close to the market rate. Interest rate risk of the Group is low, and therefore, the Group does not currently use derivatives to hedge against such risk.

As at 31 December 2021 and 2020, significant financial assets and liabilities classified by type of interest rate are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity date, or the repricing date if this occurs before the maturity date.

(Unit: Million Baht)

## Consolidated financial statements

As at 31 December

	Fixed interest rates										Total	Effective interest rate		
	Within 1 year		1 - 5 years		Over 5 years		Floating interest rate		Non-interest bearing				Total	Effective interest rate
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020				
<b>Financial assets</b>														
Cash and cash equivalents	-	-	-	-	-	-	3,588	722	-	-	3,588	722	0.1 - 0.5	
Restricted bank deposits	-	-	-	-	-	-	-	148	-	-	-	148	-	
Trade and other receivables	-	-	-	-	-	-	-	-	2,935	2,935	2,935	2,631	-	
Pledged bank deposits	-	-	-	-	-	-	277	272	-	-	277	272	0.1	
Other-current financial assets	327	-	97	-	126	-	-	-	-	-	550	126	3.2 - 5.5	
	327	-	97	-	126	-	3,865	1,142	2,935	2,935	7,350	3,899		
<b>Financial liabilities</b>														
Bank overdrafts and short-term loans from financial institutions	-	124	-	-	-	-	-	-	-	-	-	-	Note 20	
Trade and other payables	-	-	-	-	-	-	-	-	1,214	1,295	1,214	1,295	-	
Short-term loans from related parties	131	-	-	-	-	-	-	-	-	-	131	-	-	
Lease liabilities	10	10	192	-	-	-	-	-	-	-	202	175	4.5 - 6.8	
Long-term loans from financial institutions	-	-	-	-	-	-	-	2,085	-	-	-	2,085	Note 23	
Long-term baht debentures	1,730	3,897	14,767	8,345	-	-	-	-	-	-	16,497	12,242	Note 24	
	1,871	4,031	14,959	8,510	-	-	-	2,085	1,214	1,295	18,044	15,921		

(% per annum)

(Unit: Million Baht)

## Separate financial statements

As at 31 December

	Fixed interest rates										Total		Effective interest rate			
	Within 1 year		1 - 5 years		Floating interest rate		Non-interest bearing		Total		Effective interest rate					
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020				
<b>Financial assets</b>																
Cash and cash equivalents	-	-	-	-	3,155	134	-	-	3,155	134	0.1 - 0.5	0.1 - 0.6				
Restricted bank deposits	-	-	-	-	-	16	-	-	-	16	-	0.1				
Trade and other receivables	-	-	-	-	-	-	1,794	1,533	1,794	1,533	-	-				
Pledged bank deposits	-	-	-	-	270	270	-	-	270	270	0.1	0.1				
Loans to related parties	75	3	-	-	-	-	-	-	75	3	0.6	6.3				
	75	3	-	-	3,425	420	1,794	1,533	5,294	1,956						
<b>Financial liabilities</b>																
Bank overdrafts and short-term loans from financial institutions	-	124	-	-	-	-	-	-	-	-	-	-	Note 20			
Trade and other payables	-	-	-	-	-	-	1,237	630	1,237	630	-	-				
Short-term loans from related parties	1,722	1,508	-	-	-	-	-	-	1,722	1,508	0.4 - 0.7	0.6 - 3.9				
Lease liabilities	5	4	37	38	-	-	-	-	42	42	5.9 - 6.4	5.9 - 6.4				
Long-term baht debentures	1,753	3,897	14,838	8,345	-	-	-	-	16,591	12,242	-	-	Note 24			
	3,480	5,533	14,875	8,383	-	-	1,237	630	19,592	14,546						

## Liquidity risk

The Group monitors the risk of a shortage of liquidity through the use of cash and cash equivalents and has access to a sufficient variety of sources of funding.

As of 31 December 2021, the Group had approximately 22 percent of its liabilities due within a year compared to the total book value of such liabilities shown in the financial statements (2020: 38 percent) (Company only: 28 percent 2020: 43 percent). The Group also has the ability to access various sources of funds to obtain enough funding for the operations of the Group.

The table below summarises the maturity profile of the Group's non-derivative financial liabilities and derivative financial instruments as at 31 December 2021 and 2020 based on contractual undiscounted cash flows:

(Unit: Million Baht)

	Consolidated financial statements				
	On demand	Less than 1 year	1 to 5 years	> 5 years	Total
<b>Non-derivatives</b>					
Trade and other payables	1,214	-	-	-	1,214
Short-term loans from related party	-	131	-	-	131
Lease liabilities	-	23	83	255	360
Long-term baht debentures	-	1,731	14,880	-	16,611
<b>Total non-derivatives</b>	<b>1,214</b>	<b>1,885</b>	<b>14,962</b>	<b>255</b>	<b>18,316</b>

(Unit: Million Baht)

	Separate financial statements				
	On demand	Less than 1 year	1 to 5 years	> 5 years	Total
<b>Non-derivatives</b>					
Trade and other payables	-	1,237	-	-	1,237
Short-term loans from related parties	1,591	131	-	-	1,722
Lease liabilities	-	8	22	28	58
Long-term baht debentures	-	1,755	14,950	-	16,705
<b>Total non-derivatives</b>	<b>1,591</b>	<b>3,131</b>	<b>14,972</b>	<b>28</b>	<b>19,722</b>

(Unit: Million Baht)

## Consolidated financial statements

	On demand	Less than 1 year	1 to 5 years	> 5 years	Total
<b>Non-derivatives</b>					
Trade and other payables	-	1,295	-	-	1,295
Bank overdraft and short-term loans from financial institutions	-	124	-	-	124
Lease liabilities	-	22	71	202	295
Long-term loan	-	778	1,522	149	2,449
Long-term baht debentures	-	4,323	9,260	-	13,583
<b>Total non-derivatives</b>	<b>-</b>	<b>6,542</b>	<b>10,853</b>	<b>351</b>	<b>17,746</b>
<b>Derivatives</b>					
Derivative liabilities: net settled	-	51	-	-	51
<b>Total derivatives</b>	<b>-</b>	<b>51</b>	<b>-</b>	<b>-</b>	<b>51</b>

(Unit: Million Baht)

## Separate financial statements

	On demand	Less than 1 year	1 to 5 years	> 5 years	Total
<b>Non-derivatives</b>					
Bank overdraft and short-term loans from financial institutions	-	124	-	-	124
Trade and other payables	-	630	-	-	630
Short-term loans from related parties	1,508	-	-	-	1,508
Lease liabilities	-	7	22	31	60
Long-term baht debentures	-	4,323	9,260	-	13,583
<b>Total non-derivatives</b>	<b>1,508</b>	<b>5,084</b>	<b>9,282</b>	<b>31</b>	<b>15,905</b>
<b>Derivatives</b>					
Derivative liabilities: net settled	-	51	-	-	51
<b>Total derivatives</b>	<b>-</b>	<b>51</b>	<b>-</b>	<b>-</b>	<b>51</b>



### 36.3 Fair value of financial instruments

At rates close to the market interest rates, their fair value is not expected to be materially different from the amounts presented in the statement of financial position, except the following.

(Unit: Million Baht)

	Consolidated financial statements			
	As at 31 December 2021		As at 31 December 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial liabilities</b>				
Debentures	16,497	16,611	12,242	12,437

(Unit: Million Baht)

	Separate financial statements			
	As at 31 December 2021		As at 31 December 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial liabilities</b>				
Debentures	16,591	16,743	12,242	12,437

The methods and assumptions used by the Group in estimating the fair value of financial instruments are as follows:

- For financial assets and liabilities which have short-term maturity, including cash and cash equivalents, trade and other receivables, dividend receivable from subsidiary, short-term loans to related parties, pledged bank deposits, bank overdrafts, short-term loans from financial institutions, trade and other payables, dividend payable to related parties and short-term loans from related parties, the carrying amounts at the statements of financial position approximate fair value.
- For lease liabilities and long-term loans carrying interest at a rate approximating the market rate, the carrying amounts at the statements of financial position approximate fair value.
- For long-term baht debentures, fair value is derived from quoted market prices of the Thai Bond Market Association.
- For derivatives, their fair value has been determined by using a discounted future cash flow model and a valuation model technique. Most of the inputs used for the valuation are observable in the relevant market, such as spot rates of foreign currencies, yield curves of the respective currencies, interest rate yield curves and commodity price yield curves. The Group had considered to counterparty credit risk when determining the fair value of derivatives

During the current year, there were no transfers within the fair value hierarchy.

### **37. Capital management**

The primary objective of the Company and its subsidiaries' capital management is to ensure that it has appropriate capital structure in order to support its business and maximise shareholder value. As at 31 December 2021, the Group's debt-to-equity ratio was 1.74:1 (2020: 1.46:1) and the Company's debt-to-equity ratio was 2.05:1 (2020: 1.32:1).

### **38. Events after the reporting period**

On 5 January 2022, the Extraordinary General Meeting No. 1/2022 of shareholders of Industrial Water Supply Company Limited, a company which was held by the Company through Namsai 304 Company Limited, passed a special resolution approving the increase of its registered share capital, from Baht 1 million to Baht 54 million, by issuing 5.3 million ordinary shares with a par value of Baht 10 per share, totaling Baht 53 million. The shares are to be offered to the subsidiary's existing shareholders, and 25 percent of the shares were called up, for a total amount of Baht 13 million. The subsidiary registered the capital increase with the Ministry of Commerce on 5 January 2021.

### **39. Approval of financial statements**

These financial statements were authorised for issue by the Company's Board of Directors on 22 February 2022.



# Part 4

## Certification of Information and Data Accuracy

## Certification of Information and Data Accuracy

Having carefully the information and data shown in this annual registration statement / annual report, the company certifies that they are completely accurate, factual, and not misleading of lacking in essential detail. In addition:

- (1) The financial statements and data summarized in annual registration statement / annual report show essentially accurate information and data about its financial standing, performance, and cash flow of the company and its subsidiaries.
- (2) It has put in place a good information and data disclosure system to ensure that it discloses essential details about itself and its subsidiaries completely and accurately, while ensuring due compliance.
- (3) It has put in place a good internal control system and ensured due compliance with such system. The company has provided internal control system assessment details as of December 31<sup>th</sup>, 2021, to the external auditor, including defects and key changes in the internal control system together with wrongdoing potentially affecting the preparation of the financial reports for itself and its subsidiaries.

As evidence that all documents are identical to those certified by the company, the company has assigned Mr. Kritdisorn Kornketkamon to put his initials on every page of the documents. Therefore, if his initials are missing on any given page, The company will disown such data.

Name	Position	Signature
Mr. Sitthiporn Ratanopas	Chairman of the Board	<u>(Signed) Sitthiporn Ratanopas</u>
General Surapan Poomkeaw	Director	<u>(Signed) Surapan Poomkeaw</u>
Authorized person	Position	Signature
Mr. Kritdisorn Kornketkamon	Chief Financial Officer (CFO)	<u>(Signed) Kritdisorn Kornketkamon</u>

# Attachment 1

---

Profiles of Directors, Management,  
Persons in Control of the Company, and  
Corporate Secretary

# Attachment 1.1

## Profiles of Directors, Management, Persons in Control of the Company, and Corporate Secretary as of December 31, 2021

### 1. Mr. Sitthiporn Ratanopas

Position	Chairman of Board Directors and Executive Committee
Age	73
Education	<ul style="list-style-type: none"><li>• Master of Business Administration (Management), Sasin Graduate Institute of Business Administration of Chulalongkorn University</li><li>• Bachelor of Engineering (Power Engineering), Chulalongkorn University</li><li>• Diploma, National Defence College, The Joint State-Private Sector Course Class 11</li></ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

#### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2008 - Present	- Chairman of Board Directors	National Power Supply Plc.
2013 - Present	- Chairman of the Executive Committee	National Power Supply Plc.
2017 - Present	- Chairman	WIND-FREE COOLING COMPANY LIMITED
2004 - Present	- Chairman/ CEO	S & K Ex International Co., Ltd.

## 2. Mr. Chainoi Puenkosoom

Position	Director, Executive Committee and Risk Management Committee
Age	71
Education	<ul style="list-style-type: none"> <li>• Master of Business Administration, Sasin Graduate Institute of Business Administration of Chulalongkorn University</li> <li>• Bachelor of Commerce in Advanced Accounting, California College of Commerce</li> <li>• Certificate, Director Accreditation Program (DAP) Class 63/2007, Thai Institute of Directors Association (IOD)</li> <li>• Certificate, Financial Institutions Governance Program Class 3/2011, Thai Institute of Directors Association (IOD)</li> <li>• Certificate, The Role of Chairman Program (RCP) Class 33/2014, Thai Institute of Directors Association (IOD)</li> <li>• Certificate, The Role of Chairman in Leading Strategic Risk Oversight 2017, Thai Institute of Directors Association (IOD)</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2010 - Present	- Director	National Power Supply Plc.
2013 - Present	- Executive Committee	National Power Supply Plc.
2017 - Present	- Risk Management Committee	National Power Supply Plc.
2017 - Present	- Chairman/ Independent Director/ Chairman of the Remuneration Committee/ Chairman of the Corporate Governance Committee and Audit Committee	Frasers Property (Thailand) Public Company Limited
2017 - Present	- Director and Chairman of the Audit Committee	Sapthip Company Limited.
2016 - Present	- Chairman and Independent Director	Tipco Asphalt Public Company Limited
2016 - Present	- Independent Director/ Chairman of the Audit Committee/ Remuneration Committee and Corporate Governance Committee	Prima Marine Public Company Limited
2012 - 2019	- Chairman/Independent Director/ Chairman of the Remuneration Committee/ Chairman of the Corporate Governance Committee and Audit Committee	Golden Land Property Development Plc.
2017 - 2019	- Independent Director/ Audit Committee and Human Resources and Remuneration Committee	Demeter Corporation Public Company Limited.
2016 - 2018	- Director	Board of directors Working capital, Comptroller General's Department, Ministry of Finance
2011 - 2018	- Director	Energy Fund Management Institute (Public Organization) Ministry of Labor
2009 - 2018	- Director	Petroleum Institute of Thailand
2010 - 2016	- Director	State Enterprise Performance Assessment Committee Ministry of Finance

### 3. General Surapan Poomkeaw

Position	Director, Executive Committee and Chairman of Corporate Governance Committee
Age	73
Education	<ul style="list-style-type: none"> <li>• Doctorate in Political Science, Ramkhamhaeng University</li> <li>• Master's Degree in Development Administration (Excellence Honors), National Institute of Development Administration (NIDA)</li> <li>• Bachelor's Degree in Science, Chulachomkhalo Royal Military Academy</li> <li>• Certificate, Top Executives Program Class 9, Capital Market Academy (CMA)</li> <li>• Certificate, Director Accreditation Program (DAP) Class 84/2010, Thai Institute of Directors Association (IOD)</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

Work Experience (Last 5 Years)		
Time Period	Position	Company / Department
2013 - Present	- Director and Executive Committee	National Power Supply Plc.
2017 - Present	- Chairman of Corporate Governance Committee	National Power Supply Plc.
2015 - Present	- Chairman of Audit Committee	Grand Prix International Plc.
2015 - Present	- Director	Sino-Thai Engineering & Construction Plc.
2014 - Present	- Chairman of Audit Committee	TWZ Corporation Plc.



#### 4. Mr. Yothin Dumnernchanvanit

Position	Director, Executive Committee and Risk Management Committee
Age	60
Education	<ul style="list-style-type: none"> <li>• Honorary Doctorate in Strategic Logistics and Supply Chain Management, Suan Sunandha Rajabhat University</li> <li>• Honorary Doctorate in International Business Administration, University of the Thai Chamber of Commerce</li> <li>• Bachelor of Engineering (Industrial Engineering), Chulalongkorn University</li> <li>• Certificate, Director Accreditation Program (DAP) Class 1, Thai Institute of Directors Association (IOD)</li> <li>• Diploma, The National Defence Course Class 20, National Defence College Class 50</li> <li>• Certificate, Advanced Senior Executive Program Class 3, Sasin Graduate Institute of Business Administration of Chulalongkorn University</li> <li>• Certificate, Leadership Program Class 9, Capital Market Academy (CMA)</li> <li>• Certificate, Senior Executive Program for Urban Development Class 1, Urban Green Development Institute Bangkok</li> <li>• Certificate, The Executive Program of Energy Literacy for a Sustainable Future Class 1, Thailand Energy Academy</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

#### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2010 - Present	- Director/ President	Double A (1991) Plc.
2008 - Present	- Director/ President	National Power Supply Plc.
2013 - Present	- Executive Committee	National Power Supply Plc.
2017 - Present	- Chairman of Risk Management Committee	National Power Supply Plc.
2018 - 2019	- Acting CFO	National Power Supply Plc.
2015 - Present	- Advisory Director	Sasin Graduate Institute of Business Administration of Chulalongkorn University (SASIN).
2015 - Present	- Expert Administration Committee	Department of Strategic Logistics and Supply Chain Management, Suan Sunandha Rajabhat University.
2010 - Present	- Professional Advisor	The National Industrial Development Committee
1992 - Present	- Vice Chairman of the Advisory Board	Royal Automobile Association of Thailand.

## 5. Mr. Kasemsit Pathomsak

Position	Director and Audit Committee
Age	51
Education	<ul style="list-style-type: none"> <li>• Master's degree in Finance, Bentley University, USA</li> <li>• Certificate, ACP 32/2010, DAP 48/2005, DCP 175/2003, Thai Institute of Directors (IOD)</li> <li>• Monitoring the System of Internal Control and Risk Management 9/2010</li> <li>• Certificate, Leadership Program Class 9, Capital Market Academy (CMA)</li> <li>• Top Executive Program in Commerce and Trade (TEPCoT), Class7</li> <li>• The Executive Program in Energy Literacy for a Sustainable Future (TEA), Class 11</li> <li>• National Institute of Development Administration, Advance Master Management Program, Class 3</li> <li>• Institute of Metropolitan Development, Senior Executive Program in Urban Development Management (Class 1)</li> <li>• Tourism Management Program for Executives TME1</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2016 - Present	- Director and Audit Committee	บริษัท คริสเตียนีและนิลเสน (ไทย) จำกัด (มหาชน)
2013 - Present	- Independent Director, Chairman of Audit and Corporate Government Committee, Chairman of Nomination Committee, Chairman of Remuneration Committee	บริษัทหลักทรัพย์ เมอร์ซัน พาร์ทเนอร์ จำกัด (มหาชน)
2018 - Present	- Director	Asia Aviation Public Company Limited
2016 - 2018	- Director and Audit Committee	WP Energy Public Company Limited
2014 - Present	- Executive Chairman	Merchant Partners Asset Management Limited
2005 - Present	- Executive Director	Merchant Partners Securities Public Company Limited
2005 - Present	- Director	UOB Kay Hian Securities (Thailand) Public Company Limited

## 6. Mr. Kittiphath Suthisamphat

Position	Director and Audit Committee
Age	50
Education	<ul style="list-style-type: none"><li>• MBA Sloan School of Management Massachusetts Institute of Technology, Boston, USA.</li><li>• Certificate, Director Certification Program (DCP2006/72), Thai Institute of Directors (IOD)</li></ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2016 - Present	- Director and Audit Committee	National Power Supply Plc.
2000 - Present	- Vice President and Managing Director	A.J. Plast Public Company Limited
2015 - Present	- Independent Director and Audit Committee	Thai Plaspac Public Company Limited

## 7. Mr. IP KA KEUNG PATRICK

Position	Director
Age	53
Education	<ul style="list-style-type: none"><li>• LLB (Hons), London University Law Schools</li><li>• BA (Hons), University of Leeds</li></ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2017 - Present	- Director	National Power Supply Plc.
2011 - Present	- Investment Principal	China-ASEAN Investment Cooperation Fund

## 8. Mr. Nuttachat Charuchinda

Position	Director, Executive Committee, Corporate Governance Committee
Age	66
Education	<ul style="list-style-type: none"> <li>• Master of Business Administration, Thammasat University</li> <li>• Bachelor of Engineering (Civil Engineering), Chiang Mai University</li> <li>• Program for Global Leadership (PGL), Harvard Business School, USA</li> <li>• Oxford Energy Seminar, Oxford University, U.K.</li> <li>• Breakthrough Program for Senior Executives (BPSE) , IMD Institute, Switzerland</li> <li>• Diploma, The National Defence Course Class 20</li> <li>• Certificate, Directors Certification Program (DCP) 129/2010</li> <li>• Certificate, Leadership Program Class 15, Capital Market Academy (CMA)</li> <li>• Certificate, Leadership Program Class 3, Capital Market Academy (CMA)</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2017 - Present	- Director, Executive Committee and Corporate Governance Committee	National Power Supply Plc.
2016 - Present	- Consultant	PTT Plc.
2013 - 2015	- CEO, Upstream Petroleum & Gas Business Group	PTT Plc.

## 9. Mr. Woravit Chailimpamontri

Position	Director and Chairman of the Audit Committee
Age	52
Education	<ul style="list-style-type: none"> <li>• MBA in International Business from Schiller International University, London</li> <li>• BBA degree in Marketing from Bangkok University.</li> <li>• Certificate of Thailand Government Savings Bank - Management.</li> <li>• Leadership Program from Marshall School of Business, University of Southern California.</li> <li>• Director Certification Program: Class 100/2008</li> <li>• Capital Market Academy (CMA 8)</li> <li>• Commerce and Trade (Tepcot 3)</li> <li>• Commerce Academy, Politics and Governance in Democratic Systems for Executives Course (Class 14) from King Prajadhipok's Institute</li> <li>• Certificate of Housing Finance Program at the Wharton School from University of Pennsylvania</li> <li>• Top Executive Judgment Processing Program (Class 16)</li> <li>• College of Justice from Judicial Training Institute, Energy Literacy for a sustainable Future: Tea class 4 from Thailand Energy Academy,</li> <li>• Certificate of Chief Executive Course for Urban Development Management (Mahanakorn 4) from Institute of Metropolitan Development of Navamindradhiraj University,</li> <li>• Certificate of Administration of Peace and Order of Private Sector., Class 3, Education Bureau from Royal Thai Police, Thai Institute of Directors Association.</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2017 - Present	- Director and Chairman of the Audit Committee	National Power Supply Plc.
2017 - Present	- Director and Executive Committee	International Research Corporation Public Company Limited (IRCP)
2017 - Present	- Vice Chairman	THAI-ASEAN Cultural and Economic Council
2015 - Present	- Chairman	SCN Capital Company Limited
2015 - Present	- Director	Thailand - Cambodia Friendship Association.
2013 - 2016	- Vice Chairman	THAI CHINESE Cultural and Relationship Council
2013 - 2015	- Executive Director	MFC Asset Management Public Company Limited
2013 - 2014	- Director	IRPC Public Company Limited.
2012 - 2014	- Director	Government Savings Bank
2011 - 2014	- Qualified Director	Office of the Consumer Protection Board

## 10. Mr. Prayad Champucha

Position	Chief Operation Officer (COO), Acting Group Director – Procurement, Fuel Sourcing and Human Resources and Chairman of the Corporate Compliance Committee
Age	55
Education	• Bachelor of Engineering, Khonkaen University
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2017 - Present	- Chief Operation Officer (COO), Acting Group Director – Procurement, Fuel Sourcing and Human Resources	National Power Supply Plc.
2018 - Present	- Chairman of the Corporate Compliance Committee	National Power Supply Plc.
2016 - 2017	- VP, Plant Operation (PO)	National Power Supply Plc.
2014 - 2016	- CEO	Advance Thabuang Mill Company Limited
2011 - 2014	- Co-CEO, Chip Mill and Pulp Mill 1	Double A (1991) Plc.

## 11. Mr. Kritdisorn Kornketkamon

Position	Chief Financial Officer (CFO)
Age	37
Education	<ul style="list-style-type: none"> <li>• Master of Business Administration (Young Executive MBA), Chulalongkorn University</li> <li>• Bachelor of Accountancy (First Class Honors), Chulalongkorn University</li> <li>• Bachelor of Business Administration Majoring in finance (First Class Honors, Gold Medal), Sukhothai Thammathirat Open University</li> <li>• Bachelor of Economics (First Class Honors, Gold Medal), Sukhothai Thammathirat Open University</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2019 - Present	- Chief Financial Officer (CFO)	National Power Supply Plc.
2017 - Present	- Cockpit director	Double A (1991) Plc.
2013 - 2014	- Deputy Director of Accounting	Double A (1991) Plc.

## 12. Mr. Thanarat Wittayatechakul

Position	Group Director – Business Development and Strategic Planning
Age	36
Education	<ul style="list-style-type: none"> <li>• Master of Business Administration (Young Executive MBA), Chulalongkorn University</li> <li>• Bachelor of Engineering (Electrical), Kasetsart University</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2020 - Present	- Group Director – Business Development and Strategic Planning	National Power Supply Plc.
2019 - 2020	- Business Planning and Investment Manager	National Power Supply Plc.
2017 - 2019	- Financial Analysis Manager	National Power Supply Plc.
2016 - 2017	- Plant IT Deputy Manager	National Power Supply Plc.
2011 - 2016	- Planning and Performance Deputy Manager	National Power Supply Plc.

## 13. Mr. Singh Neammunee

Position	Acting Corporate Secretary, Board Secretary and Legal Permits & Compliance Manager
Age	42
Education	<ul style="list-style-type: none"> <li>• Bachelor of Laws, Thammasat University</li> <li>• Attorney-At-Law License and Notarial Services Attorney</li> <li>• Certificate, Company Secretary Program (CSP) Class 2005/13 and 2018/91, Thai Institute of Directors Association (IOD)</li> <li>• Certificate, Company Reporting Program (CRP) Class 2018/21, Thai Institute of Directors Association (IOD)</li> <li>• Certificate, Effective Minutes Taking (EMT) Class 2006/3, Thai Institute of Directors Association (IOD)</li> <li>• Certificate, Board Reporting Program (BRP) Class 2010/4, Thai Institute of Directors Association (IOD)</li> </ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2017 - Present	- Legal Permits & Compliance Manager - Acting Corporate Secretary - Secretary of the Board of Directors	National Power Supply Plc.
2012 - 2017	- Legal Manager - Corporate Secretary Assistant - Board Secretary Assistant	National Power Supply Plc.
2006 - 2017	- Corporate Secretary Assistant - Board Secretary Assistant	Double A (1991) Plc.

# Attachment 2

---

## Details of subsidiaries' directors

as of December 31, 2021



## Attachment 2 Details of subsidiaries' directors as of December 31, 2021

Name	Subsidiary														Associate												
	FG	NPP2	NPP3	NPP5	NPP5A	NS304	CHP1	CHP3	CHP5	IPP IPT	NPP12	LSCP	LSTCP	PSCP	TBCP	TTCP	SNST	EB5	IRC	IWS	PT. Utami	NPS SOLAR	OC	OSH	BPG	BPH	PR2020
1. Mr. Prayad Champucha	X	X	X	X	X	X											X	/	X		X						
2. Mr. Jirawat Vissawathamrong	/	/	/	/	/	/																/					/
3. Mr. Panus Aunorakarnkit	/	/	/	/	/	/												/	/								/
4. Mr. Kritdisorn Kornketkamon	/	/	/	/	/	/												/	/								/
5. Miss Pradipat Bamrungrsi																											
6. Mr. Wynnand Johan Wessels																						/					
7. Mr. Wisnu Wongsomboon																		x									
8. Miss Jummaeree Phumphuang																							/	/			
9. Miss Prapapun Tirathawatchakul																							/	/			
10. Mr. Wittawach Wongsuwan																							/	/			
11. Mr. Watchara Panyapilajai																		/	/								
12. Mr. Pairote Varophas																									/	/	
13. Mr. Kittiphan Chitpentham																									/	/	
14. Mr. Tanongsak Srisongmuang	/	/	/	/	/	/	X	X	X	X	X	X	X	X	X	X				X		X		/	/	/	
15. Mr. Thanarat Wittayatechakul							/	/	/	/	/	/	/	/	/	/				/		/					
16. Miss Tunyarat Tamsamai							/	/	/	/	/	/	/	/	/	/				/		/					
17. Mr. Worapong Vivatanavanich																									/	/	
18. Mr. Jirapat Archalaka																									/	/	
19. Miss Chalinee Phalanuwat																									/	/	
20. Mr. Athiwat Songratsameepat																									/	/	
21. Mr. Yanyong Vittayapaisansin																									/	/	X
22. Mrs. Arunya Yungkumyart																											/
23. Mr. Singh Neammunee	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Note: X = Chairman, / = Director, O = Liquidator

FG = Future Greenery Company Limited  
 NPP2 = National Power Plant 2 Company Limited  
 NPP3 = National Power Plant 3 Company Limited  
 NPP5 = National Power Plant 5 Company Limited  
 NPP5A = National Power Plant 5A Company Limited  
 NS304 = Namsai 304 Company Limited  
 CHP1 = CHP1 Company Limited  
 CHP3 = CHP3 Company Limited  
 CHP5 = CHP5 Company Limited  
 IPP IPT = IPP IPT Company Limited  
 NPP12 = National Power Plant 12 Company Limited  
 LSCP = Lan Sak Community Power Plant Co., Ltd.  
 LSTCP = Lam Sonthi Community Power Plant Co., Ltd.  
 PSCP = Phanom Sarakham Biogas Community Power Plant Co., Ltd.  
 TBCP = Tha Toom Biogas Community Power Plant Co., Ltd.  
 TTCP = Tha Toom Community Power Plant Co., Ltd.  
 SNST = Sonish Starch Technology Company Limited  
 EB5 = EB5 Company Limited  
 IRC = Integrated Research Center Co., Ltd.  
 IWS = Industrial Water Supply Co., Ltd.  
 PT.Utami = PT. Utami Jaya Mulia  
 LSCP = Lan Sak Community Power Plant Co., Ltd.  
 LSTCP = Lam Sonthi Community Power Plant Co., Ltd.  
 PSCP = Phanom Sarakham Biogas Community Power Plant Co., Ltd.  
 TBCP = Tha Toom Biogas Community Power Plant Co., Ltd.  
 TTCP = Tha Toom Community Power Plant Co., Ltd.  
 SNST = Sonish Starch Technology Company Limited  
 EB5 = EB5 Company Limited  
 IRC = Integrated Research Center Co., Ltd.  
 IWS = Industrial Water Supply Co., Ltd.  
 PT.Utami = PT. Utami Jaya Mulia  
 OC = Ocean Cape Company Limited  
 OSH = Ocean Star Holding Company Limited  
 BPG = Burapa Power Generation Co., Ltd.  
 BPH = Burapa Power Holding Co., Ltd.  
 PR2020 = Power Root 2020 Co., Ltd.

# Attachment 3

---

Details of Head of Internal Audit and Head of Corporate Compliance Committee

## Attachment 3.1

### Details of Head of Internal Audit as of December 31, 2021

#### Mr. Nitichai Thongpant

---

Position	Head of Internal Audit
Age	55
Education	<ul style="list-style-type: none"><li>• Bachelor of Business Administration (Accounting), Ramkhamhaeng University</li><li>• Master of Business Administration Ramkhamhaeng University</li><li>• Directors Certification Program, Institute of Promotion Association Thai company director (DCP2007/96)</li></ul>
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

---

#### Work Experience (Last 5 Years)

---

Time Period	Position	Company / Department
2018 – Present	Head of Internal Audit	National Power Supply Plc.
2016 – 2018	CEO (Director)	Book Tower (Thailand) Co., Ltd.
2013 – 2018	Accounting Director	Kanna Company Limited
2009 – 2013	Chief Executive Officer Responsibilities Administration and supervision of subsidiaries	Service Holding Company Limited

---

## Attachment 3.2

### Details of Head of Corporate Compliance Committee as of December 31, 2021

#### Mr. Prayad Champucha

Position	Chief Operation Officer (COO), Acting Group Director – Procurement, Fuel Sourcing and Human Resources and Chairman of the Corporate Compliance Committee
Age	55
Education	• Bachelor of Engineering, Khonkaen University
Shareholding Proportion (%)	-None-
Family's Relationship to Management	-None-

#### Work Experience (Last 5 Years)

Time Period	Position	Company / Department
2017 - Present	Chief Operation Officer (COO), Acting Group Director – Procurement, Fuel Sourcing and Human Resources	National Power Supply Plc.
2018 - Present	Chairman of the Corporate Compliance Committee	National Power Supply Plc.
2016 - 2017	VP, Plant Operation (PO)	National Power Supply Plc.
2014 - 2016	CEO	Advance Thabuang Mill Company Limited
2011 - 2014	Co-CEO, Chip Mill and Pulp Mill 1	Double A (1991) Plc.

# Attachment 4

---

## Review of Business Asset and Asset Revaluation

as of December 31, 2021

-None-

# Attachment 5

---

## Policy, Code of Conduct, and Corporate Governance

## Corporate Governance Policy

National Power Supply Public Company Limited (“Company”)’s Board of Directors adheres to the Corporate Governance policy, complying with applicable laws and regulation as well as the 2017 Principles of Good Corporate Governance of Listed Companies specified by the Stock Exchange of Thailand (SET). The policy uses as a guideline for business to create sustainable values. There are 8 principles of corporate government policy.

Principle 1: Recognize the roles and responsibilities of the Board of Directors as corporate leaders that create value for sustainable business

Principle 2: Define the objectives and main goal of the business for sustainability

Principle 3: Strengthen an effective board

Principle 4: Recruiting and developing the top executives and personnel management

Principle 5: Nurture innovation and responsible business

Principle 6: Strengthen effective risk management and internal control

Principle 7: Ensure disclosure and financial integrity

Principle 8: Ensure engagement and communication with shareholders

## Code of Conduct for Director, Executives, and Employee

(Core Value)

National Power Supply Public Company Limited (“Company”) and its subsidiaries (collectively referred to “the Group”) have determined the core value. The Group will run business by taking the impact of environment, economy, and society into the accountability by focusing on the sustainable development. This is to comply with the main principle that the Group will perform as a good citizen to the society. So, it is crucial that the Group must be carried out in accordance with core value and social ethics. It is the core to conduct the business. The accomplishment of the Group depends on the expression towards ethics of each employees as well as organization.

## Anti-Corruption policy

National Power Supply Public Company Limited (“Company”) recognizes the importance of anti-corruption and the commitment to conduct business with integrity under the framework of corporate governance by adhering principle of good governance, code of conduct, and ethics as well as being responsible to all stakeholders including society and environment in which the company is conducting business with transparency, fairness and verifiability.

To ensure the company has policy of responsibility and proper guideline to prevent any anti-corruption activities that could risk. The company has conducted anti-corruption policies in written form to be used as a guideline for operating the business and to lead to the sustainable development.

## Conflict of Interest Policy

National Power Supply Public Company Limited (“Company”) determines conflict of interest policy. Any activities must best meet interest of the company and stakeholders as well as avoid any activities that could lead to conflict of interest both direct and indirect. Any stakes involved in transaction related whether to receive or loss must declare their relationship in the related transaction. Also, any stakes involved with the related transaction must not involve and not be authorized person in approving any transaction.

Conflict of interest policy is effective since February 24<sup>th</sup>, 2020 onward.

## Social Responsibility

National Power Supply Public Company Limited (“Company”) operates the business of generating electricity and energy. The company is aiming to produce sustainable renewable energy to support the demand for electricity of Thai people. Also, the company considers the balance between agricultural and energy sectors as well as to create income to Thai farmers under the following concepts.

- Promote education, develop career, take care of health for better life
- Energy trees, source of additional income and sustainable renewable energy
- Electricity from clean technology
- Waste is not a waste

In this regard, the company is committing to run business toward social responsibility, transparency, and verifiability by adhering ethics and legal including international practice and interest of those who have stake. Similarly, the company is aware of its responsibilities toward environment and community by supporting and maintaining the safety and health standards of employees, contractors, communities, and visitors. Also, the company aims to protect and maintain sustainable environment as well as encourage the efficient use of resource in order to sustainably develop economic and society. As a result, the company has established policy in various ways.

- Perform business with fairness
- Anti-corruption
- Respect human rights
- Fair treatment to labors
- Customer responsibility
- Protecting environment
- Participating in social development and community
- Innovate and disseminate the innovation in which derived from operating the business through social responsibility, environment, stakeholders

## Other practices in accordance with good corporate governance



Full version of corporate governance

<https://www.npsplc.com/en/corporate-governance/cg-policy>



# Attachment 6

---

## Report of the Audit Committee

## Report of the Audit Committee

Dear Shareholders

National Power Supply Public Company Limited

The board determined the quorum, qualifications, terms, duties and responsibilities of the Audit Committee and put it in writing. The Audit Committee currently consists of 3 independent directors as follows:

- |                   |                 |                                 |
|-------------------|-----------------|---------------------------------|
| 1. Mr. Woravit    | Chailimpamontri | Chairman of the Audit Committee |
| 2. Mr. Kasemsit   | Pathomsak       | Audit Committee Member          |
| 3. Mr. Kittiphath | Suthisamphat    | Audit Committee Member          |

The head of internal audits acts as secretary of the Audit Committee.

In the 2021 accounting period, the Audit Committee performed its duties pursuant to the Audit Committee Charter and the requirements of the Stock Exchange of Thailand. There were 5 meetings, and significant issues can be summarized as follows:

### Financial Report

The Audit Committee examined and reviewed the quarterly financial statement and performance of the Company and subsidiaries with independent and internal auditors and management. This review ensured that the financial statements of the Company were reliable, transparent and well prepared. It also disclosed sufficient information in accordance with laws and regulations of the Securities and Exchange Commission, and general accounting standards.

### Conflicts of Interest

The Audit Committee reviewed and advised on conflicts of interest in the business to ensure that activities reflected the Stock Exchange of Thailand's guidelines.

### Internal Control and Risk Management

The Audit Committee reviewed the adequacy, appropriateness and efficiency of the Company and its subsidiaries' internal control system, internal audit and auditor's report. The Company has prepared an Adequacy Evaluation Form to improve the internal control system. The Company applied the Internal Control Adequacy Evaluation Form from the Securities and Exchange Commission (SEC) and the international internal control practices set by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), stated in appendix 11 of the 56-1 manual that covers five components of the integrated framework – Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities.

### Legal Compliance

The Audit Committee emphasized that management operates the business in accordance with the laws and regulations of the Stock Exchange of Thailand and other legal compliances.

## Corporate Governance

The Audit Committee review concluded that the Company to operates the business in accordance with good corporate governance practices in order to work transparently and build trust with stakeholders. The Company also arranged methods of communication to receive information on matters of corruption from whistle-blowers as well as review regulations and update the code of conduct.

### Corporate Governance in Internal Audit

The Audit Committee review emphasized the independence of the internal audit in determining the scope and practice of the internal audit, approving the internal budget, human resources, training and development, performance reports, amended internal audit report on significant issues, as well as advising on the review process for greater efficiency.

### Auditor Selection and Remuneration

The Audit Committee considered auditor selection and determined the remuneration for 2021. The matter of selection considered knowledge, experience, reliability, resources, freedom, and quality of past auditor work. Remuneration for selected auditors was considered and required approval at the annual shareholder meeting for 2021. Consequently, a resolution was passed to appoint EY as Company auditor.

During the accounting period of 2021, the Audit Committee agreed to arrange an internal control system and disclose sufficient and appropriate information to ensure that all practices and procedures are in compliance with the law.



Mr. Woravit Chailimpamontri

Chairman of the Audit Committee

22 February 2022

A photograph of a large industrial power plant at night, illuminated with blue and green lights. The plant features several tall smokestacks and complex piping structures. The sky is a deep blue, and some trees are visible in the background.

# Sponsor

TCC Energy Co., Ltd.

Eastern Pearl Co., Ltd.

Envertex Co., Ltd.

Sing Heng Seng Co., Ltd.



National Power Supply Public Company Limited

THANK YOU FOR YOUR KIND SUPPORT





**TCC E**  
ENERGY

**บริษัท ทีซีซี เอ็นเนอร์ยี จำกัด**  
**TCC ENERGY COMPANY LIMITED**

*We're a leader in coal trading business and we pride ourselves in selling high quality coal and delivering best services to our customers.*



**บริษัท ทีซีซี เอ็นเนอร์ยี จำกัด**

87/2 CRC Tower, All Seasons Place 45th Fl., Unit 2, Wireless Rd., Lumpini, Patumwan, Bangkok, Thailand 10330  
Tel. 66(0) 2685-3600 Fax. 66(0) 2685-3607 Website : [www.thaicapital.co.th](http://www.thaicapital.co.th)

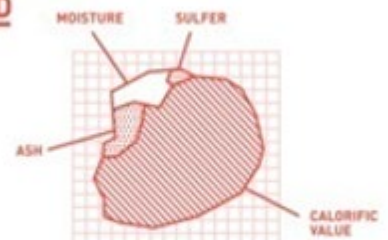


## BENEFITS OF OUR COAL

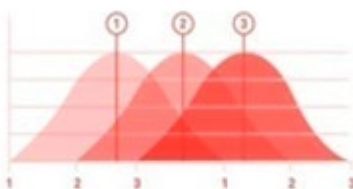
### 1 CLEAN ENERGY



### 2 INTERNATIONAL STANDARD



### 3 STABLE QUALITY



### 4 SUSTAINABLE FOR ENVIRONMENT



**THIS COAL IS SUITABLE FOR**



CEMENT PRODUCTION



ELECTRICITY PRODUCTION



AND MANY MORE



**EASTERN PEARL**  
COMPANY LIMITED  
THE BEST FOR ALL NEEDS

240/42 AYODHAYA TOWER 20 FL.  
HUAYKWANG RATCHADAPISEK ROAD  
BANGKOK 10310 THAILAND  
T +66 (0)2 74 1455  
F +66 (0)2 74 1964-5  
[WWW.EASTERNPEARL.CO.TH](http://WWW.EASTERNPEARL.CO.TH)



# NELES

Working through the equipment life-cycle



[www.envertex.co.th](http://www.envertex.co.th)

**Envertex Co., Ltd.**

02 - 009 - 2600

# SHS

Your Partner in Powering Your Industry



The Leading Supplier of Steam Coal and Premium Screened Coal

8/3 Ratchadapisek Road Klongtoey Bangkok 10110 Thailand

Tel: (662) 229-4990-3 Fax: (662) 229-4914

[www.shscoal.com](http://www.shscoal.com)

Certificate ISO 9001:2015 (No. FS 661138)



National Power Supply Public Company Limited  
206 Moo. 4 Thatoom Srimahaphote Prachinburi 25140, Thailand  
1759 press 9 (Investor Line)  
[www.NPSplc.com](http://www.NPSplc.com)

