



# **Analyst Meeting 2022 Year End**

**3 March 2023**

Yandin Wind Farm, Western Australia



# Agenda

1

## **RATCH**

### **Overview**

2

## **Group**

### **Performance**

3

## **Financial**

### **Performance**

4

## **Appendix**

**RATCH GROUP**





1

# RATCH

## Overview

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# 3S Strategy

**Triple S Strategy (2023–2027)**

## Strength

Efficient operations geared towards worthwhile revenue and returns and strong foundation for excellence.

### Strategy Plan

- ✓ Aim to successfully develop more than 19 projects in Nexif Portfolio (approximately 1,000 MW) which are in line with the investment goals and plans
- ✓ Increase stable and solid investment in Australia and Laos, whose portfolios currently ranked second and third consecutively, leading to an increase in EBITDA
- ✓ Focus on driving efficiency in order to maintain the income level generated from the existing assets
- ✓ Prepare the old power plants, plant sites and other common facilities to be ready for future developments and opportunities
- ✓ Optimize asset portfolio to drive stakeholders' benefit via various strategies including asset recycling





Seek business opportunities which are in line with the New Theme PPA of Clean Energy, including carbon credit trading mechanism

# Sustainability

Promoting renewable energy with concerns about environmental and social stewardship and governance for sustainable growth.

## Strategy Plan



Expand into GREEN business such as Battery, Hydrogen fuel, Ammonia, Fuel cell, as well as Carbon capture, utilization and storage (CCUS)



Expand investment in renewable energy to bolster the Company's renewable growth



Pursue ESG and Carbon Neutrality directions, including promoting reforestation and conservation



Conduct studies on large scale energy storage systems such as Pump Hydro Energy Storage, Liquid Air Energy Storage, or Gravity Energy Storage to create sustainability



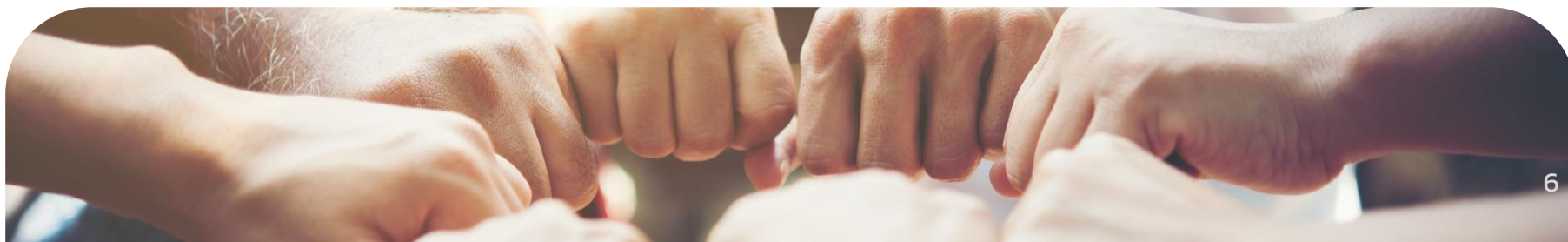
Develop projects that use Hydrogen fuel technology or other fuels to reduce reliance on Fossil fuels

# Synergy

Integrated operations with extended collaboration with leading partners in Thailand and abroad, for sustainable growth opportunities in the power business and non-power business in the value chain as well as value-added innovations.

## Strategy Plan

- ✓ Aim to develop the potential Non-Power Business to create the new S-Curve such as Solar System & Solution, Energy Management System (EMS) and Smart Health Business
- ✓ Support Thailand's Health Service projects which have potential for future expansion
- ✓ Combine business expertise with partners to extend and develop future opportunities
- ✓ Conduct pilot projects which lead to successful implementations
- ✓ Support the investment in supply chain business to create opportunities and increase value creation
- ✓ Seek potential partners to generate strong growth





# ●●● Awards

## 2021 ASEAN Corporate Governance Scorecard (ACGS) – ASEAN ASSETS CLASS



## Sustainability Disclosure Award by ThaiPat Institute



## The “Excellent (5-star)” CG Score 2022 by Corporate Governance Report of Thai Listed Company (CGR)



# ●●● Awards



## **Ms. Choosri Kietkajornkul,**

CEO, recognized as "Outstanding Commerce and Accountancy, Chulalongkorn Alumnae" from Faculty of Commerce and Accountancy Alumni Association, Chulalongkorn University



## **Mrs. Wadeerat Charoencoop**

CFO received Asia's Greatest CFO 2022-23 Award by AsiaOne Magazine & URS Media International



**Hin Kong** received PFI (Project Finance International) AWARDS 2022 "Asia-Pacific Awards - Power Deal of the Year"





# Company Business

## Power Generation Business

- ✓ IPP and SPPs in Thailand
- ✓ Renewable Projects



## Infrastructure Business

- ✓ Transport Network
- ✓ Tap Water Supply
- ✓ Telecom Network
- ✓ IoT Technology



## Electricity and Energy-Related Business

- ✓ Operation and Maintenance Service for Power Plants
- ✓ Gas Turbine Parts Maintenance Service
- ✓ Fuel Supply
- ✓ Coal Mining Business
- ✓ Innovation and Invention Business



## Healthcare Business

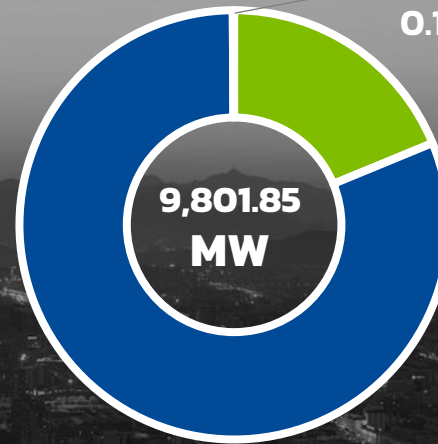
- ✓ Private Hospital












# RATCH's Power Plant Portfolio

7,874.12  
80.3%  
Conventional



As of February 2023

							
	Thailand	Laos	Australia	Indonesia	Vietnam	Philippines	Japan
Total MW	5,491.10 MW (56.02%)	1,420.30 MW (14.49%)	1,590.89 MW (16.23%)	1,009.72 MW (10.30%)	251.49 MW (2.57%)	36.33 MW (0.37%)	2.02 MW (0.02%)
Conventional	5,396.34 MW	751.20 MW	703.20 MW	886.67 MW	136.71 MW		
Renewable Energy	94.76 MW	669.10 MW	877.69 MW	123.05 MW	114.78 MW	36.33 MW	2.02 MW

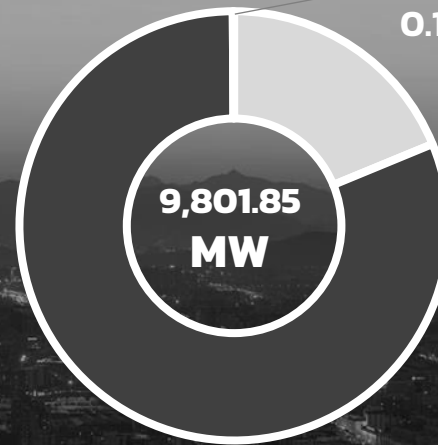
\*Battery 10 MW in Australia





# RATCH's Power Plant Portfolio

7,874.12  
80.3%  
Conventional



10.00  
0.1%  
Others\*

1,917.73  
19.6%  
Renewable  
Energy

*As of February 2023*

## Projects COD in 2023



**RATCH Cogeneration  
Expansion**

**31.20 MW**

**February 2023**



**Paiton Energy**

**741.52 MW**

**2Q/2023**



**Ecowin Wind-Turbine**

**15.16 MW**

**2Q/2023**



# RATCH Cogeneration Expansion

**1 February 2023:**

Commercial Operation of RATCH Cogeneration (RCO)  
SPP Power Plant (Expansion)



31.20 MW  
(Expansion)



## Project Details:



**Attributable Capacity:**  
31.20 MW (100%)



**Steam Generating Capacity:**  
7.15 tons per hour



**Nava Nakorn Industrial  
Promotion Zone**, Pathum Thani  
Province



**Contracts**  
with Industrial Users Signed

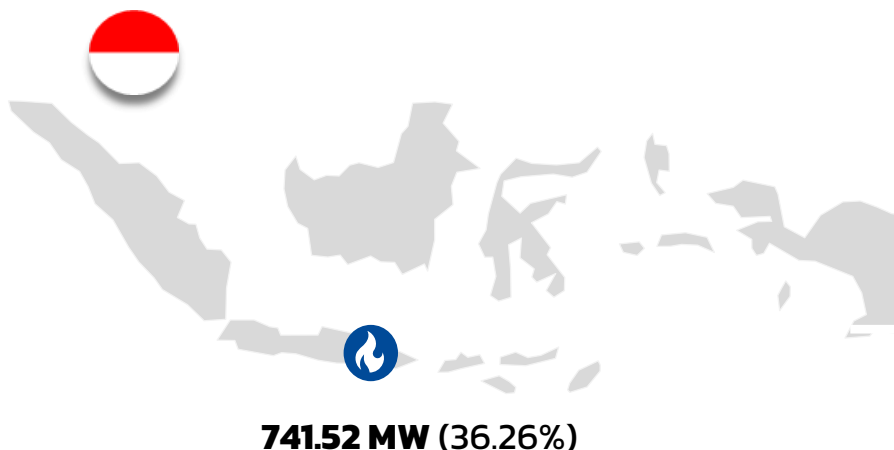
20 MW\*  
(Existing IUs)

90 MW\*  
(25-year PPA  
EGAT)

Remark: \* COD on 31 October 2013, and RATCH acquired RCO on October 2019.

**15 February 2023:**

## Progress on Paiton Project



### RHIS has reached an arrangement to acquire:

- **36.26%** in PT Paiton Energy
- **36.26%** Minejesa Capital B.V.
- **65%** in IPM Asia Pte. Ltd.

Expected deal completion: **2Q23**

### Paiton Power Plants:

#### Key items

**Gross Capacity**

**Location**

**PPA**

**Transmission**

#### Paiton 7/8

**1,230 MW**  
(Operational)

Probolinggo, East Java

**Offtaker**: PLN with a letter of support from MoF

**43 years**  
(ending in Mar 2042; **19 years remaining**)

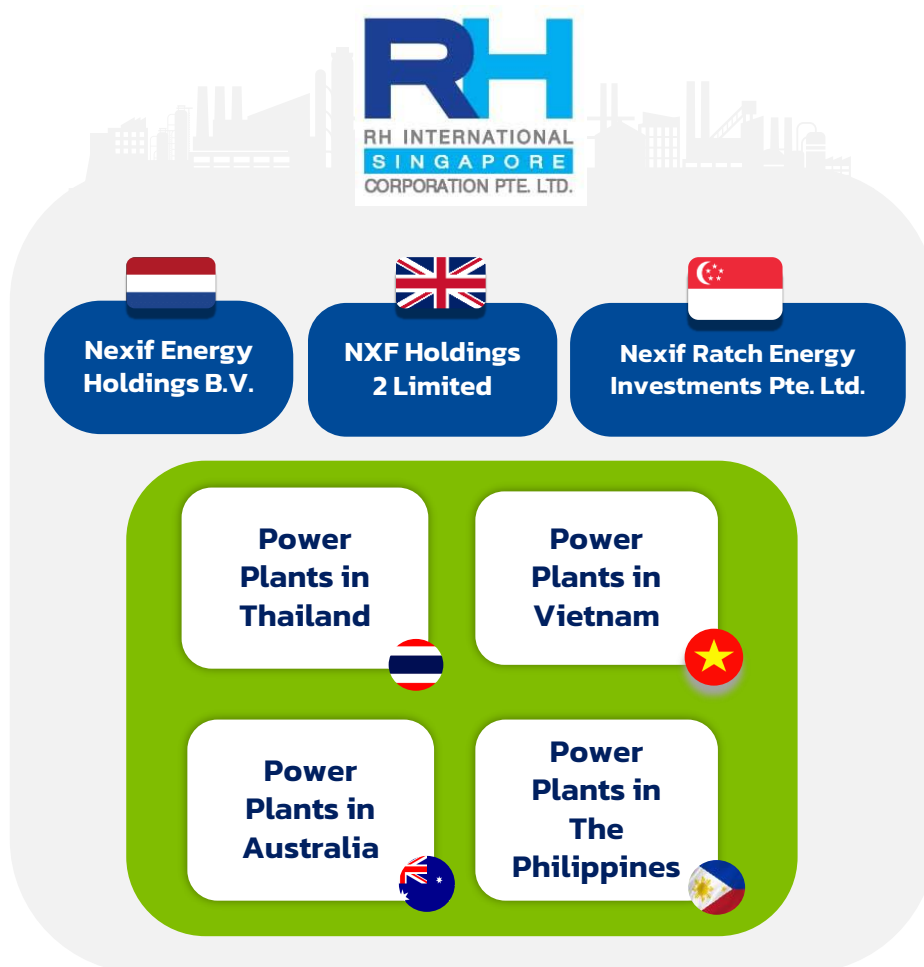
#### Paiton 3

**815 MW**  
(Operational)

**30 years**  
(ending in Mar 2042; **19 years remaining**)

Power generated is connected to PLN's 500kV bulk power network

# Signing of Share Sale Agreement to acquire Nexif Portfolio



## Acquisition overview:

- RHIS purchased 100% shares in Nexif Energy Holdings B.V. and NXF Holdings 2 Limited owning assets in Australia, Thailand, Vietnam and Philippines.
- NXF Holdings 2 limited was transferred to the new formation of Nexif Ratch Energy Investments Pte. Ltd.
- The portfolio includes **wind, solar, hydro, gas-fired power plants and Battery Energy Storage System.**

## Acquisition value:

- **605 mUSD** (equivalent to approx. 21,470.42 Million Baht.)

## Attributable capacity:

- 450.45 MW operational,
- 71.48 MW under construction
- 1,030.41 MW under development

**Total 1,552.34 MW**

**Deal completion:** 20 December 2022



## Project Locations

Overseas

**Vietnam**

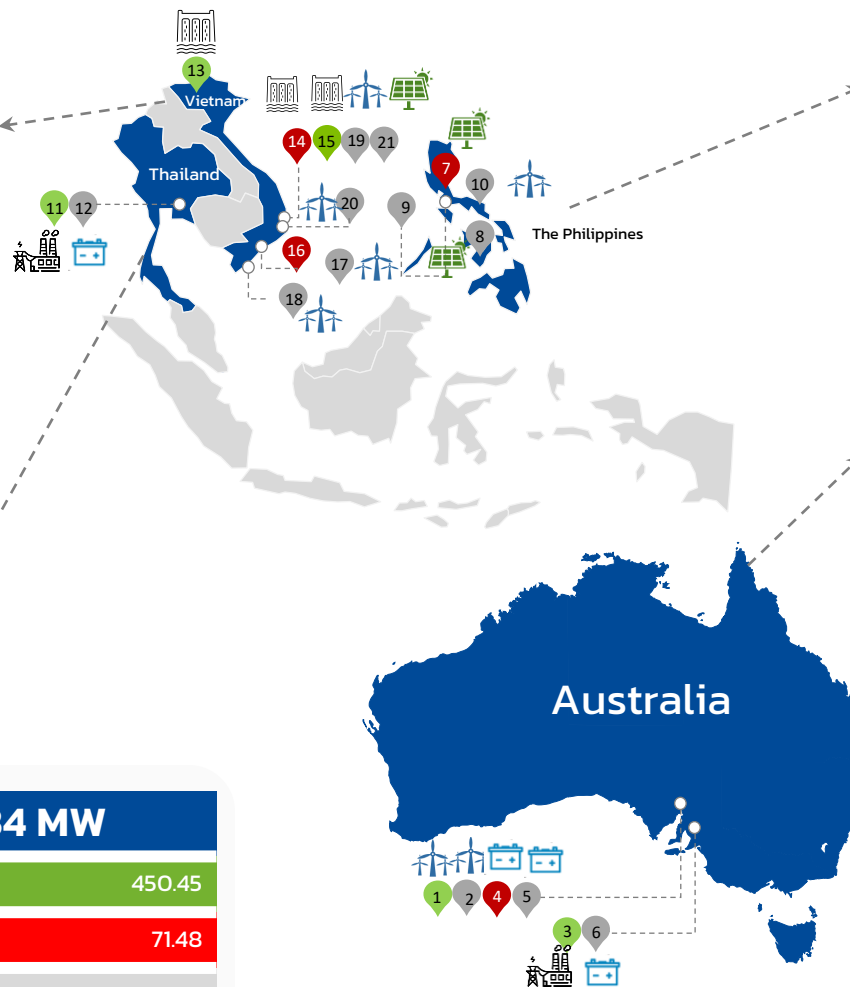
<b>353.62 MW</b>
Operation 34.47
Construction 25.15
Development 294.00

Domestic

**Thailand**

<b>54.98 MW</b>
Operation 49.98
Development 5.00

<b>Total 1,552.34 MW</b>
Operation 450.45
Construction 71.48
Development 1,030.41



Overseas

**The Philippines**

<b>325.74 MW</b>
Construction 36.33
Development 289.41

Overseas

**Australia**

<b>818.0 MW</b>
Operation 366.0
Construction 10.0
Development 442.0



# Nexif Portfolio (in operation)



Northern  
Territory

Western Australia

South  
Australia

Queensland

New South Wales

Lincoln Gap 1&2

## Lincoln Gap 1

Type

Wind farm

Plant Capacity

126 MW

Ownership

100%

Location

South Australia

Technology

Senvion & Vestas WTGs

COD

2020

Snapper Point

Victoria



## Snapper Point

Type

Gas-fired

Plant Capacity

154 MW

Ownership

100%

Location

South Australia

Technology

GE TM2500

COD

2022

## Lincoln Gap 2

Type

Wind farm

Plant Capacity

86 MW

Ownership

100%

Location

South Australia

Technology

Senvion & Vestas WTGs

COD

2022





## Rayong (NRER)

**Type**

**Gas-fired combined cycle**

**Plant Capacity**

**98 MW**

**Ownership**

**100%**

**Location**

**Rayong, Thailand**

**Technology**

1 x Siemens SGT800C GT  
1 x Siemens SST600 ST

**PPA**

**25-year PPA with EGAT**

**Fuel**

**25-years GSA with PTT**

**COD**

**2022**





## Coc San Hydro

**Type**

**Hydro**

**Plant Capacity**

29.70 MW

**Ownership**

58.48%

**Location**

Lao Cai Province

**Technology**

Run-off river with peak storage (5hr)

**COD**

2016



## Song Giang 2

**Type**

**Hydro**

**Plant Capacity**

37 MW

**Ownership**

46.23%

**Location**

Khanh Hoa Province

**Technology**

Cascade run-off river with peak storage (5hr)

**COD**

2014





# Nexif Portfolio (in progress)

## Calabanga

Type

Solar



Plant Capacity

74.14 MW

Ownership

49%

Location

Camarines Sur Province, South Luzon, The Philippines

Technology

PV Solar/ inverter

Status

- Target Loan signing: End March 2023
- Target Financial close and start construction: End April 2023

## Song Giang 1

Type

Hydro



Plant Capacity

12 MW

Ownership

46.23%

Location

Vietnam

Technology

Run-off river with peak storage (5hr)

Status

- Construction in progress
- Target COD: Q4/2024

## Power Business (Under Construction)

## Ecowin Wind-Turbine Power Plant



### Attributable Capacity:

15.16 MW (51.04%)



### On-shore wind farm located

in Ben Tre Province, approx.  
160 km from the south of Ho  
Chi Minh City, Vietnam



**20-Year** PPA with EVN

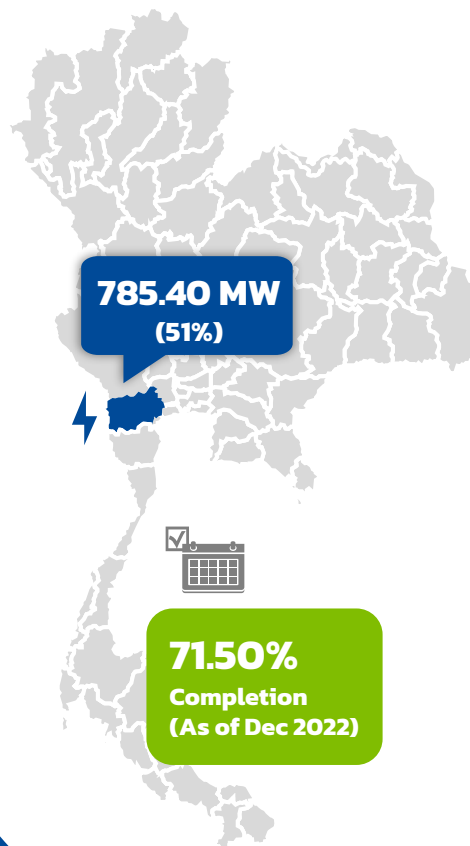


**Expected COD:** 2Q23



## Power Business (Under Construction)

## Hin Kong Power Plant Unit 1&2



» **Attributable Capacity:**  
785.40 MW (51%)

» **Located** in Ratchaburi  
Province

» **25-Year** PPA with EGAT

» **Signed Financial** Agreement  
31 Mar 2022

» **Financial Close:** 19 August 2022  
(CP Completion & UR Submission)

» **First Drawdown:**  
29 August 2022

» **Expected COD:**

- Unit 1: 2024
- Unit 2: 2025

## Power Business (Under Development)

### **R E N Korat (IPS)**

Attributable Capacity  
**12.48 MW (40%)**



- Nakhon Ratchasima province
- EIA approved
- EPC signed and NTP: October 2022
- Started construction : November 2022
- Expected COD: 2024

### **Navanakorn Phase 3 Expansion**

Attributable Capacity  
**12 MW (40%)**



- Pathumthani Province
- Construction period: 18 months
- Expected COD: 2024

**Power Business (Under Development)**



**Xekong 4A and 4B**

**Hydroelectric Power Plant**

Attributable Capacity 213 MW (60%)



**Other Business Partner**

- Xekong Province, Lao PDR
- Prepare for PPA Negotiation with EGAT
- Expected COD: 2033



**Sibundong**

**Hydroelectric Power Plant**

Attributable Capacity 36.85 MW (50%)



Through

**FRD\***

- Sibundong River, North Sumatra Province, Indonesia
- Technology: Run-of-River
- Total investment: USD 13.89 million
- Expected COD: 2029

## Infrastructure Business

## Pink and Yellow Line Monorail Project

### Routes



### Concession Period

### Concessioner

**RATCH's stake**

Pink Line: Khae Rai–Min Buri, 34.5 km. **30** Stations  
 Yellow Line: Lad Prao–Sam Rong, 30.4 km. **23** Stations  
 30 Years from COD  
 Mass Rapid Transit Authority of Thailand  
 10%



Detail	 Pink Line (NBM)	 Yellow Line (EBM)
<b>NTP</b>	29 June 18	29 June 18
<b>Construction Duration</b>	5 Years 2 months	5 Years
<b>Contract Term</b>	30 Ȳ	30 Ȳ
<b>COD</b>	<b>August 2023</b>	<b>June 2023</b>
<b>Progress (As of December 2022)</b>	Civil works= 94.43% M&E systems = 94.49% <b>Overall = 94.48%</b>	Civil works= 98.04% M&E systems = 98.15% <b>Overall = 98.09%</b>





## Infrastructure Business

## Intercity Motorway



Bang Pa-In –  
Nakhon Ratchasima

**M6** (196 km)

Bang Yai–  
Kanchanaburi

**M81** (96 km)



Investment Type

**PPP Gross Cost**

Expected COD

**2025**

### Scope of work:

**Phase 1: Design & Construction (3 Years: starting in December 2021)**

- Toll Collection System
- Traffic Management and Control System
- Other Infrastructure

**Phase 2: O&M (30 Years)**

### Project Update

- PPP for O&M Contracts signed in September 2021
- Credit Facilities Agreement signed in January 2022
- Commencement Date: 11 January 2023



**M6**



**M81**





2

# Group

## Performance

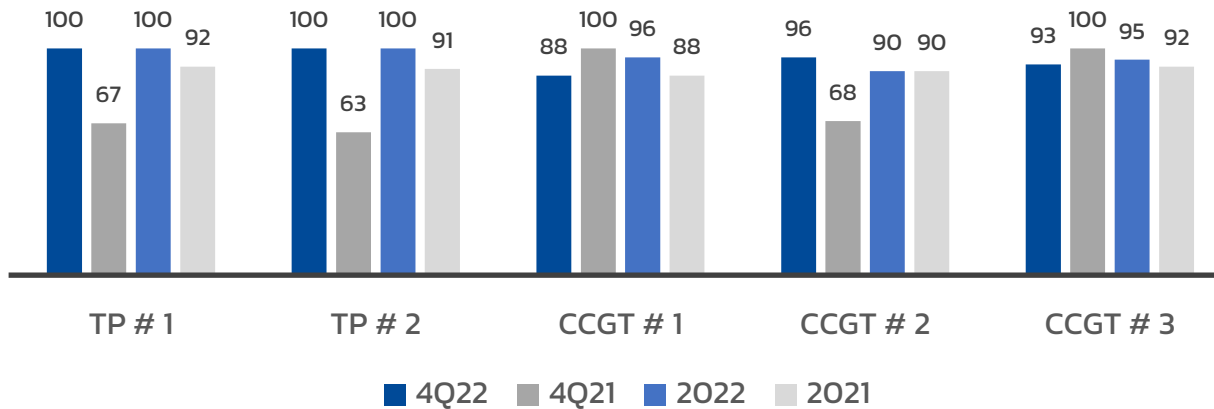
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# ● ● ● Operation Performance : IPP Projects

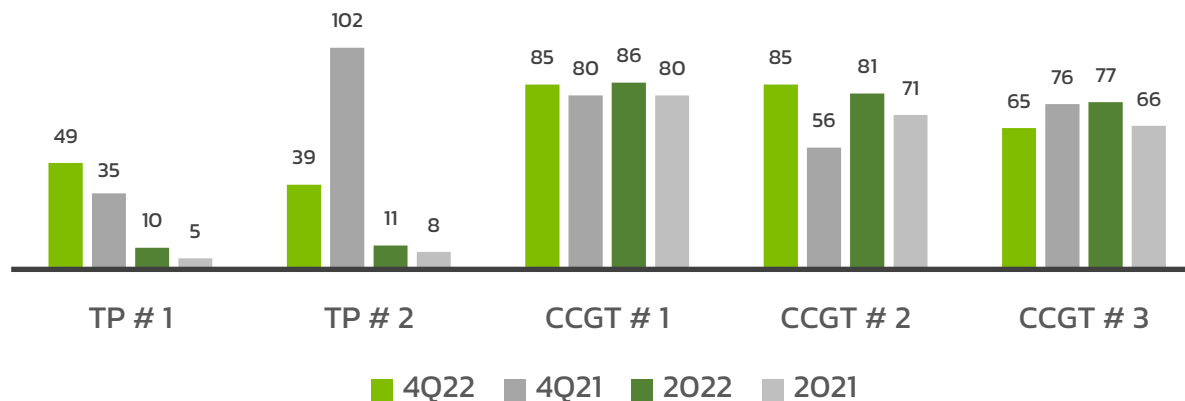


**RATCHGEN**

## %Equivalent Availability Factor (EAF)



## %Dispatch Factor (DF)



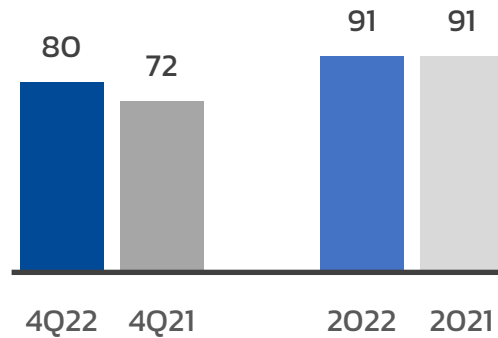


# ● ● ● Operation Performance : IPP Projects

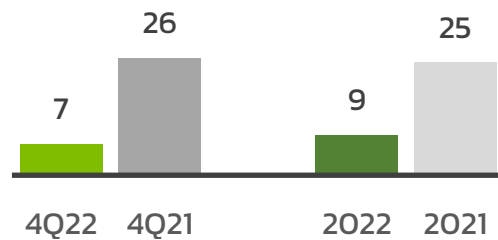


**RPCL**

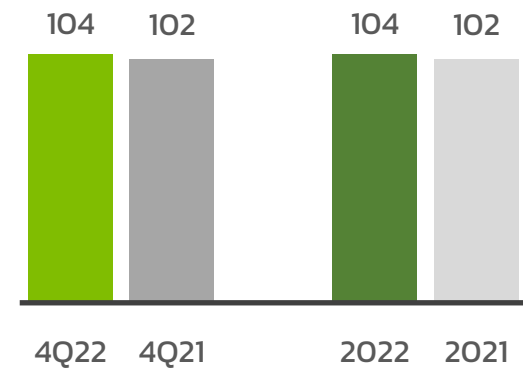
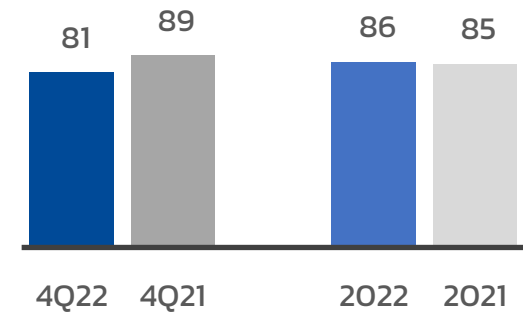
**%Equivalent  
Availability Factor  
(EAF)**



**%Dispatch Factor  
(DF)**



**HPC**



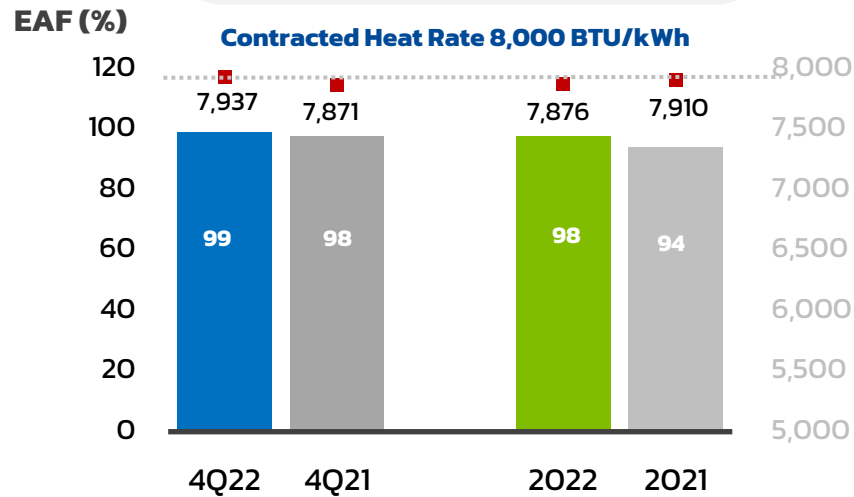


# ● ● ● Operation Performance : SPP Projects



## %RATCH Cogeneration

**Heat Rate:** Maintained below the Contracted Heat Rate

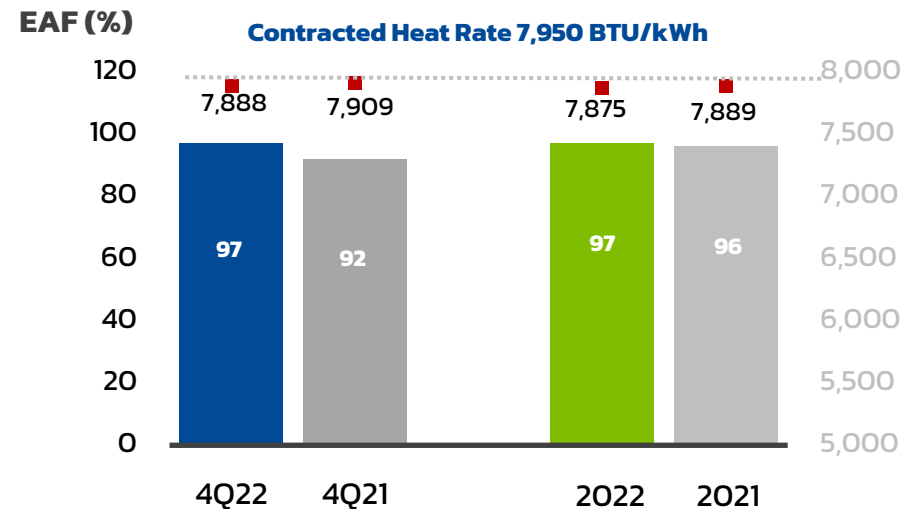


■ Heat Rate (Actual)



## RATCH WORLD Cogen Block 1-2

**Heat Rate:** Maintained below the Contracted Heat Rate



■ Heat Rate (Actual)



# ● ● ● Operation Performance : SPP Projects

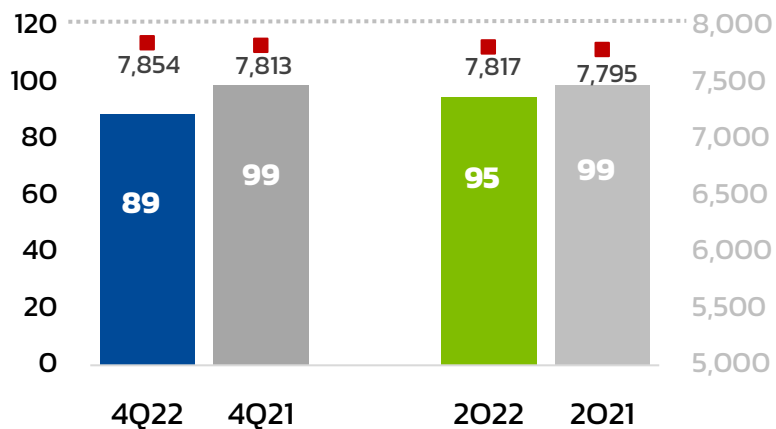


## NNEG

**Heat Rate:** Maintained below the Contracted Heat Rate

EAf (%)

Contracted Heat Rate 7,950 BTU/kWh



■ Heat Rate (Actual)

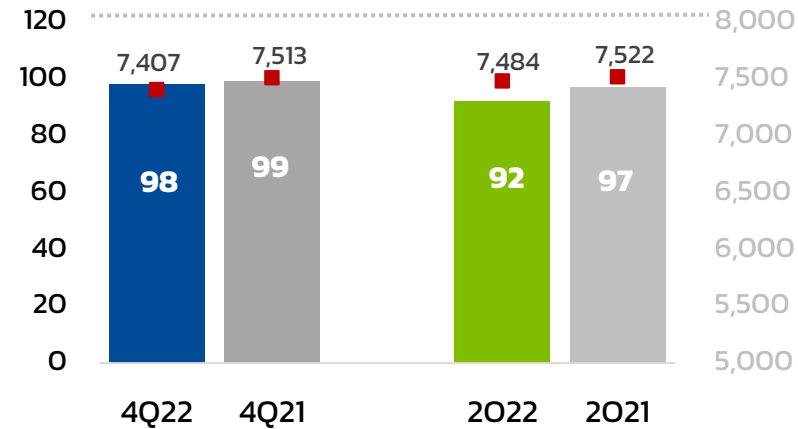


## Berkprai

**Heat Rate:** Maintained below the Contracted Heat Rate

EAf (%)

Contracted Heat Rate 7,950 BTU/kWh



■ Heat Rate (Actual)





# Operation Performance : Renewable Energy

## HB 2-3



### HB 2



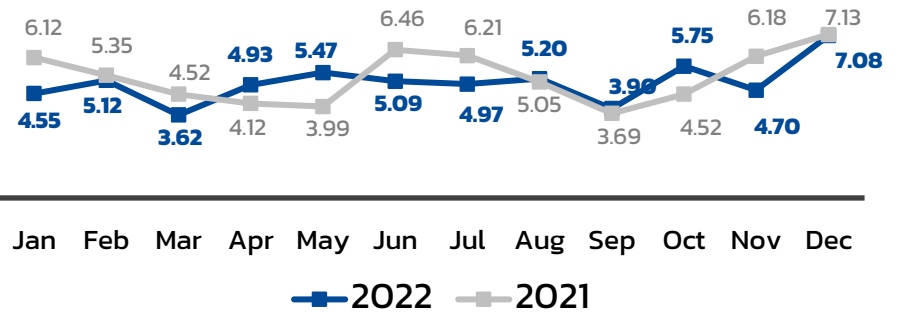
### HB 3



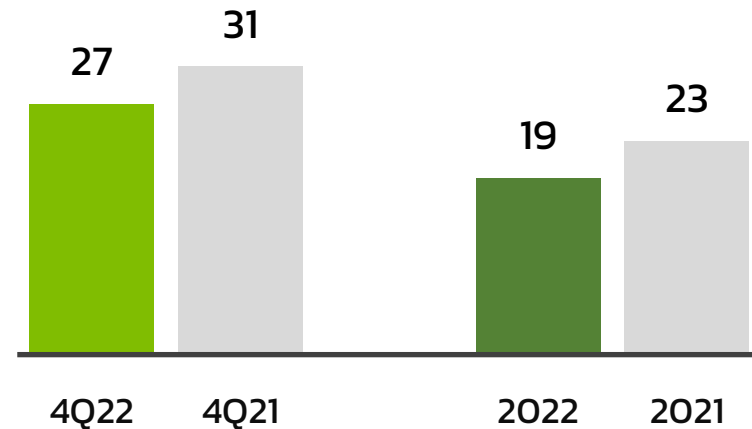
### Wind Speed (m/s)

AVG. 2022 = 5.03

AVG. 2021 = 5.28



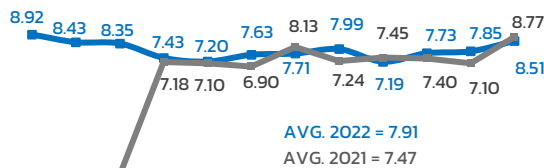
### %Capacity Factor (CF)



## Wind Farms

Wind Speed (m/s)

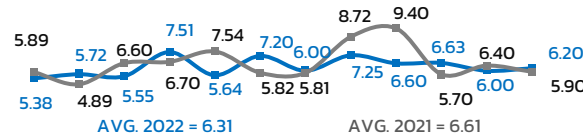
### Yandin\*\*



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

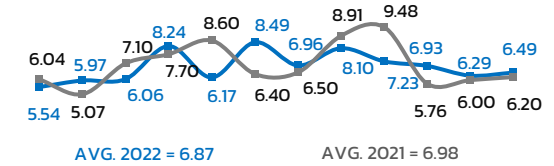
Remark: \*\* COD in 2Q/2021

### Windy Hill



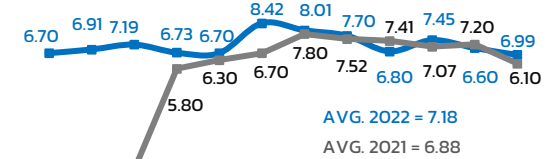
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

### Mouth Emerald



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

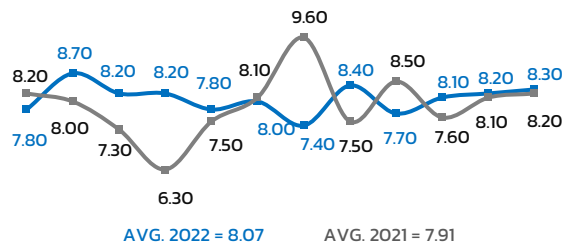
### Collector\*



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

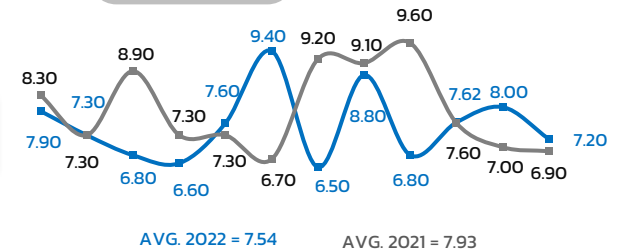
Remark: \* COD in 2Q/2021

### Starfish

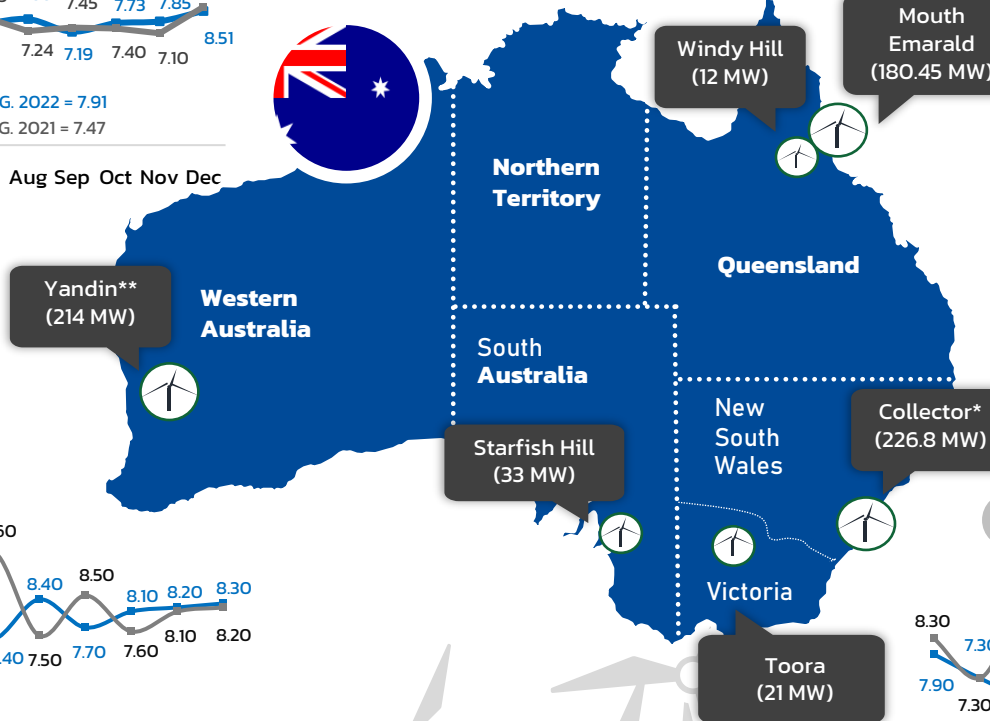


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### Toora



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

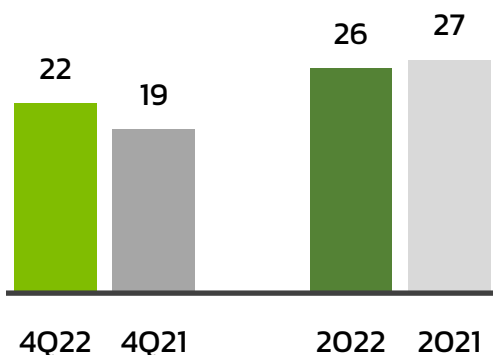




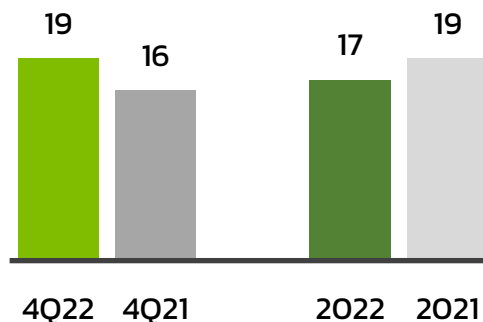
# Wind Farms

%Capacity Factor (CF)

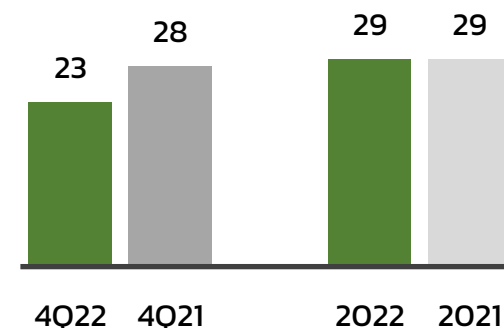
## Mount Emerald



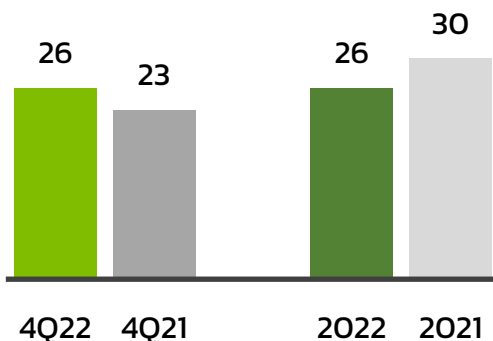
## Windy Hill



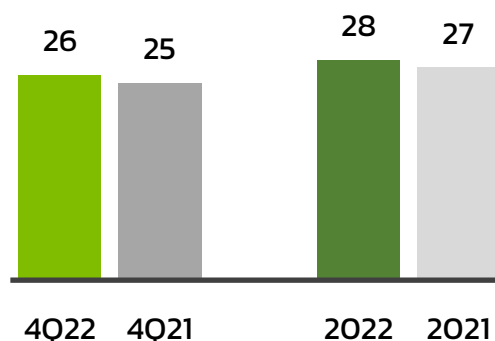
## Starfish Hill



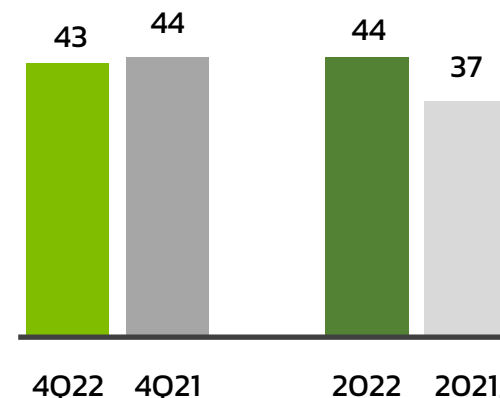
## Toora



## Collector\*



## Yandin\*\*



Remark: \* COD in 2Q/2021

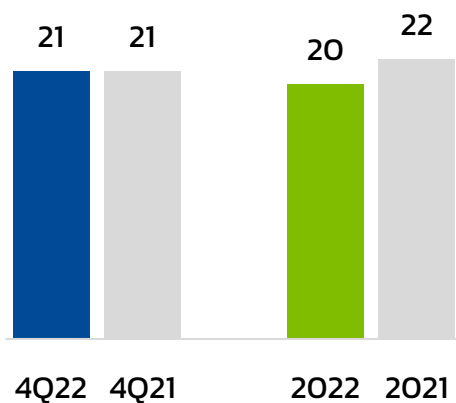
Remark: \*\* COD in 2Q/2021

# Solar Farms

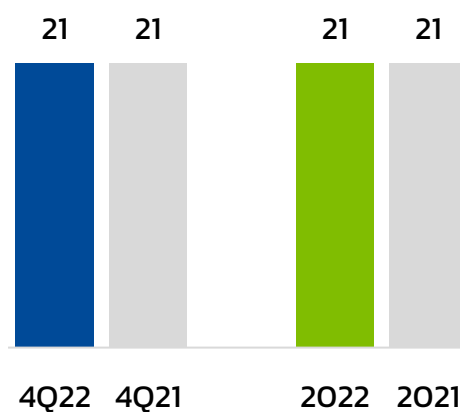
%Capacity Factor (CF)



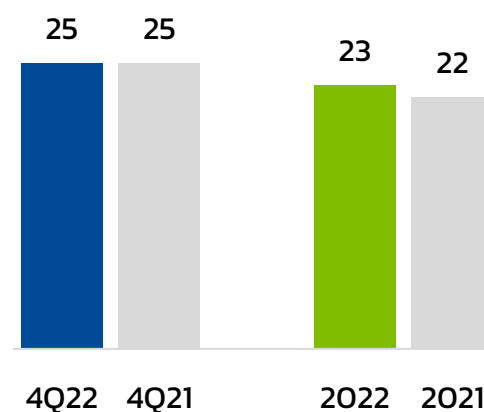
**Solarta**



**KR 3 4 7**



**Collinsville**



# Hydro Projects

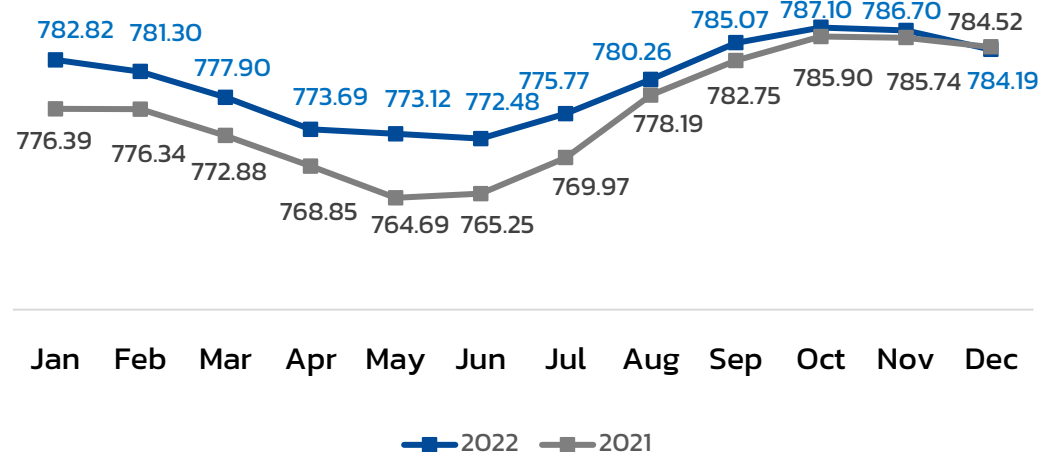
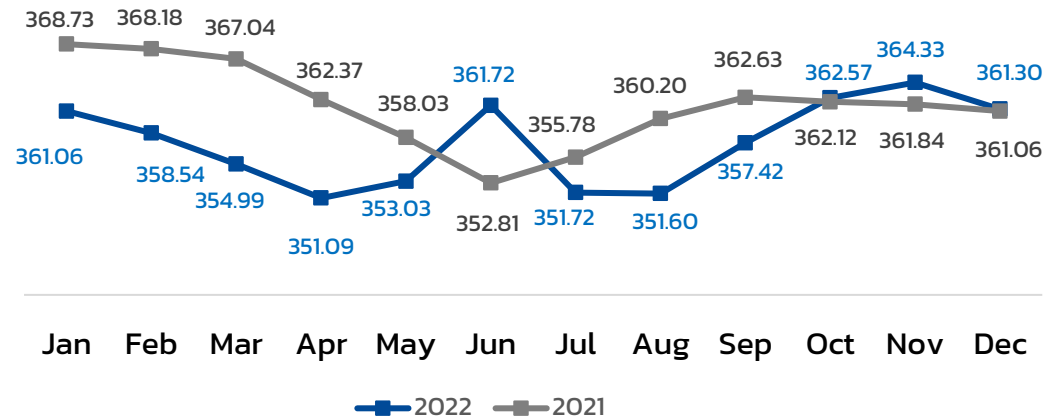
**NN2**



**PNPC**



## Water Level (m.asl.)





3

# Financial Performance

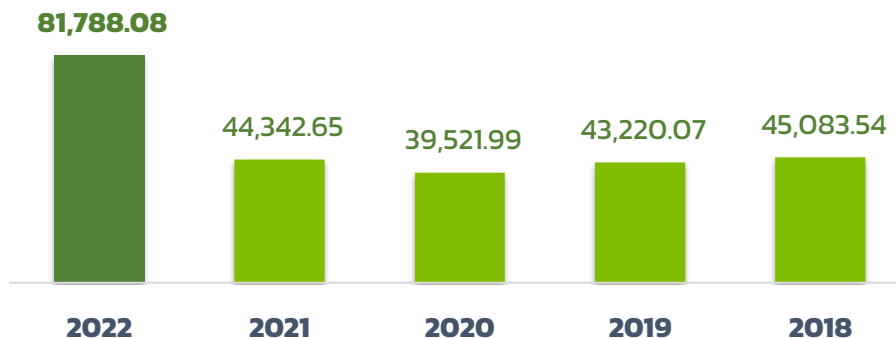




# Financial Performance

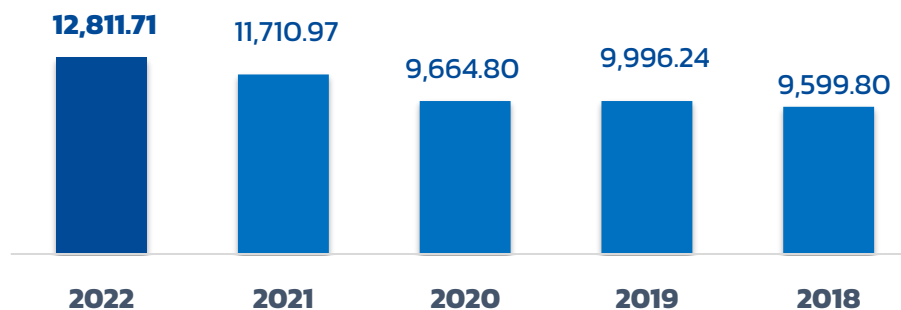
## Revenue

Unit: Million Baht



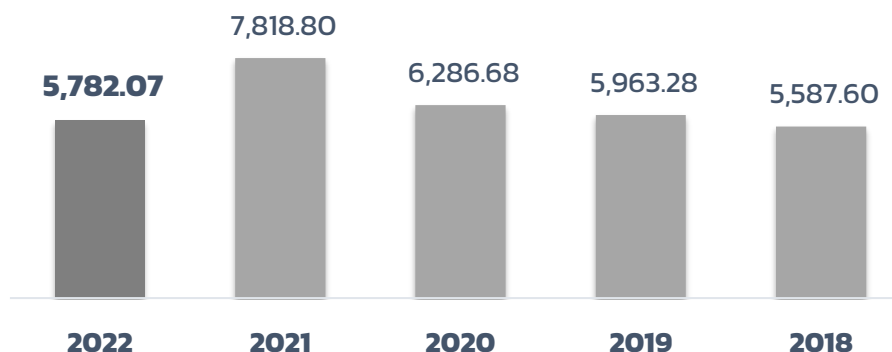
Unit: Million Baht

## EBITDA



## Net Profit

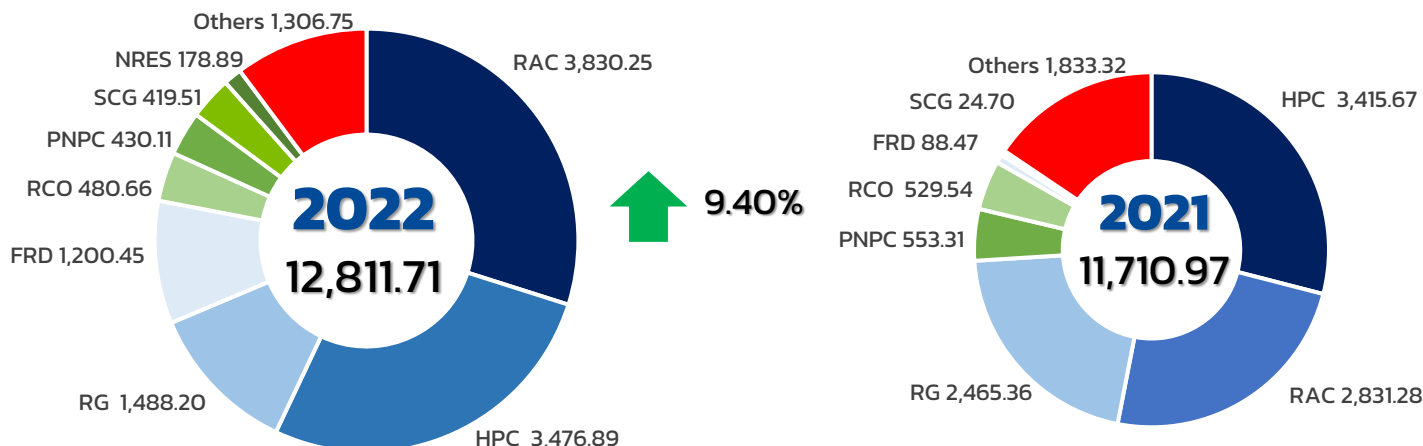
Unit: Million Baht



# Financial Performance

## EBITDA

Unit: Million Baht



## 2022 Main EBITDA Contributors



### RAC – Collector Wind Farm

- Started commercial operation in June 2021.
- The electricity price increased due to the increase in demand.



HPC – Managed to maintain a high EAF of 86% in 2022



SCG & FRD – Consolidated the EBITDA of SCG and FRD since the acquisition in 4Q2021

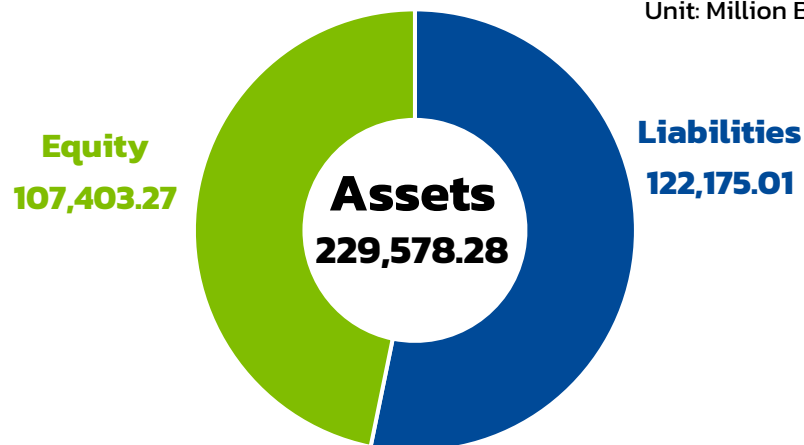


NRES – NRER Started commercial operation in April 2022

# ● ● ● Statements of Financial Position

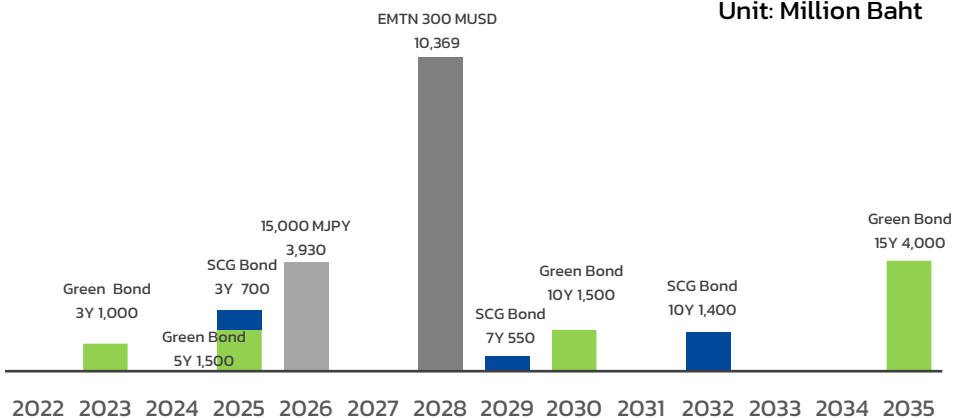
## Financial Position

Unit: Million Baht



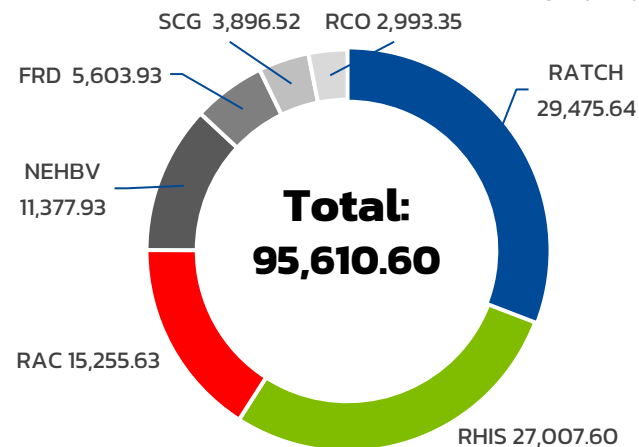
## Debenture Repayment Profile

Unit: Million Baht



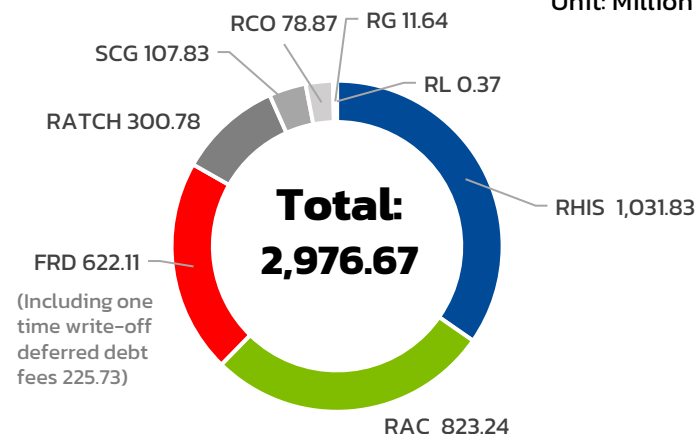
## Interest Bearing Debt

Unit: Million Baht

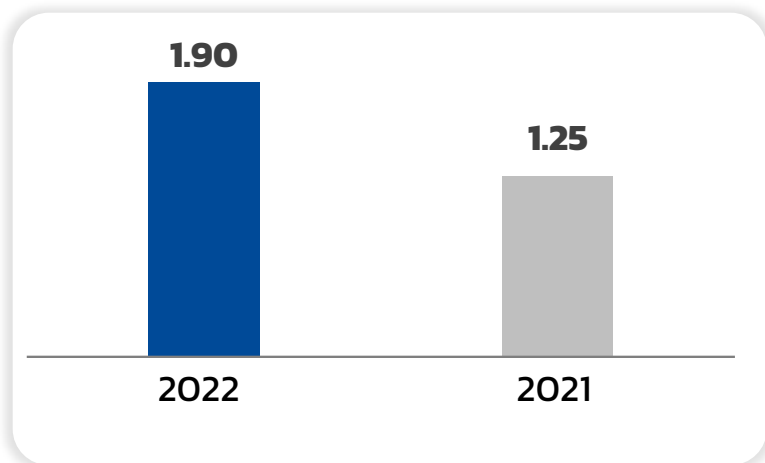


## Finance Cost 2022

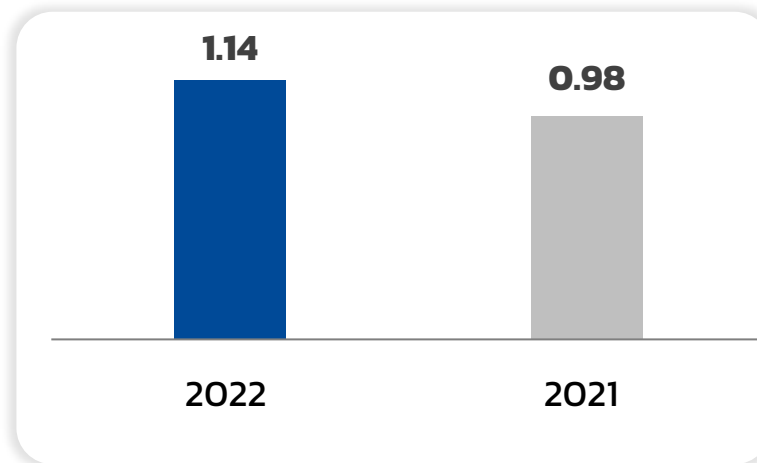
Unit: Million Baht



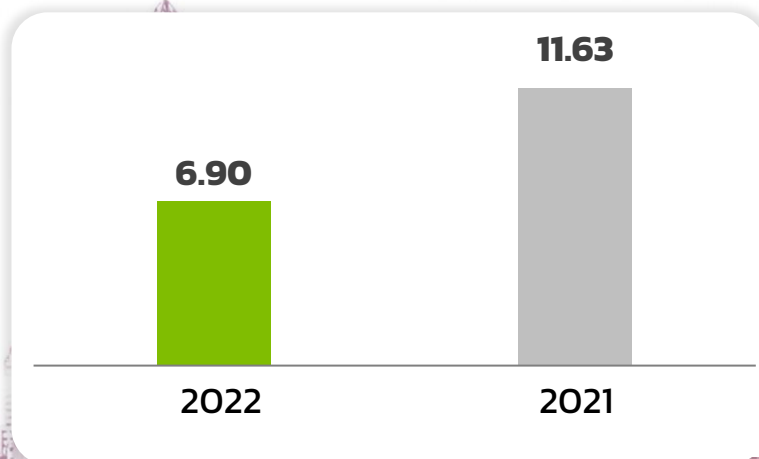
**Current ratio (times)**



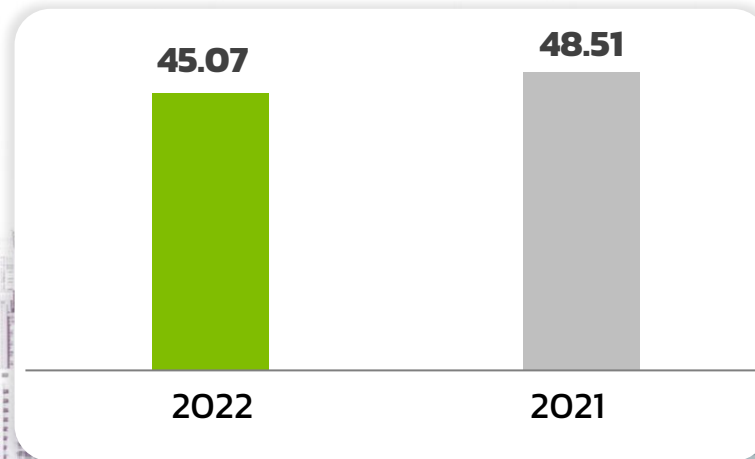
**Debt/Equity (times)**



**ROE (%)**



**Book Value per Share (Baht)**

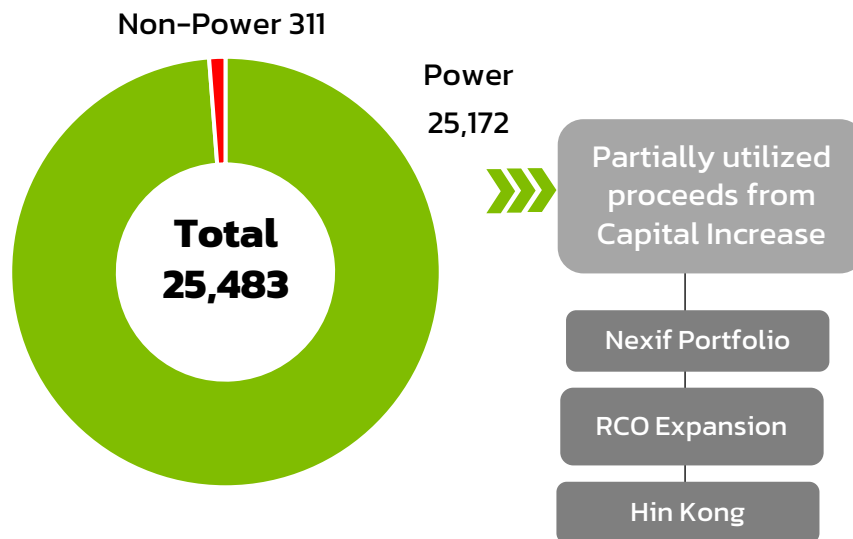




# Capital Expenditure

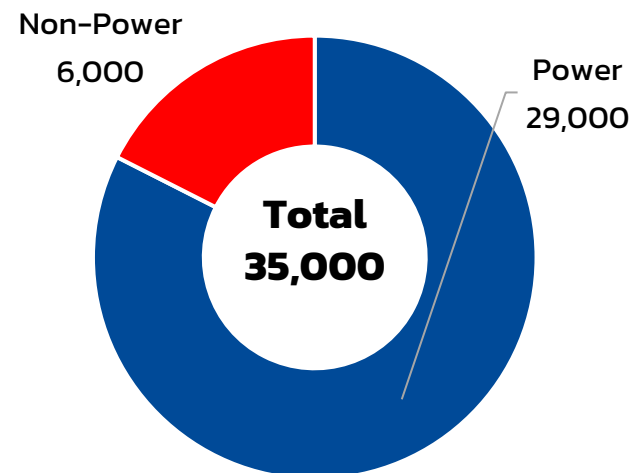
**2022**

Unit: Million Baht



**2023**

Unit: Million Baht





4

# Appendix

# **Income Statement : 4Q22 & 4Q21**

Unit : in Million Baht	4Q22	4Q21
Revenues	20,217.43	14,518.52
Costs & Expenses	(18,391.21)	(11,199.70)
<b>EBITDA</b>	<b>1,826.22</b>	<b>3,318.82</b>
Depreciation & Amortization – Cost*	(688.51)	(571.06)
Depreciation & Amortization – Admin	(57.03)	(67.37)
<b>EBIT</b>	<b>1,080.68</b>	<b>2,680.39</b>
Finance costs	(753.38)	(566.28)
Gain (loss) on fair value adjustment of derivatives	(309.19)	14.10
Income tax expense	(97.75)	(114.01)
<b>Profit for the period</b>	<b>(79.64)</b>	<b>2,014.20</b>
Non-controlling interests	(6.53)	(4.12)
<b>Profit for the period: Equity holders of the Company – before FX of subsidiaries</b>	<b>(86.17)</b>	<b>2,010.08</b>
Gain (Loss) on FX of subsidiaries	(155.44)	159.91
<b>Profit for the Company</b>	<b>(241.61)</b>	<b>2,169.99</b>

\* Included the revaluation of heavy oil and diesel oil prices in the total amount of +25.44 MB in 4Q22, -0- MB in 4Q21

# **Income Statement : 2022 & 2021**

Unit : in Million Baht	2022	2021
Revenues	81,788.08	44,342.65
Costs & Expenses	(68,976.37)	(32,631.68)
<b>EBITDA</b>	<b>12,811.71</b>	<b>11,710.97</b>
Depreciation & Amortization – Cost*	(2,866.22)	(1,942.27)
Depreciation & Amortization – Admin	(222.71)	(250.35)
<b>EBIT</b>	<b>9,722.78</b>	<b>9,518.35</b>
Finance costs	(2,976.67)**	(1,868.07)
Gain (loss) on fair value adjustment of derivatives	(102.46)	143.51
Income tax expense	(937.34)***	(177.17)
<b>Profit for the period</b>	<b>5,706.31</b>	<b>7,616.62</b>
Non-controlling interests	105.89	(4.11)
<b>Profit for the period: Equity holders of the Company – before FX of subsidiaries</b>	<b>5,812.20</b>	<b>7,612.51</b>
Gain (Loss) on FX of subsidiaries	(30.13)	206.29
<b>Profit for the Company</b>	<b>5,782.07</b>	<b>7,818.80</b>

\* Included the revaluation of heavy oil and diesel oil prices in the total amount of -2.16 MB in 2022, + 65.88 MB in 2021

\*\* Included one time write-off deferred debt fees (FRD) 225.73 MB

\*\*\* Included deferred tax expense (FRD) 337.70 MB



# 

Unit : in Million Baht	4Q22	3Q22	2Q22	1Q22	4Q21
Revenues	20,217.43	24,871.29	18,449.70	18,249.66	14,518.52
Costs & Expenses	(18,391.21)	(20,860.43)	(14,469.71)	(15,255.02)	(11,199.70)
<b>EBITDA</b>	<b>1,826.22</b>	<b>4,010.86</b>	<b>3,979.99</b>	<b>2,994.64</b>	<b>3,318.82</b>
Depreciation & Amortization – Cost*	(688.51)	(797.61)	(696.88)	(683.22)	(571.06)
Depreciation & Amortization – Admin	(57.03)	(54.32)	(53.64)	(57.72)	(67.37)
<b>EBIT</b>	<b>1,080.68</b>	<b>3,158.93</b>	<b>3,229.47</b>	<b>2,253.70</b>	<b>2,680.39</b>
Finance costs	(753.38)	(663.96)	(751.01)	(808.32)**	(566.28)
Gain (loss) on fair value adjustment of derivatives	(309.19)	153.30	78.92	(25.49)	14.10
Income tax expense	(97.75)	(104.92)	(266.10)	(468.57)***	(114.01)
<b>Profit for the period</b>	<b>(79.64)</b>	<b>2,543.35</b>	<b>2,291.28</b>	<b>951.32</b>	<b>2,014.20</b>
Non-controlling interests	(6.53)	(28.58)	(74.06)	215.06	(4.12)
<b>Profit for the period: Equity holders of the Company - before FX</b>	<b>(86.17)</b>	<b>2,514.77</b>	<b>2,217.22</b>	<b>1,166.38</b>	<b>2,010.08</b>
Gain (Loss) on foreign exchange of subsidiaries	(155.44)	(266.54)	(21.12)	412.97	159.91
<b>Profit for the Company</b>	<b>(241.61)</b>	<b>2,248.23</b>	<b>2,196.10</b>	<b>1,579.35</b>	<b>2,169.99</b>

\* Included the revaluation of heavy oil and diesel oil prices in the total amount of +25.44 MB in 4Q22, -0- MB in 4Q21

\*\* Included one time write-off deferred debt fees (FRD) 225.73 MB

\*\*\* Included deferred tax expense (FRD) 337.70 MB

# ● ● ● Revenues: 4Q22 & 4Q21

Unit : in Million Baht	4Q22	4Q21	Diff	%
<b>Sales</b>	<b>18,406.21</b>	<b>11,785.33</b>	<b>6,620.88</b>	<b>56.18</b>
AP (RG)	516.98	583.04	(66.06)	(11.33)
EP (Fuel) – RG	14,269.85	9,368.78	4,901.07	52.31
RATCH Cogen (RCO)	917.91	661.35	256.56	38.79
RAC	1,156.99	956.04	200.95	21.02
SCG	1,540.83	239.41	1,301.42	n.a.
FRD	3.65	(23.29)	26.94	n.a.
<b>Revenue from leases – RG/FRD</b>	<b>681.57</b>	<b>592.57</b>	<b>89.00</b>	<b>15.02</b>
<b>Revenue from rendering of services</b>	<b>31.34</b>	<b>17.79</b>	<b>13.55</b>	<b>76.17</b>
<b>Management service income</b>	<b>62.28</b>	<b>58.81</b>	<b>3.47</b>	<b>5.90</b>
<b>Interest income</b>	<b>248.92</b>	<b>48.08</b>	<b>200.84</b>	<b>n.a.</b>
<b>Other incomes</b>	<b>72.21</b>	<b>204.56</b>	<b>(132.35)</b>	<b>(64.70)</b>
<b>Gain on Bargain Purchase – FRD/SCG</b>		<b>227.03</b>	<b>(227.03)</b>	<b>(100.00)</b>
<b>Gain from Changes in Proportion of Investment – NRES</b>	<b>661.08</b>	<b>–</b>	<b>661.08</b>	<b>–</b>
<b>Share of profit from JVs &amp; Associates</b>	<b>53.82</b>	<b>1,584.35</b>	<b>(1,530.53)</b>	<b>(96.60)</b>
<b>Total Revenues</b>	<b>20,217.43</b>	<b>14,518.52</b>	<b>5,698.91</b>	<b>39.25</b>

# ● ● ● Revenues: 2022 & 2021

Unit : in Million Baht	2022	2021	Diff	%
<b>Sales</b>	<b>71,777.79</b>	<b>35,162.22</b>	<b>36,615.57</b>	<b>n.a.</b>
AP (RG)	2,446.91	3,121.03	(674.12)	(21.60)
EP (Fuel) – RG	54,980.00	25,871.34	29,108.66	n.a.
RATCH Cogen (RCO)	3,517.84	2,219.38	1,298.46	58.51
RAC	5,016.70	3,734.35	1,282.35	34.34
SCG	5,740.48	239.41	5,501.07	n.a.
FRD	75.86	(23.29)	99.15	n.a.
<b>Revenue from leases – RG/FRD</b>	<b>2,843.19</b>	<b>2,095.30</b>	<b>747.89</b>	<b>35.69</b>
<b>Revenue from rendering of services</b>	<b>104.24</b>	<b>69.26</b>	<b>34.98</b>	<b>50.51</b>
<b>Management service income</b>	<b>275.44</b>	<b>224.30</b>	<b>51.14</b>	<b>22.80</b>
<b>Dividend Income</b>	<b>26.51</b>	<b>58.83</b>	<b>(32.32)</b>	<b>(54.94)</b>
<b>Interest income</b>	<b>499.61</b>	<b>205.35</b>	<b>294.26</b>	<b>n.a.</b>
<b>Other incomes</b>	<b>209.06</b>	<b>397.96</b>	<b>(188.90)</b>	<b>(47.47)</b>
<b>Gain on Bargain Purchase – FRD/SCG</b>	<b>–</b>	<b>227.03</b>	<b>(227.03)</b>	<b>(100.00)</b>
<b>Gain from Change in Proportion of Investment – NRES</b>	<b>661.08</b>	<b>–</b>	<b>661.08</b>	<b>–</b>
<b>Share of profit from JVs &amp; Associates</b>	<b>5,391.16</b>	<b>5,902.40</b>	<b>(511.24)</b>	<b>(8.66)</b>
<b>Total Revenues</b>	<b>81,788.08</b>	<b>44,342.65</b>	<b>37,445.43</b>	<b>84.45</b>



## Share of profit from jointly-controlled entities : 4Q22 & 4Q21

### Included FX

Unit : in Million Baht	4Q22	4Q21	Diff	%
HPC	291.61	910.07	(618.46)	(67.96)
RPCL	41.89	19.06	22.83	n.a.
SEAN	41.52	42.37	(0.85)	(2.01)
Berk Prai	34.39	28.36	6.03	21.26
RW COGEN	33.96	24.96	9.00	36.06
RIAU	20.47	112.56	(92.09)	(81.81)
Songkhla Biomass	9.70	8.50	1.20	14.12
KR2	8.50	7.93	0.57	7.19
FKW	6.45	9.40	(2.95)	(31.38)
KORAT 3,4,7	4.01	24.38	(20.37)	(83.55)
SOLARTA	2.12	40.16	(38.04)	(94.72)
Impact Solar	0.89	(0.29)	1.18	n.a.
FRD	-	50.86	(50.86)	(100.00)
NNEG	(45.95)	5.91	(51.86)	n.a.
ABEIF (TLP)	(72.65)	(46.74)	(25.91)	(55.43)
NRES	(132.32)	(1.28)	(131.04)	n.a.
PNPC	(175.98)	318.10	(494.08)	n.a.
Others	(14.79)	30.04	(44.83)	n.a.
<b>Total Share of profit from jointly-controlled entities</b>	<b>53.82</b>	<b>1,584.35</b>	<b>(1,530.53)</b>	<b>(96.60)</b>



## Included FX

Unit : in Million Baht	2022	2021	Diff	%
HPC	3,476.89	3,415.67	61.22	1.79
PNPC	430.11	553.31	(123.20)	(22.27)
SEAN	281.54	303.43	(21.89)	(7.21)
RIAU	225.01	224.84	0.17	0.08
RPCL	220.55	219.03	1.52	0.69
RW COGEN	204.11	195.50	8.61	4.40
NRES	178.89	(30.68)	209.57	n.a.
Berk Prai	118.37	121.80	(3.43)	(2.82)
SOLARTA	116.65	168.52	(51.87)	(30.78)
ABEIF (TLP)	79.30	70.40	8.90	12.64
KORAT 3,4,7	39.59	96.37	(56.78)	(58.92)
Songkhla Biomass	30.88	29.96	0.92	3.07
FKW	16.64	23.47	(6.83)	(29.10)
KR2	16.15	19.24	(3.09)	(16.06)
Impact Solar	2.46	(0.29)	2.75	n.a.
FRD	–	236.24	(236.24)	(100.00)
NNEG	(133.07)	154.64	(287.71)	n.a.
Others	87.09	100.95	(13.86)	(13.73)
<b>Total Share of profit from jointly-controlled entities</b>	<b>5,391.16</b>	<b>5,902.40</b>	<b>(511.24)</b>	<b>(8.66)</b>



## Share of profit from jointly-controlled entities : 4Q22 & 4Q21

### Excluded FX

Unit : in Million Baht	4Q22	4Q21	Diff	%
HPC	482.05	955.89	(473.84)	(49.57)
SEAN	47.25	43.12	4.13	9.58
RPCL	41.77	18.57	23.20	n.a.
Berk Prai	34.39	28.36	6.03	21.26
RW COGEN	33.96	24.54	9.42	38.39
RIAU	14.38	113.44	(99.06)	(87.32)
Songkhla Biomass	9.70	8.50	1.20	14.12
KR2	8.51	7.93	0.58	7.31
FKW	6.46	9.40	(2.94)	(31.28)
KORAT 3,4,7	4.01	24.38	(20.37)	(83.55)
SOLARTA	2.12	40.16	(38.04)	(94.72)
Impact Solar	0.89	(0.29)	1.18	n.a.
FRD	-	50.86	(50.86)	(100.00)
PNPC	(25.76)	107.70	(133.46)	n.a.
NNEG	(47.00)	5.05	(52.05)	n.a.
ABEIF (TLP)	(52.84)	(65.99)	13.15	19.93
NRES	(132.32)	(1.28)	(131.04)	n.a.
Others	(4.31)	28.71	(33.02)	n.a.
<b>Total Share of profit from jointly-controlled entities</b>	<b>423.26</b>	<b>1,399.05</b>	<b>(975.79)</b>	<b>(69.75)</b>



## Share of profit from jointly-controlled entities : 2022 & 2021

### Excluded FX

Unit : in Million Baht	2022	2021	Diff	%
HPC	3,183.58	3,024.29	159.29	5.27
SEAN	273.50	290.63	(17.13)	(5.89)
PNPC	254.14	281.82	(27.68)	(9.82)
RPCL	220.46	219.85	0.61	0.28
RIAU	213.15	221.76	(8.61)	(3.88)
RW COGEN	204.28	196.63	7.65	3.89
NRES	178.89	(30.68)	209.57	n.a.
ABEIF (TLP)	173.13	14.08	159.05	n.a.
Berk Prai	118.39	121.81	(3.42)	(2.81)
SOLARTA	116.65	168.51	(51.86)	(30.78)
KORAT 3,4,7	39.59	96.37	(56.78)	(58.92)
Songkhla Biomass	30.88	29.96	0.92	3.07
FKW	16.64	23.47	(6.83)	(29.10)
KR2	16.15	19.24	(3.09)	(16.06)
Impact Solar	2.46	(0.29)	2.75	n.a.
FRD	-	236.24	(236.24)	(100.00)
NNEG	(134.61)	152.88	(287.49)	n.a.
Others	107.68	107.79	(0.11)	(0.10)
<b>Total Share of profit from jointly-controlled entities</b>	<b>5,014.96</b>	<b>5,174.36</b>	<b>(159.40)</b>	<b>(3.08)</b>

## ● ● ● Costs and Expenses : 4Q22 & 4Q21

Unit : in Million Baht	4Q22	4Q21	Diff	%
<b>Cost of Sale and Rendering of Services</b>	<b>17,445.02</b>	<b>10,808.41</b>	<b>6,636.61</b>	<b>61.40</b>
– Fuel Cost : RG	14,248.04	9,090.54	5,157.50	56.73
– SPP Fuel Cost : (RAC/RCO/SCG)	1,936.03	622.71	1,313.32	n.a.
– Operation & Maintenance	528.86	456.64	72.22	15.82
– Repairing Expense (CSA)	240.33	232.30	8.03	3.46
– Spare parts	86.57	124.25	(37.68)	(30.33)
– Others	405.19	281.97	123.22	43.70
<b>Selling and Admin- Expenses</b>	<b>946.19</b>	<b>391.29</b>	<b>554.90</b>	<b>n.a.</b>
<b>Total Cost and Expenses*</b>	<b>18,391.21</b>	<b>11,199.70</b>	<b>7,191.51</b>	<b>64.21</b>

\* excluding depreciation & amortization




## ● ● ● Costs and Expenses : 2022 & 2021

Unit : in Million Baht	2022	2021	Diff	%
<b>Cost of Sale and Rendering of Services</b>	<b>66,420.38</b>	<b>31,174.23</b>	<b>35,246.15</b>	<b>n.a.</b>
- Fuel Cost : RG	54,501.79	25,501.56	29,000.23	n.a.
- SPP Fuel Cost : (RAC/RCO/SCG)	7,192.04	1,618.39	5,573.65	n.a.
- Operation & Maintenance	1,946.77	1,605.36	341.41	21.27
- Repairing Expense (CSA)	934.88	899.57	35.31	3.93
- Spare parts	342.39	425.72	(83.33)	(19.57)
- Others	1,502.51	1,123.63	378.88	33.72
<b>Selling and Admin- Expenses</b>	<b>2,555.99</b>	<b>1,457.45</b>	<b>1,098.54</b>	<b>75.37</b>
<b>Total Cost and Expenses*</b>	<b>68,976.37</b>	<b>32,631.68</b>	<b>36,344.69</b>	<b>n.a.</b>

\* excluding depreciation & amortization

# Planned Outage in 2022

Actual Outage Planned Outage		Planned Outage in 2022											
Plant		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
RG	CCGT-11											CI (11d) 27	7
	CCGT-12											CI (11d) 27	7
	CCST-10												
RG	CCGT-21				MI (30d) 3	2							
	CCGT-22				MI (30d) 3	2							
	CCST-20												
RG	CCGT-31		CI (9d) 6	14									
	CCGT-32		CI (9d) 6	14									
	CCST-30												
RG	Thermal-1												
RG	Thermal-2												
HPC	Unit #1											YM (22d) 20	11
	Unit #2		MO (44d) 14	26									
	Unit #3										YM (22d) 16	6	
RPCL	CCGT-11											CI (10d) 27	6
	CCGT-12											CI (10d) 27	6
	CCST-10												
RPCL	CCGT-21		MI (25d) 3	27									
	CCGT-22		MI (25d) 3	27									
	CCST-20		MI (25d) 3	27									

Thermal Plant	Minor Inspection (MI)		40 Days	Major Overhaul (MO)		57 Days		
Gas Turbine	Warranty Inspection (WI)			Combustion Inspection		Minor Inspection		Major Overhaul
	Normal (WI)	Gen.Rotor Removed (WI*)		(CI)		(MI)		(MO)
	26 Days	32 Days		15 Days		30 Days		52 Days
Steam Turbine	Warranty Inspection (WI)			Minor Inspection		Major Overhaul		
	Normal (WI**)	Gen.Rotor Removed (WI*)		(MI)		(MO)		
	26 Days	30 Days		26 Days		49 Days		

# Planned Outage in 2021

		Planned Outage in 2021											
		<div> <div>Actual Outage</div> <div>Planned Outage</div> </div>											
Plant		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
RG	CCGT-11							23 MI (31d)	22				
	CCGT-12							23 MI (30d)	21				
	CCST-10							4 MO (51d)	23				
RG	CCGT-21										3 CI (15d)	17	
	CCGT-22										3 CI (15d)	17	
	CCST-20										3 MO (48d)	19	
RG	CCGT-S1		6 CI (13d)	18									
	CCGT-S2		6 CI (13d)	18									
	CCST-30	3 MO (47d)	18										
RG	Thermal-1											14 MI (31d)	14
RG	Thermal-2											22 MI (31d)	22
HFC	Unit #1								22 MO (53d)	13			
	Unit #2	18 YM (29d)	15										
	Unit #3							18 YM (23d)	9				
RPCL	CCGT-11											21 MI (25d)	15
	CCGT-12											21 MI (28d)	18
	CCST-10											21 MI (25d)	15
RPCL	CCGT-21	3 CI (10d)	12										
	CCGT-22	3 CI (10d)	12										
	CCST-20												

Thermal Plant	Minor Inspection (MI)		40 Days	Major Overhaul (MO)		57 Days		
Gas Turbine	Warranty Inspection (WI)			Combustion Inspection		Minor Inspection		Major Overhaul
	Normal (WI)	Gen.Rotor Removed (WI*)		(CI)		(MI)		(MO)
	26 Days	32 Days		15 Days		30 Days		52 Days
Steam Turbine	Warranty Inspection (WI)			Minor Inspection		Major Overhaul		
	Normal (WI**)	Gen.Rotor Removed (WI*)		(MI)		(MO)		
	26 Days	30 Days		26 Days		49 Days		

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## Disclaimer

The information contained in our presentation is intended solely for your personal reference only. In addition, such information contains projections and forward-looking statements that reflect the Company's current views with respect to future events and financial performance. These views are based on assumptions subject to various risks. No assurance is given that future events will occur, that projections will be achieved, or that the Company's assumptions are correct. Actual results may differ materially from those projected. Investors are, however, required to use their own discretion regarding the use of information contained in this presentation for any purpose.

