

# DBS Thailand EV Conference

March 7, 2022



 **GPSC**

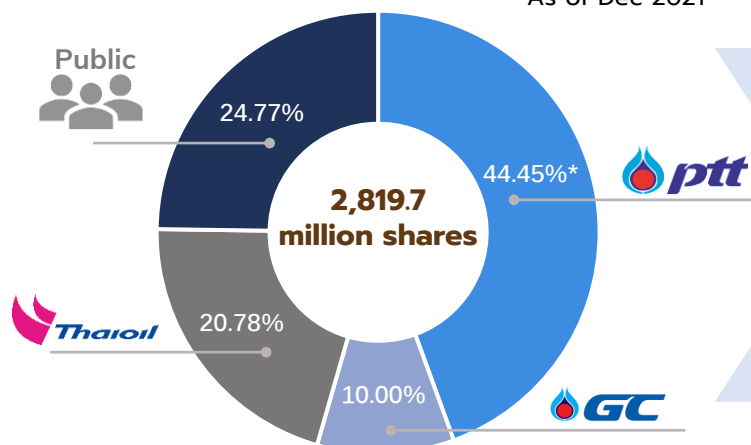


## The power and smart energy flagship of PTT Group

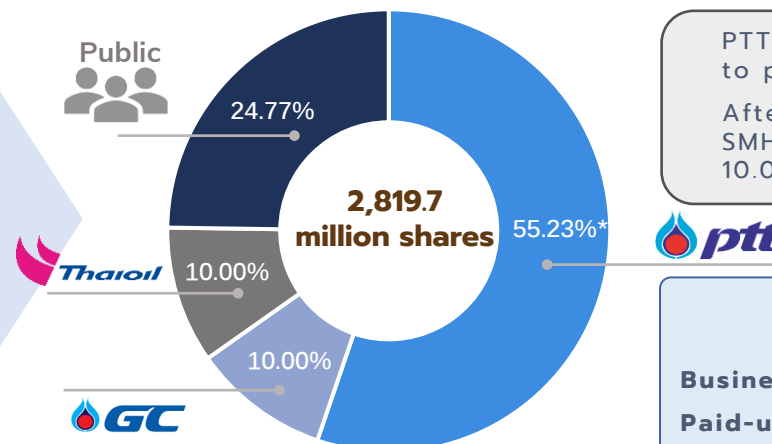
*"GPSC, The global leading innovative and sustainable power company, the core business is to **generate and supply electricity and utilities** to customers and also **developing new S-Curve business** to create value to stakeholders."*

### GPSC's shareholding structure

As of Dec 2021



### GPSC's shareholding structure after the restructuring transaction of PTT



PTT is under the process of regulatory work to purchase 10.78% of GPSC. from TOP.

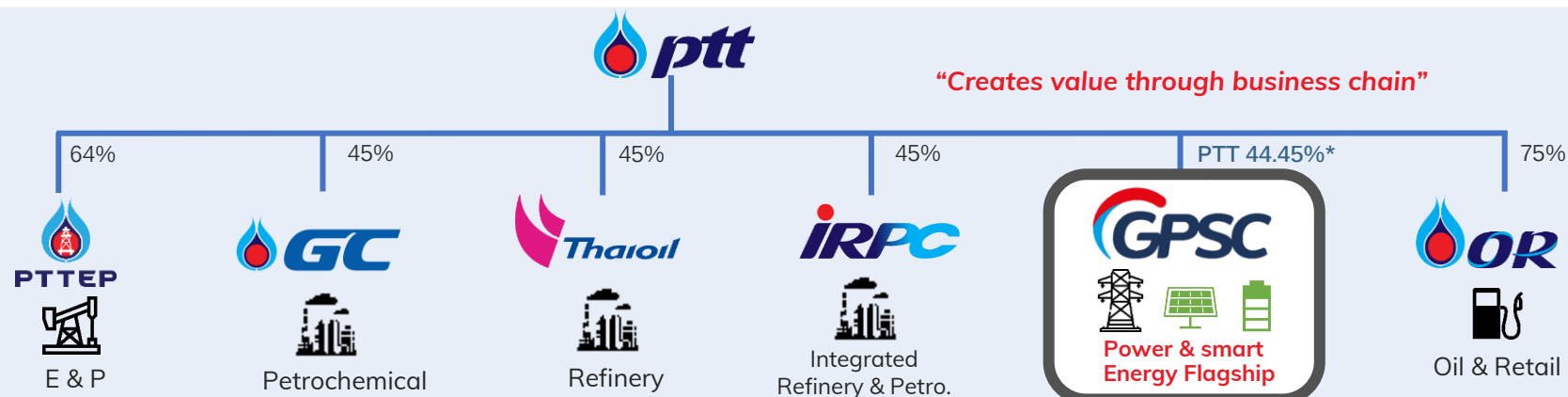
After the Restructuring Transaction, PTT and SMH will own 55.23% and TOP will own 10.00% of GPSC's total paid-up capital.

#### COMPANY INFORMATION (as of Feb 18, 2022)

**Business Type** | Energy & Utilities listed on SET  
**Paid-up Capital** | 28,197 MB  
**Market Cap.** | 215,709 MB (3<sup>rd</sup> in power sector)

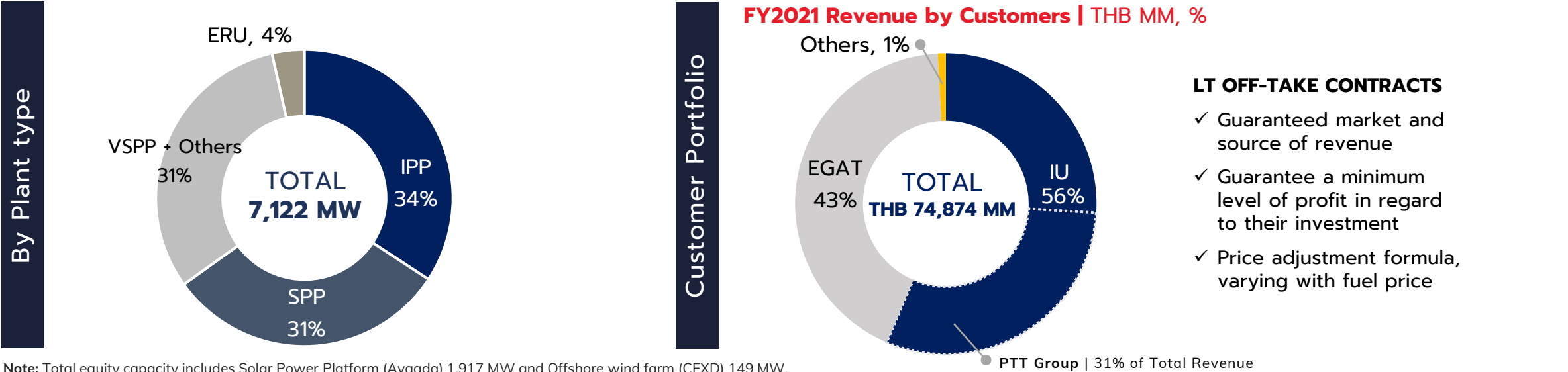
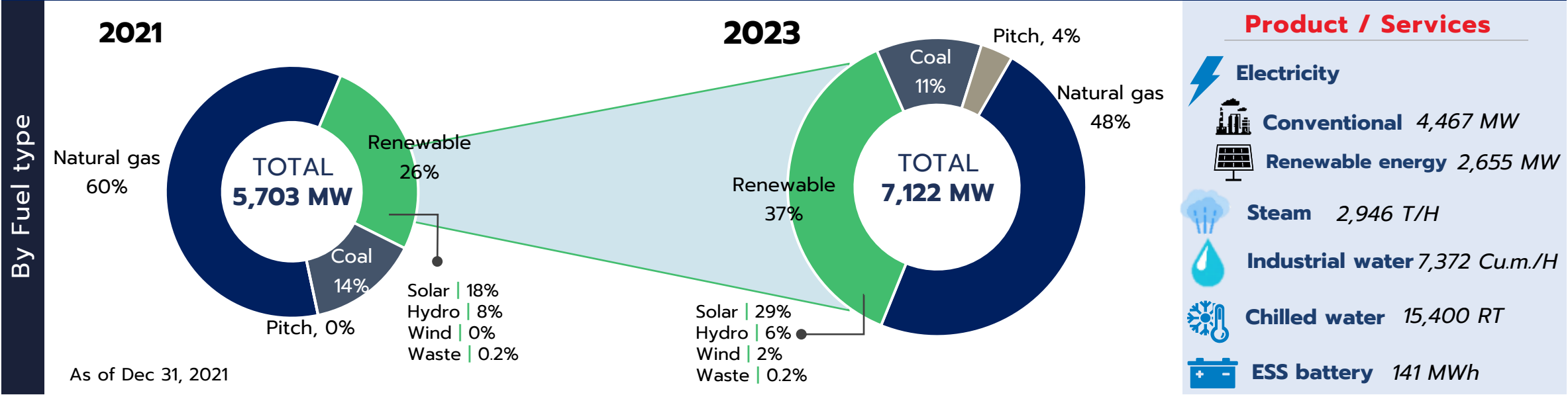
\*PTT stake includes 191% hold via SMH, a wholly-owned indirect subsidiary of PTT.

### PTT Group's Business



\* PTT stake includes 1.91% hold via SMH

Total committed equity capacity



Note: Total equity capacity includes Solar Power Platform (Avaada) 1,917 MW and Offshore wind farm (CFXD) 149 MW.



**1. 2021 in Review & Going Forward**

**2. Financial Performance**

**3. Update of Projects & Outlook**



# **1. 2021 in Review & Going Forward**

## **2. Financial Performance**

## **3. Update of Projects & Outlook**





## Overcome Emerging Challenges



**COVID-19 disrupted the Thai economy** in the first half of 2021. But energy consumption have been recovering slightly throughout the year.



**Coal and natural gas prices surge** amid constrained supply as demand recovery continues.



### Unplanned outages

- Glow Energy Phase 5
- GHECO-One

## React & Enablers



### Measures against COVID-19

- To ensure stability and continuity of supply to meet all customers' needs
- Set up G-COVID center
- Designate restricted area for production
- Set up a special operation team (Golden man)
- Work from home policy
- Limited COVID-19 impact



### React to fluctuations of energy price

- Manage the dispatch by merit order for minimizing the cost of production
- Proactive hedging strategies identification to mitigate risks by Hedging Committee



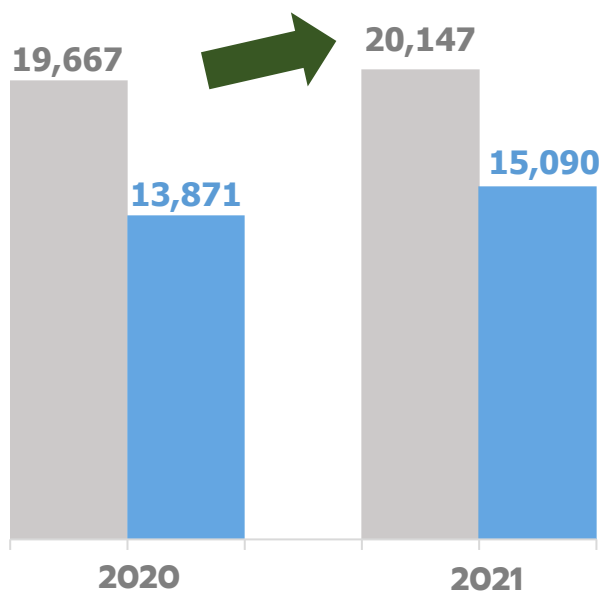
### GPSC Group's network

- Manage the operation through the Group's network to serve customers' demands during the period
- Intensive root cause analysis for future prevention

# 2021 in Review | Financial Highlight

**Higher power and steam sales volume led to higher revenue**

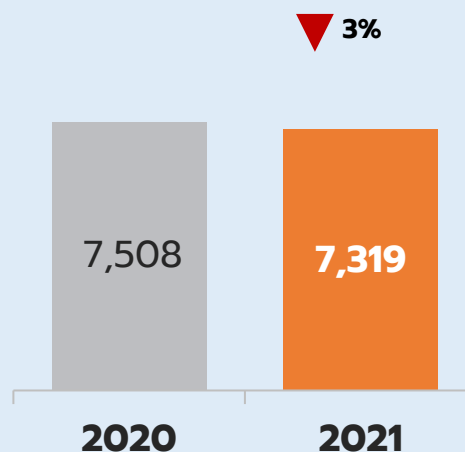
Unit: ■ Power: GWh  
■ Steam: '000 Ton



**Higher electricity demand during Covid-19**

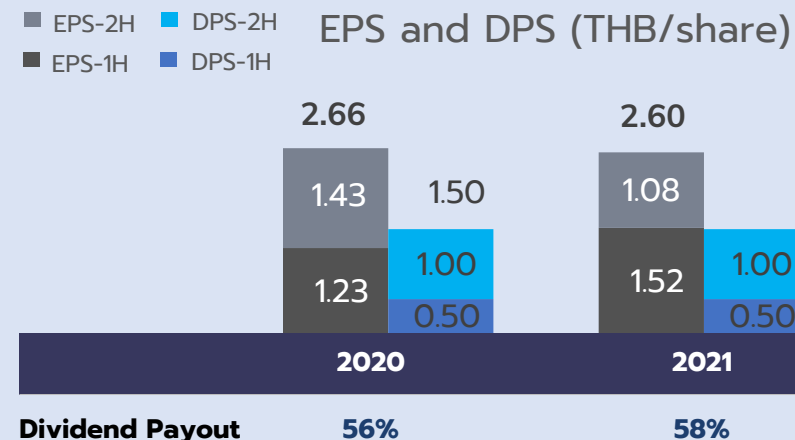
- Power + 2%, IUs + 13%
- Steam + 9%

**Slightly decrease in NI**



**Slightly decrease in Net Income**  
from higher fuel prices and  
unplanned outage even through  
strong performance of Affiliate  
and better synergy outcome

*GPSC announces 2021 dividend payment,  
at the rate of **THB 1.50 per share***



**Strong Credit Profile**

**AA+**

**TRIS**  
RATING  
A Strategic Partner of SGP Global

**+ 2 notches**

**BBB-**  
**A+(tha)**

**FitchRatings**

**stable**

**GPSC rating reflects the confident of our future growth and business direction.**

- ✓ Stable Cash Flow Generation
- ✓ Strong linkages with the PTT
- ✓ Strategic role in PTT's group as GPSC play all in PTT's new future energy vision

## ✓ S1: Strengthen and Expand the Core

### Recurring Synergy Value



As of **2021**, the recognized synergy value was **1,633 MB** (after-tax) from O&M, procurement and corporate functions.

**2022 Target**  
**> 1,600 MB per year**



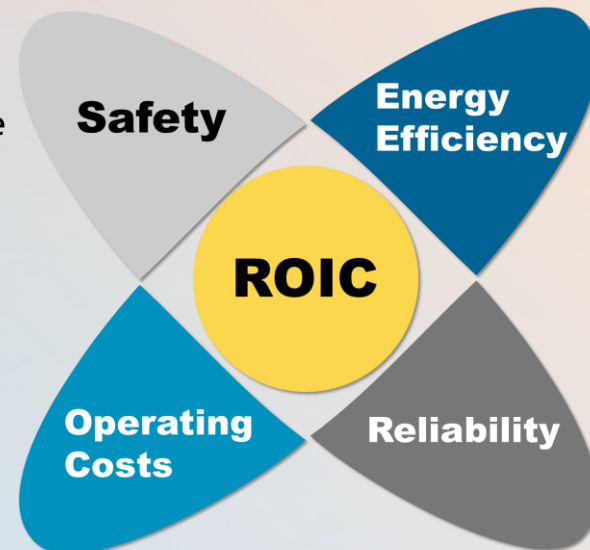
GLOW SPP has signed construction contract with JEL and TJEL (SCOD 2024)

**GLOW SPP 2** uses advanced technology to *increase the project efficiency, the stability* of the network, serving energy demand of EGAT and IUs as well as *being environmentally friendly*.

## Operation Excellence Management System

To drive “Operational Excellence” across all assets of GPSC

- Total Recordable Injury Rate (TRIR)



- Energy Intensity Index

- Lower operating cost/unit
- Higher operating margin

- Plant integrity review & management
- Replace critical equipment

### 2022 Target

- ✓ **Strengthening Zero TRIR & Zero Unplanned Shutdown program**

### Best in Class Target

- ✓ **To be Operational Best in Class by 2025**





## S2: Scale-Up Green Energy



### Solar Projects in Taiwan

#### Sheng Yang Project

GPSC Holds | **45.00%** of shares



Installed Capacity | **55.8 MW**

Increased **25.11 MW** equity capacity to our portfolio

Revenue recognition since May 28, 2021



### Offshore Wind in Taiwan

#### Changfang Project and Xidao Project (CFXD)



GPSC Holds | **25.00%** of shares



Installed Capacity | **595 MW**

Increased **149 MW** equity capacity to our portfolio

✓ **2022 Target** : The transfer of shares will be completed before the end of the 2nd quarter of 2022.



### Solar Power Platform in India

#### Avaada Energy Private Limited (AEPL)



GPSC Holds | **41.60%\*** of shares



As of Dec 2021, AEPL has a total committed capacity of 4,608 MW

Increased **1,917 MW** equity capacity to our portfolio

**AEPL aims to expand its capacity up to 11,000 MW by 2025**

#### 2022 GPSC action plan for AEPL:

- ✓ Secure funding: Barclays provided loans for solar energy CAPEX plan of AEPL with GPSC's support in Feb-2022.
- ✓ Using AEPL investment platform to execute projects with target COD > 3,000 MW
- ✓ Dispatching staffs as the secondment to build expertise & keep monitoring performance to GPSC and to set up Liaison office of GRSC in 2H-2022

\* On January 18, 2022, GPSC has raised the equity injection amounting USD 25 million in AEPL and shareholding proportion was increased to 42.93%



## S3: S-Curve and Batteries

### SemiSolid Energy Storage Unit Production Plant



**"G-Cell"** Energy Storage Unit Production Plant with a total initial capacity of 30 MWh per year, the first in Southeast Asia that employs the SemiSolid technology.

**"VW acquires 25% stake in 24M technologies"** shows that 24M SemiSolid manufacturing platform offers the potential to substantially reduce capital and operating costs to meet rising demand for EVs.

Investment in **Anhui Axxiva New Energy Technology Co., Ltd.**

- Holding 11.1% equity interest for a battery manufacturing plant with a 1 GWh p.a. production capacity
- Serving the electric vehicle market in China
- To capture and expand business collaboration in many areas, including technical knowledge and experience sharing for commercial giga-scale production, co-procurement in electrode active materials and other raw materials and others

✓ **Target to start of regular production in Q1/2023**

### Investment in China







## S3: S-Curve and Batteries

### GPSC in collaboration with SWAP & GO



**GPSC and SWAP & GO** signed a memorandum of agreement to study and further develop G-Cell battery, a semi-solid lithium-ion battery cell.

- The cooperation will **accommodate the needs of a growing number of electric motorcycle users**, offering a clean energy alternative and providing a better quality of life for the Thai people **with the production of G-cell battery for swappable battery packs.**

### GPSC & Chao Phraya Express Boat



**GPSC and Chao Phraya Express Boat** signed an MOU to Develop Thailand's first Prototype Boat Battery Pack.

- To provides a solution for fuel efficiency and emission reduction and could expand to other projects** under the transportation system development plan, which focuses on increased reliance on electric energy to ease road traffic and reduce pollution levels.
- To promote the use of electric boats for water transportation in a concrete manner.**





## S3: S-Curve and Batteries

**GPSC & PTT have formed a joint venture in the battery supply chain to support electric vehicle (EV) production.**



On February 28, 2022, GPSC signed the agreement with NUOVO PLUS Company Limited to transfer assets involving production, education, research, and battery business development to NUOVO PLUS.

The asset transfer, valued at THB 2,428 million due to complete by April 2022, aims to support the growth of EV vehicle industry and energy storage system with purpose to produce 5-10 GWh per year in 2030.

# 2021 in Review | 4S Corporate Strategy Progress

## ✓ S3: S- Curve and Batteries

GPSC  
11.1%

### Giga-scale Battery Cell Plant\*



### Pilot-scale Battery Cell Plant R&D Center\*



GPSC

49%

ARUN+

51%

PTT indirect owned 100% subsidiary company

NUOVO+

100%

Project  
Flash

GPSC  
Singapore

11.1%

AXXIVA

Project  
VISESS

### Battery Flagship



➤ Battery Value Chain for EV and Energy Storage System industry focus



➤ From battery cell to battery pack manufacturing scale-up and commercialization



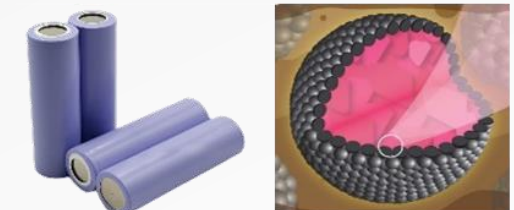
➤ Enhance competitiveness in battery business and EV value chain



➤ Strength combination of technical expertise and finance from GPSC and & PTT

### Core-shell Cathode Battery Material Technology

ptt  
VISESS







## 1. Digitalization:

Grid modernization and smart energy management

## 2. Decarbonization

RE50@50 + ESS, CCUS and Hydrogen

## 3. Decentralization

Smart microgrid & infrastructure development

## 4. De-regulation

Third Party Access, new price structure

## 5. Electrification

EV30@30 and Charging station

### Thailand Smart Mobility 30@30 Plan 2019 – 2030

By 2030, 30% (~750,000 units) of total production will be Zero-emission EV (ZEV).

From 2035, only ZEV will be allowed to register as new vehicle.

## Government's Package to boost EV Consumption



THB MM  
< 2

### 2022-2023

- Customs duty discount up to 40%

### 2022-2025

- Excise tax cut to 2% from 8%

### Buyer

### 2022-2023

- Subsidy THB 70,000 for battery size under 30 kWh
- Subsidy THB 150,000 for battery size over 30 kWh

THB MM  
2-7

### 2022-2025

- Customs duty discount up to 20% for battery over 30 kWh
- Excise tax cut to 2% from 8%

none



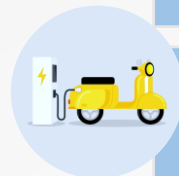
THB MM  
< 2\*

### 2022-2025

- Excise tax cut to 0%

### 2022-2025

- Subsidy THB 150,000 for battery size over 30 kWh



THB MM  
< 0.15

none

### 2022-2025

- Subsidy THB 18,000

EV

- CKD (Completely Knocked Down) : Domestic manufacture with domestic or imported parts
- CBU (Completely Built Up)\*\* : Imported finished car from abroad

\* The package covers domestic manufactured truck (CKD) only

\*\* Under the incentive conditions, applicants shall produce 1-car or 1.5-car in Thailand offset CBU imported by 2024 or 2025, respectively.

## ✓ S4: Shift to Customer-Centric Solutions

### “EECi Project: Smart City for Innovation Development”



**VISTEC**  
VIDYASIRIMEDHI  
INSTITUTE OF SCIENCE AND TECHNOLOGY



Smart Energy Technology

Solar Rooftop = 1.39 MW  
Solar Floating = 0.1 MW



ESS = 1.2 MWh



Block Chain System  
Peer to Peer Energy Trading



Energy Management Service



ZERO Import Building



ZERO Solar Shading



## The Solar Orchestra Project

*Energy management services to provide all-round energy support*

All-in-one Package to Support Solar Roof Manufacturing and Carbon Reduction

**SOLAR ORCHESTRA**  
**100%**  
Project Finance

GPSC NEQ EXIM C&G

Sources of funding  
Installation technology  
Carbon credit trading



✓ 2022 Target : The project's solar capacity including the Solar Orchestra Project is expected to reach beyond 30MW



### To Grasp Opportunities in Wheeling Charges Program

Partners up with electrify to develop and implement energy trading platform

- ✓ Closely monitoring legal and regulatory framework for bilateral trade
- ✓ Studying Technical standards codes or guidelines in the areas of Barriers Planning and Design, System Operation and Maintenance



**GPSC continually develops Smart Energy Solutions to support Thailand's 4D1E policy**

### Sustainability Strategy 2022-2025 Key Initiatives

- Green financing for clean portfolio growth
- Climate emergency/Climate resiliency

- Reforestation strategy
- No Net Biodiversity Loss program
- Water Security Program

- Social values delivery through CSR priorities,
- SDG contributions and community engagement

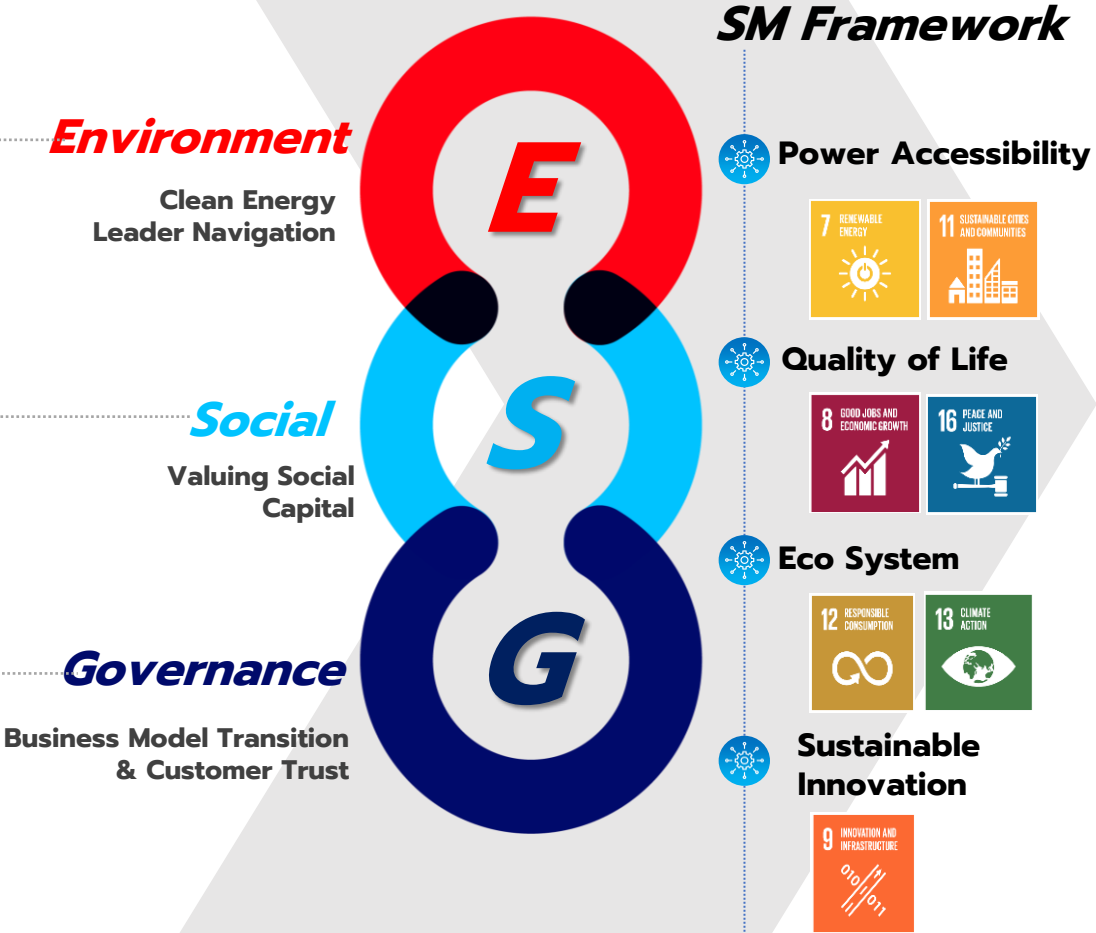
- Group-wide intensive human rights due-diligence
- People Centric Solutions

- Operational Excellence
- Reinforcing Customer Engagement Program

- Mobilizing new energy market
- Strengthening innovation

- Enhancing sustainable supply chain
- Securing Information and IT infrastructure
- Maintaining good corporate governance

Long Term Values Creation Innovative  
& Sustainable Energy



Value Creation  
Key Deliverables

-  Delivering low carbon energy to customers
-  Creating shared values to all stakeholders
-  Doubling growth through business diversification, S-curve products & customer centric solutions

**NET ZERO TARGET**

Carbon intensity reduction

10% by 2025

35% by 2030



# ESG | Sustainability Initiatives to Achieve SDGs and Objectives

## Power Accessibility



Enhance stability of access  
Smart Energy Management

**VISTEC**  
VIDYASIRIPEDHI  
THAILAND'S FIRST SUSTAINABLE ENERGY



**EECI**

- Clean Energy Generation
- Flexibility Distributed Generation
- No Clean Energy Shedding

## Sustainable Innovation



Sustainable Innovation for the corporation  
GPSC Young Social Innovator



### PTT Group SMART Farming by GPSC (Restart Thailand)

- Basic training in agriculture and technology
- Smart farming technology installation and business plan creation

## SM Framework



## Quality of Life



Empower better living

### Light for Better Life Project

- Solar Rooftop System to schools in Rayong
- Solar Rooftop System to Koh Sichang Hospital
- Solar Rooftop System to Thanyarak Hospital in Mae Hong Son



## ECO system



Eco-system of driving clean energy

### Sourcing Sustainable Materials

- Sustainable Procurement and Supplier Management
- GPSC Group sustainable way in operations

### Operating Low Carbon Utilities & Green Products

#### Products

- Low carbon products
- Renewable energy
- Smart grids
- Stationary/ Mobility battery ESS
- EPC Contractor for Solar Rooftop, Solar Floating installation and Energy Management such as "Solar Orchestra"



# 2021 in Review | Awards of Achievements

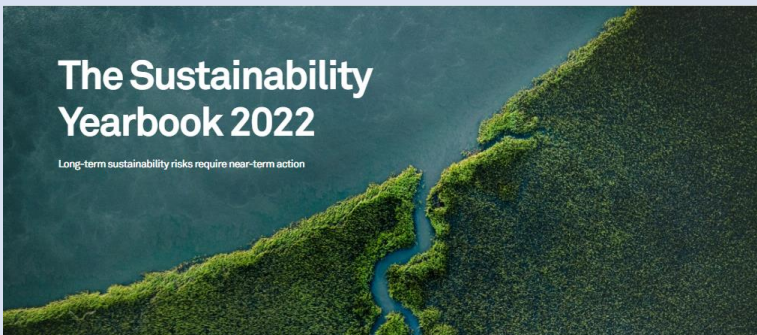


## Rising Star Sustainability Awards

By the Stock Exchange of Thailand (SET) and Money & Banking magazine



**CGR rating of “Excellent” (5 stars) for the 6th consecutive year**  
by the Thai Institute of Directors (IOD)



**GPSC has earned the Bronze Class distinction for Electric Utilities industry in the S&P Global Sustainability Yearbook 2022\***, marking the company's success in the Dow Jones Sustainability Indices (DJSI) assessment for the second year running, solidifying its position as a world-class leader in sustainable energy innovation.

\*The Sustainability Yearbook 2022 is based on 2021 Corporate Sustainability Assessment.



## Core Business Growth



**GPSC total electricity sale growth +7% YoY  
and Steam +2% YoY**

Electricity and steam consumption will see continuing growth as demand expected to rise in line with gradual economic recovery during the COVID-19 pandemic.

## 2022 Additional MW Growth

**> 500 MW**



- Growth opportunities, especially for renewable energy and smart-grid development from PDP 2022
- Combining expertise and financial capabilities through Nuovo Plus and creating joint investment opportunities in battery business and EV value chain
- AEPL investment platform (Implementation phase) and beyond
- Opportunities in collaboration in focus countries



**1. 2021 in Review & Going Forward**

**2. Financial Performance**

**3. Update of Projects & Outlook**



# FY2021 | Highlight

## Events & Highlights



**Higher demand from industrial customers** due to limited COVID-19 impact



### Better synergy outcome

mainly from operation and maintenance – power and steam network integration, commercial activities, procurement and maintenance management.



**Affiliate strong performance** mainly from XPCL



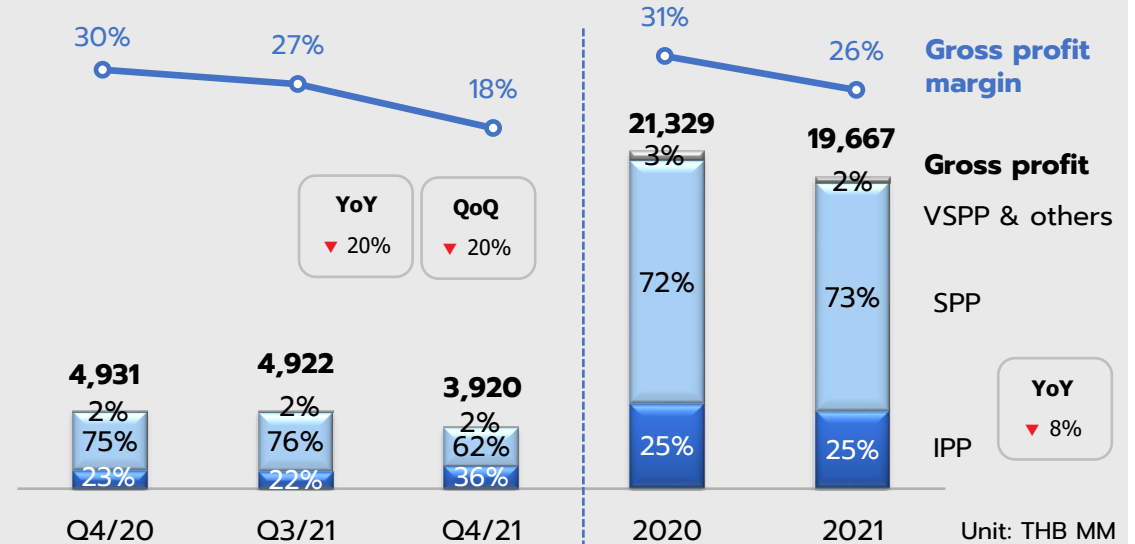
**Higher fuel cost from upward trend of natural gas & coal price**

### Unplanned outages

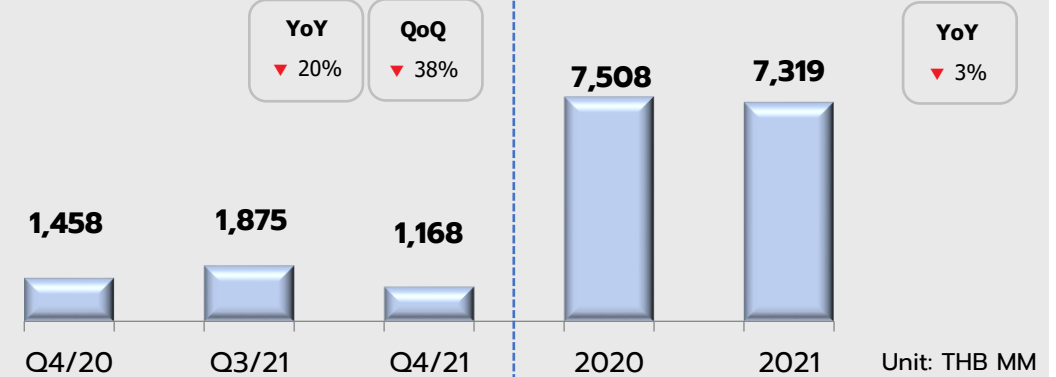
- **GHECO-One's unplanned outage 28 days (30 Aug – 27 Sep 2021)**
- Loss mitigation by selling coal to SPP3, which has been realized the benefit in Q4/2021
- **GLOW Energy Phase 5's unplanned outage since 14 Aug 2021**
- **GLOW Energy Phase 5's unplanned outage during 4 Jun – 18 Oct 2020 and 6 Dec 2020 – 1 Apr 2021**

## FY2021 & Q4/2021 Performance

### Gross profit & Gross profit margin by power plant type

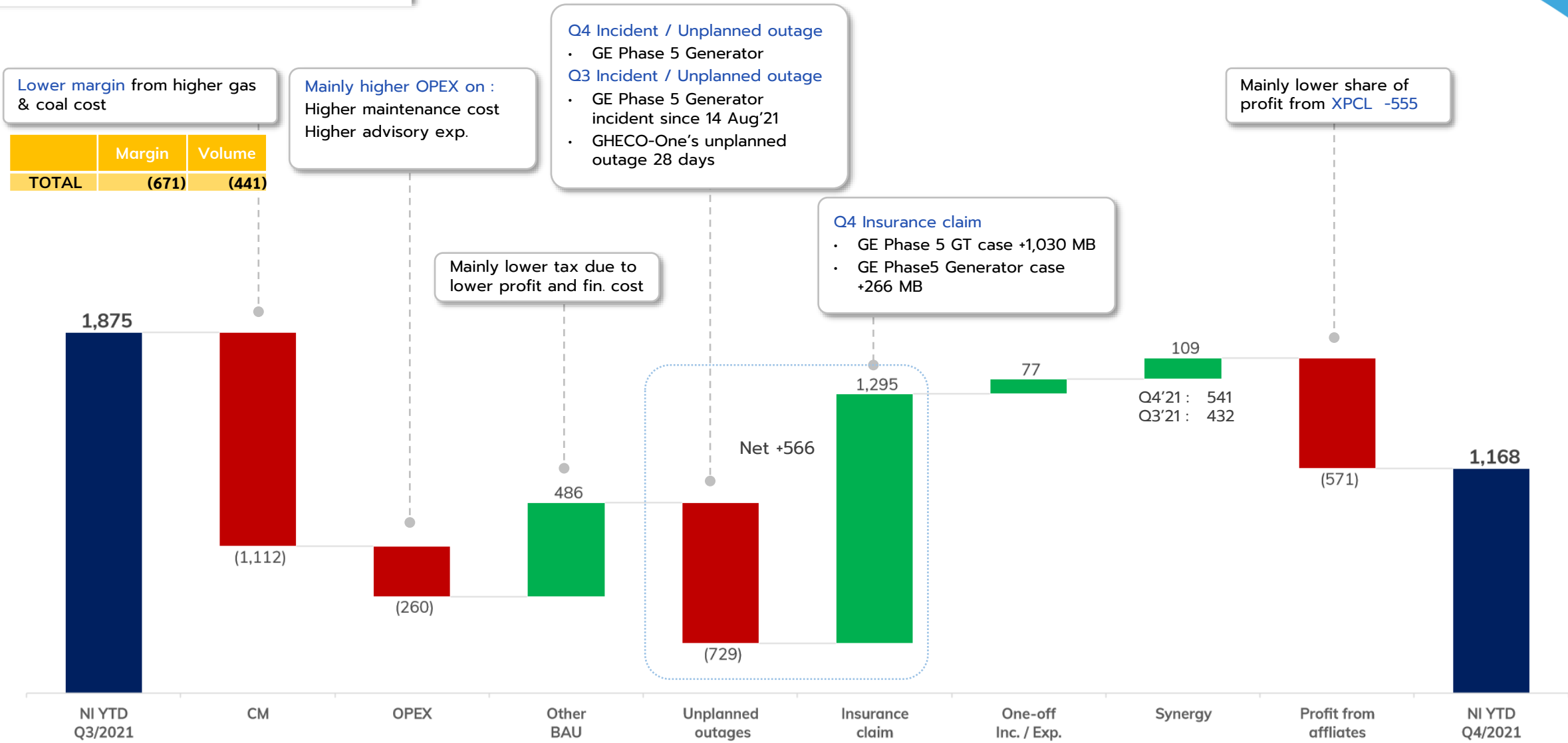


### Net Income



# Q4/2021 vs Q3/2021 (QoQ) Net Profit

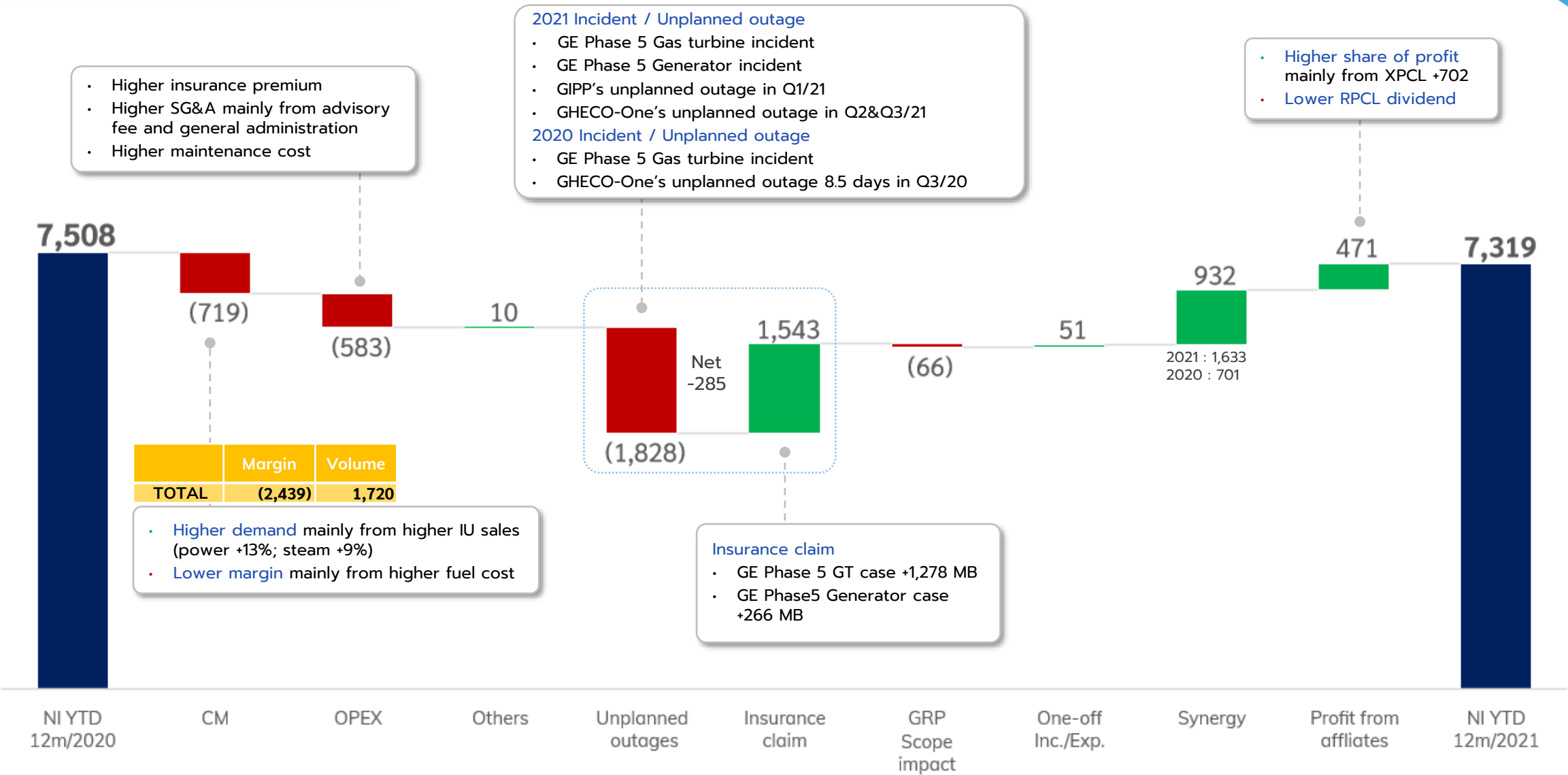
Net Profit **-706 MTHB (-38%)**





# FY2021 vs FY2020 (YoY) Net Profit

Net Profit **-189 MTHB (-3%)**



**1. 2021 in Review & Going Forward**

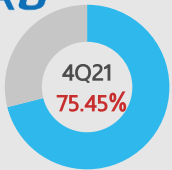
**2. Financial Performance**

**3. Update of Projects & Outlook**



## Energy Recovery Unit (ERU)

SCOD | 2023\*



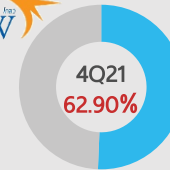
|                            |     |
|----------------------------|-----|
| <b>Electricity</b><br>(MW) | 250 |
| <b>Steam</b><br>(ton/hr.)  | 175 |

### Project updates:

Engineering design work almost done. Procurement of steam turbine and electricity generator 1 and 2 are done, while the procurement of boiler 1, 2, and 3 including condenser of SNOX system are in progress. The construction of foundation and equipment work for Boilers, Pitch Solidification, Electrostatic precipitator, and Cooling Tower are in progress. Overall, the project has reached 75.45%.

## SPP Replacement - Stage 1 | Glow Energy Phase 2

SCOD | Q4/2022



|                            |     |
|----------------------------|-----|
| <b>Electricity</b><br>(MW) | 192 |
| <b>Steam</b><br>(ton/hr.)  | 300 |

### Project updates:

The engineering design work, procurement and construction progress has reached 62.9% and the project is on the process of installing machine, notably HPSG, Piperack, Gas Metering Station and foundation work for Gas Turbine which are on schedule



## AEPL : Solar Power Platform in India



**Contracted Capacity**  
**4,608 MW**

**GPSC Hold**  
**41.6% \* of shares**

| Project                                    | MW    | COD           |
|--------------------------------------------|-------|---------------|
| <b>Operating</b><br>(23 projects)          | 2,205 | As of Q4/2021 |
| <b>Under construction</b><br>(13 projects) | 2,403 | 2022 - 2023   |

\* On January 18, 2022, GPSC has raised the equity injection amounting USD 25 million in AEPL and shareholding proportion was increased to 42.93%

## CFXD : Offshore Wind Power Plant in Taiwan

**SCOD | Q1/2024**



**Contracted Capacity**  
**595 MW**

**GPSC Hold**  
**25% of shares**

### Project updates:

The project is under construction and expected to COD in 2024

## Operating outlook

### ✓ Glow Energy Phase 5 resume normal operation

- GLOW Energy Phase 5 Power Plant is expected to resume normal operation in March 2022
- Insurance claim is ongoing

### ✓ Improving Operation Excellence Management System

- Improve reliability & efficiency to maintain industrial customers' demand

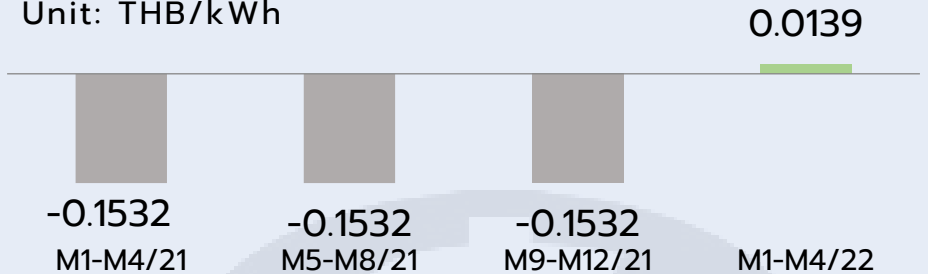
### ✓ The opportunities with new PDP & national EV policy

- There are room for GPSC to support in closing the PDP gap and EV demand during energy transition period



### ✓ Ft recovery

Unit: THB/kWh



### — Natural gas price

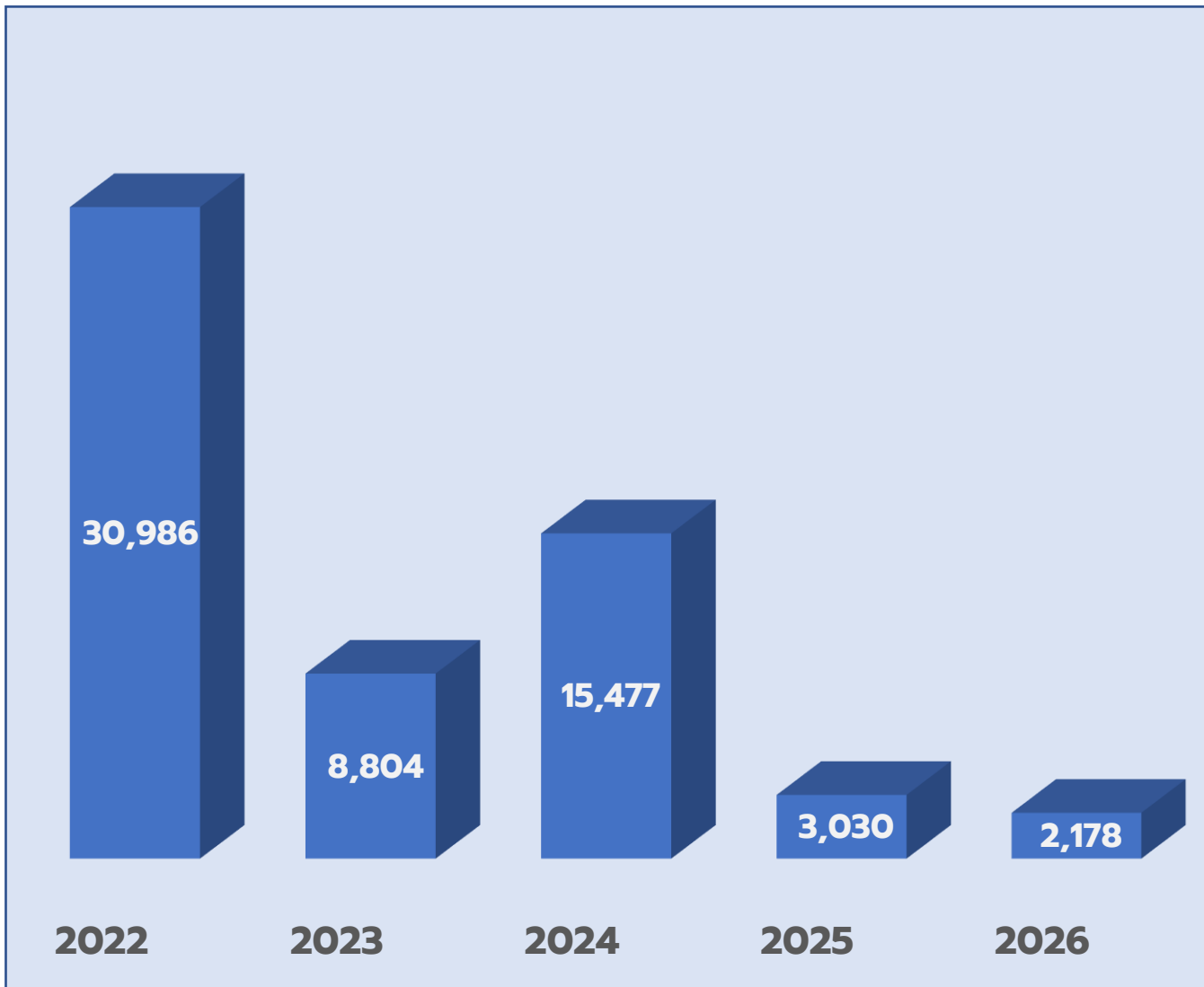
- Natural gas price is forecasted to remain high in 1H/2022 in the same direction with crude oil with lag time of 6 – 12 months

### — Coal price

- Coal price is expected to peak in 1H/2022 and to decline in 2H/2022

## GPSC | CAPEX in the next 5 years

**Committed CAPEX in the next 5 years (2022-2026) ~ 60,000 MB**



### **GPSC's Committed CAPEX in the next 5 years is aligned with the 4S Strategy.**

- CAPEX in 2022 mainly from core business and offshore wind project in Taiwan
- GPSC manages its core business with OpEx and Synergy programs, while also balances new investments for well-diversified portfolio
- A huge investment has been put into AEPL in 2021
- Battery and new S-Curve businesses are non-capital-intensive in the initial stage



# Q&A SESSION



**IR Contact:**

Pongsak Plaingam +662 140 4646

Thanaporn Tantiwinyupong +662 140 1808

Achariya Sanrattana +662 140 1818

[ir@gpscgroup.com](mailto:ir@gpscgroup.com)

[www.gpscgroup.com](http://www.gpscgroup.com)

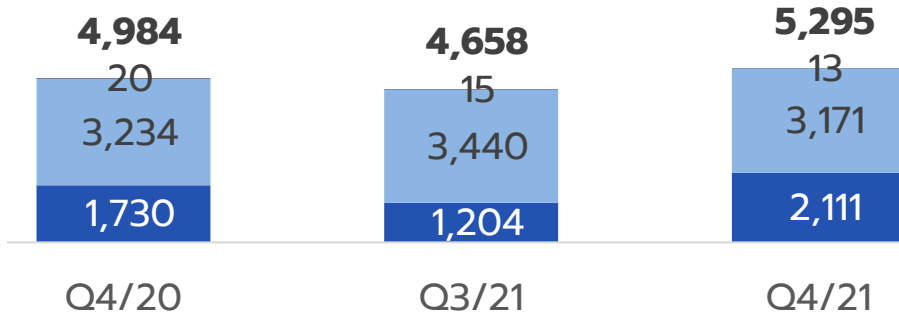
# Appendix



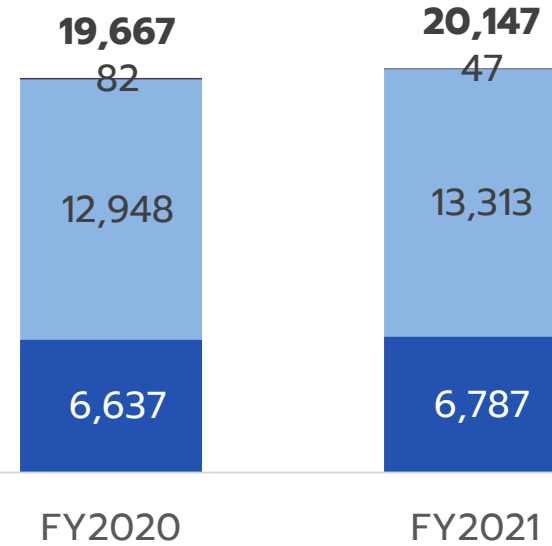
# GPSC | Macro Factors (as of Dec 2021)

■ IPP ■ SPP ■ VSPP & Others

## Key Macro Factors (as of Dec 2021)

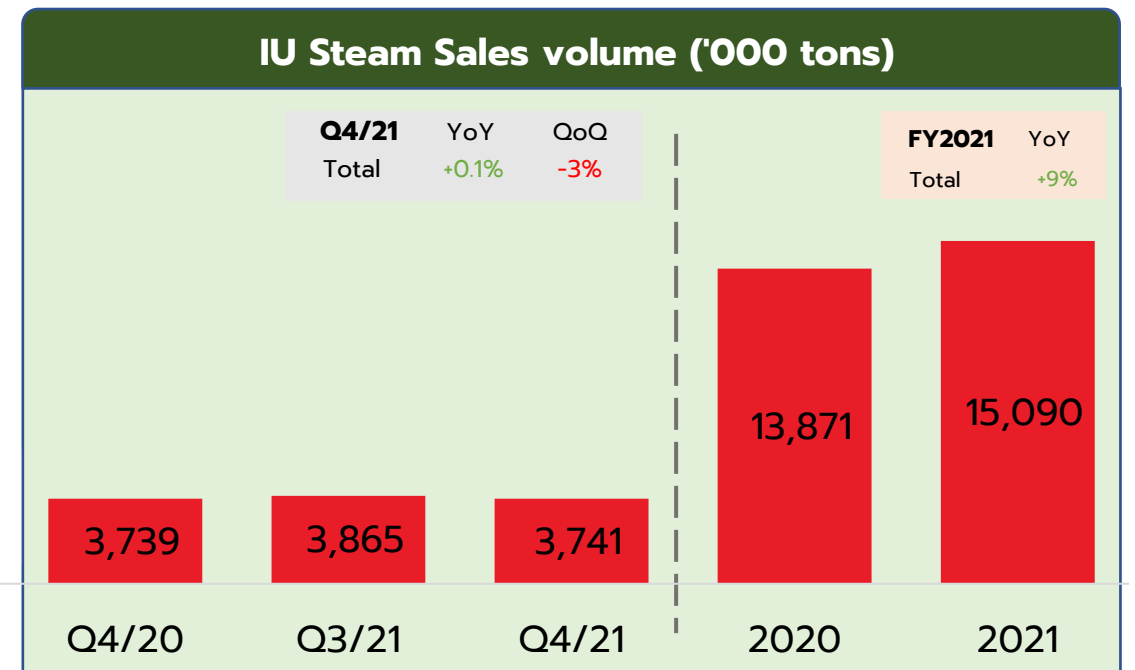
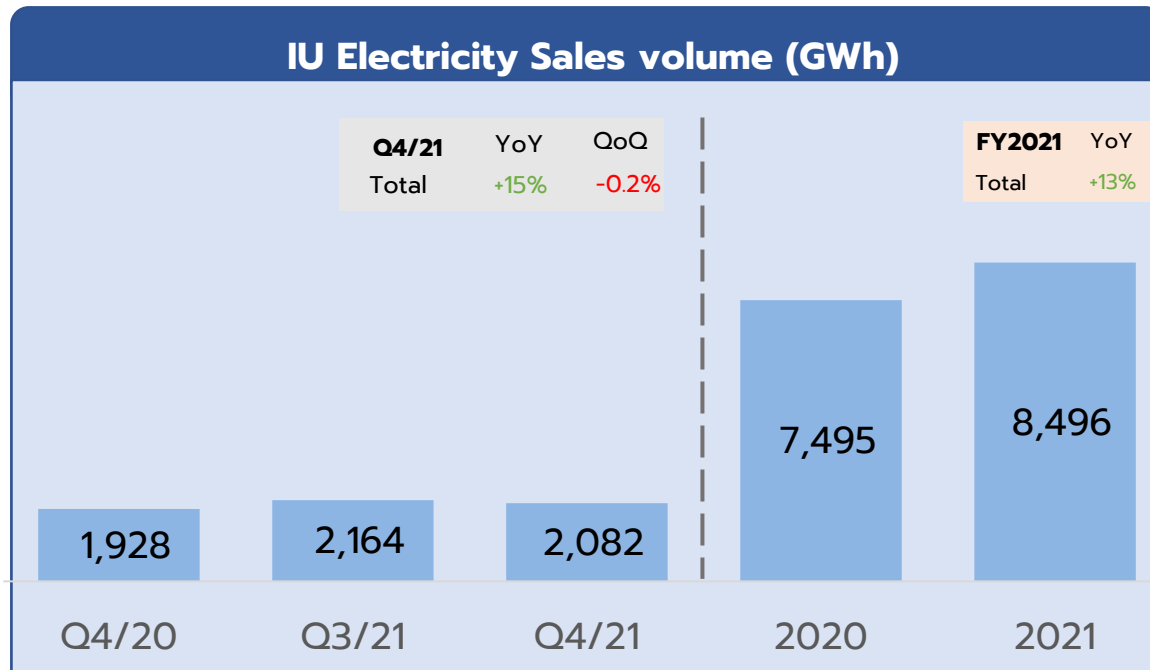


## Electricity Sales volume (GWh)



| Q4/21         | YoY        | QoQ         |
|---------------|------------|-------------|
| <b>Total</b>  | <b>+6%</b> | <b>+14%</b> |
| VSPP & Others | -33%       | -8%         |
| SPP           | -2%        | -8%         |
| IPP           | +22%       | +75%        |

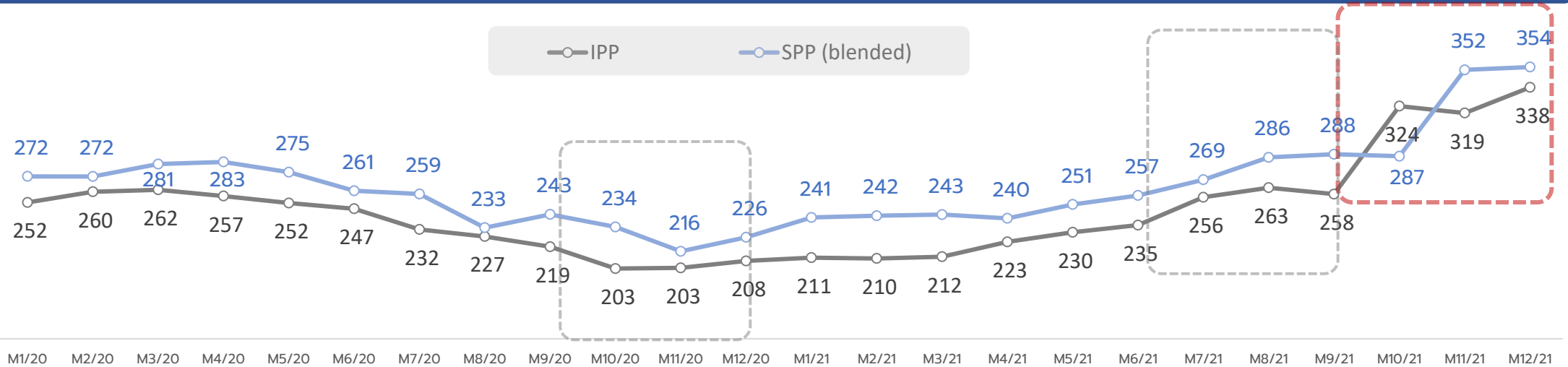
| FY2021        | YoY        |
|---------------|------------|
| <b>Total</b>  | <b>+2%</b> |
| VSPP & Others | -43%       |
| SPP           | +3%        |
| IPP           | +2%        |



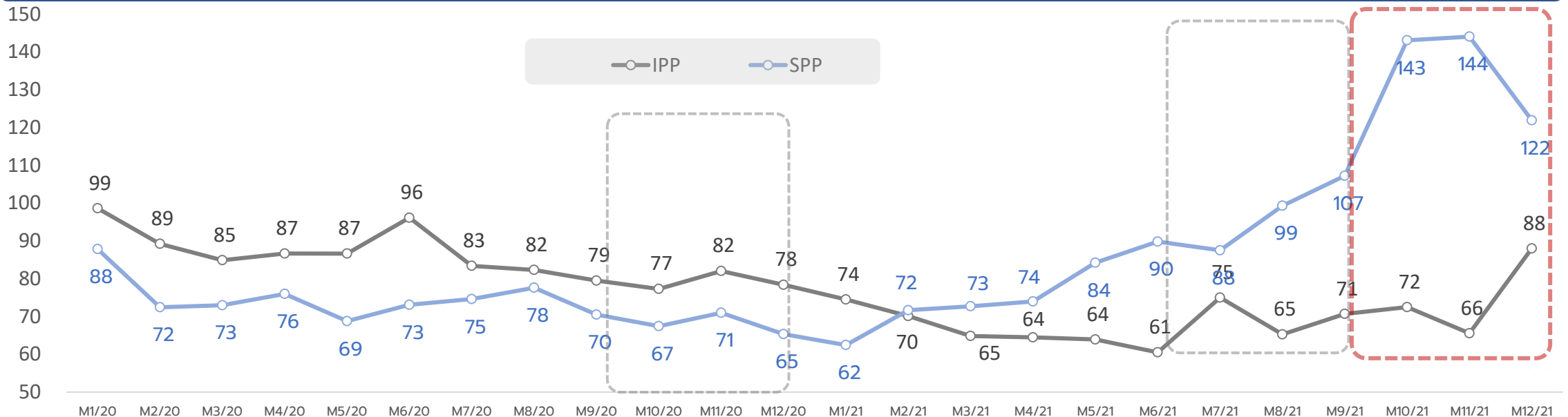


# GPSC | Macro Factors (as of Dec 2021)

## Natural Gas Cost 2020 – Q4'2021 (THB/MMBTU)



## Coal Cost 2020 – Q4'2021 (USD/Ton JPU)

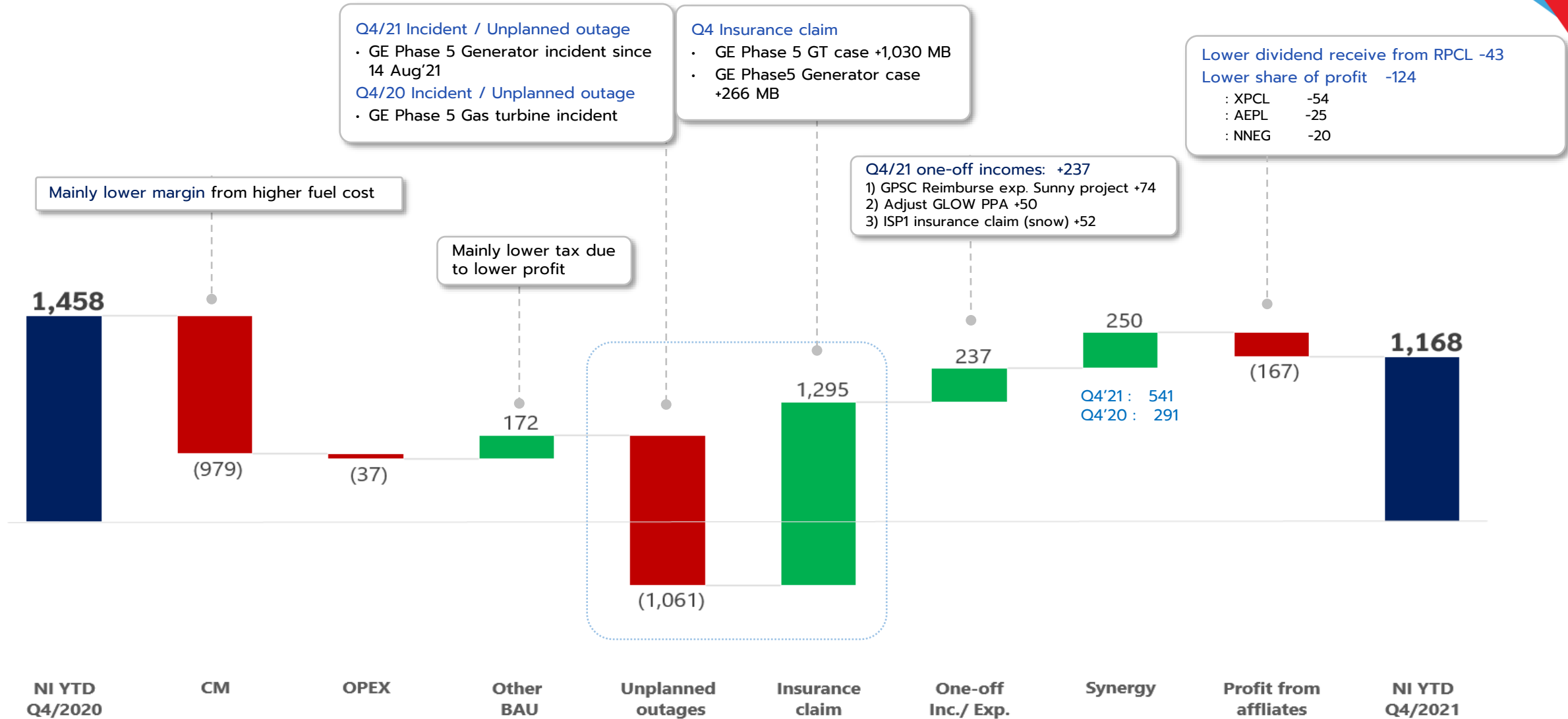


# GPSC | Operating Results

| Overall operating results of the Company and its subsidiaries<br>(unit: THB million) | Q4/20        | Q3/21        | Q4/21        | change +/-(-) |              | 2020          | 2021          | change +/-(-) |
|--------------------------------------------------------------------------------------|--------------|--------------|--------------|---------------|--------------|---------------|---------------|---------------|
|                                                                                      |              |              |              | YoY           | QoQ          |               |               | YoY           |
| Operating revenue                                                                    | 16,532       | 17,997       | 22,019       | 33%           | 22%          | 69,578        | 74,873        | 8%            |
| Cost of sales (excluding depreciation and amortization)                              | (11,601)     | (13,075)     | (18,098)     | 56%           | 38%          | (48,249)      | (55,206)      | 14%           |
| <b>Gross profit</b>                                                                  | <b>4,931</b> | <b>4,922</b> | <b>3,920</b> | <b>(20%)</b>  | <b>(20%)</b> | <b>21,329</b> | <b>19,667</b> | <b>(8%)</b>   |
| Selling and administrative expenses                                                  | (528)        | (431)        | (582)        | 10%           | 35%          | (1,790)       | (1,963)       | 10%           |
| Other operating income                                                               | 5            | 5            | 5            | 2%            | 0%           | 20            | 20            | 0%            |
| <b>EBITDA</b>                                                                        | <b>4,409</b> | <b>4,496</b> | <b>3,343</b> | <b>(24%)</b>  | <b>(26%)</b> | <b>19,559</b> | <b>17,724</b> | <b>(9%)</b>   |
| Depreciation and amortization                                                        | (2,046)      | (2,205)      | (2,200)      | 8%            | (0.2%)       | (8,287)       | (8,630)       | 4%            |
| <b>EBIT</b>                                                                          | <b>2,362</b> | <b>2,291</b> | <b>1,143</b> | <b>(52%)</b>  | <b>(50%)</b> | <b>11,272</b> | <b>9,093</b>  | <b>(19%)</b>  |
| Finance costs                                                                        | (965)        | (998)        | (901)        | (7%)          | (10%)        | (4,024)       | (3,860)       | (4%)          |
| Other non-operating income and expenses                                              | 133          | 262          | 1,063        | 699%          | 306%         | 915           | 2,100         | 130%          |
| Dividend received and shares of profit of associates and joint ventures              | 367          | 772          | 201          | (45%)         | (74%)        | 1,320         | 1,792         | 36%           |
| Income tax expenses                                                                  | (141)        | (295)        | (97)         | (31%)         | (67%)        | (992)         | (1,192)       | 20%           |
| <b>Profit before FX and extraordinary items</b>                                      | <b>1,757</b> | <b>2,033</b> | <b>1,409</b> | <b>(20%)</b>  | <b>(31%)</b> | <b>8,491</b>  | <b>7,934</b>  | <b>(7%)</b>   |
| Net foreign exchange gain (loss)                                                     | 12           | (95)         | 68           | 466%          | (172%)       | (1)           | (93)          | 9,221%        |
| <b>Net profit</b>                                                                    | <b>1,769</b> | <b>1,938</b> | <b>1,477</b> | <b>(17%)</b>  | <b>(24%)</b> | <b>8,490</b>  | <b>7,841</b>  | <b>(8%)</b>   |
| Non-controlling interests                                                            | (311)        | (63)         | (309)        | (1%)          | 391%         | (982)         | (522)         | (47%)         |
| <b>Net profit for the Company</b>                                                    | <b>1,458</b> | <b>1,875</b> | <b>1,168</b> | <b>(20%)</b>  | <b>(38%)</b> | <b>7,508</b>  | <b>7,319</b>  | <b>(3%)</b>   |
| <b>Adjusted Net Income<sup>1</sup></b>                                               | <b>1,813</b> | <b>2,256</b> | <b>1,571</b> | <b>(13%)</b>  | <b>(30%)</b> | <b>8,962</b>  | <b>8,907</b>  | <b>(1%)</b>   |
| Gross profit margin (%)                                                              | <b>30%</b>   | <b>27%</b>   | <b>18%</b>   | <b>(12%)</b>  | <b>(10%)</b> | <b>31%</b>    | <b>26%</b>    | <b>(5%)</b>   |
| Net profit margin (%)                                                                | <b>9%</b>    | <b>10%</b>   | <b>5%</b>    | <b>(4%)</b>   | <b>(5%)</b>  | <b>11%</b>    | <b>10%</b>    | <b>(1%)</b>   |
| Adjusted Net Income margin (%)                                                       | <b>11%</b>   | <b>13%</b>   | <b>7%</b>    | <b>(4%)</b>   | <b>(5%)</b>  | <b>13%</b>    | <b>12%</b>    | <b>(1%)</b>   |

# Q4/2021 vs Q4/2021 (YoY) Net Profit

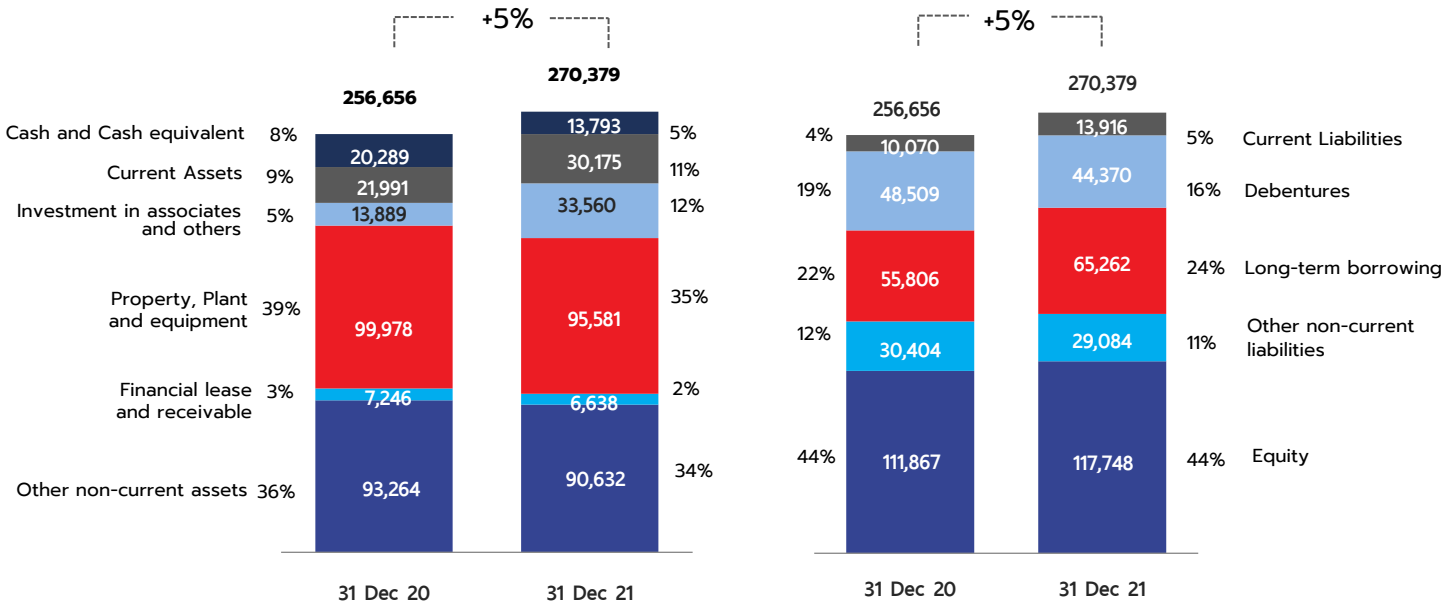
Net Profit **-290 MB (-20%)**





# GPSC | FY2021 Financial Position

## Summary of Financial Position



### Total asset +13,723 MTHB

- Cash and cash equivalents -6,496
- Investment in associates and others, mainly AEPL, GRP and Axxiva +19,672
- PPE -4,397
- Other assets -4,944

### Total Liabilities +7,843 MTHB

- Long-term loan and debenture +5,317
- Current liabilities +3,846
- Other liabilities: -1,320

### Total Equity +5,880 MTHB

- NI for the period +7,840
- Dividend payment -4,534
- Other comprehensive income +2,574

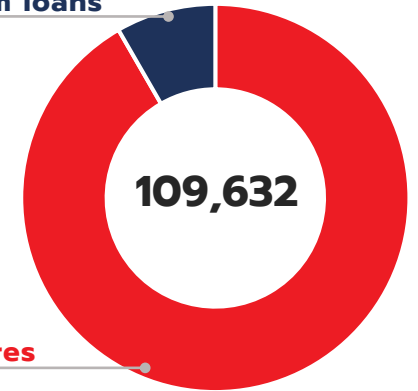
## Total Interest-Bearing Debt (THB million)

Short-term loans  
and current portion of long-term loans

THB 9,121 million | 8%

Non-current portion of  
long-term loans and debentures

THB 100,511 million | 92%



## CREDIT RATINGS

AA+

**TRIS**  
RATING  
A Strategic Partner of S&P Global

A+(tha)  
BBB-

**FitchRatings**

# GPSC | Power Plant Portfolio (1/2)

| Name                     | Type | Shareholding (%) | Total capacity (MW) | Equity Power capacity (MW) | Equity Operating Power capacity (MW) | Steam (T/H)  | Industrial water (Cu.m/H) | COD  | Tenor       |
|--------------------------|------|------------------|---------------------|----------------------------|--------------------------------------|--------------|---------------------------|------|-------------|
| <b>IPP</b>               |      |                  |                     |                            |                                      |              |                           |      |             |
| Sriracha                 | IPP  | GPSC (100%)      | 700                 | 700                        | 700                                  | -            | 80                        | 2000 | 25          |
| Glow IPP                 | IPP  | GLOW (95%)       | 713                 | 677                        | 677                                  | -            | -                         | 2003 | 25          |
| Huay Ho                  | IPP  | GLOW (67%)       | 152                 | 102                        | 102                                  | -            | -                         | 1999 | 30          |
| GHECO-One                | IPP  | GLOW (65%)       | 660                 | 429                        | 429                                  | -            | -                         | 2012 | 25          |
| XPCL                     | IPP  | GPSC (25%)       | 1285                | 321                        | 321                                  | -            | -                         | 2019 | 29          |
| RPCL                     | IPP  | GPSC (15%)       | 1400                | 210                        | 210                                  | -            | -                         | 2008 | 25          |
| <b>Total IPP</b>         |      |                  | <b>4,910</b>        | <b>2,439</b>               | <b>2,439</b>                         | <b>-</b>     | <b>80</b>                 |      |             |
| <b>SPP</b>               |      |                  |                     |                            |                                      |              |                           |      |             |
| CUP-1                    | SPP  | GPSC (100%)      | 226                 | 226                        | 226                                  | 890          | 720                       | 2006 | 10-15       |
| CUP-2                    | SPP  | GPSC (100%)      | 113                 | 113                        | 113                                  | 170          | 510                       | 2008 | 15          |
| CUP-3                    | SPP  | GPSC (100%)      | -                   | -                          | -                                    | 280          | 770                       | 2009 | 15          |
| Rayong Expansion (CUP-3) | SPP  | GPSC (100%)      | 15                  | 15                         | 15                                   | -            | -                         | 2019 | n/a         |
| CUP-4                    | SPP  | GPSC (100%)      | 49                  | 49                         | 49                                   | 140          | -                         | 2019 | Long-term   |
| Glow Energy Phase 1      | SPP  | GLOW (100%)      | -                   | -                          | -                                    | 250          | 1,340                     | 1994 | -           |
| Glow Energy Phase 2      | SPP  | GLOW (100%)      | 281                 | 281                        | 281                                  | 300          | 1,180                     | 1996 | (extension) |
| Glow Energy Phase 4      | SPP  | GLOW (100%)      | 77                  | 77                         | 77                                   | 137          | 2,050                     | 2005 | 25          |
| Glow Energy Phase 5      | SPP  | GLOW (100%)      | 328                 | 328                        | 328                                  | 160          | -                         | 2011 | 10-20       |
| Glow SPP 2/ GLOW SPP 3   | SPP  | GLOW (100%)      | 513                 | 513                        | 513                                  | 190          | 150                       | 1999 | 25          |
| Glow SPP 11 Phase 1      | SPP  | GLOW (100%)      | 120                 | 120                        | 120                                  | -            | 360                       | 2000 | 25          |
| Glow SPP 11 Phase 3      | SPP  | GLOW (100%)      | 42                  | 42                         | 42                                   | -            | -                         | 2006 | 10-20       |
| Glow SPP 11 Phase 2      | SPP  | GLOW (100%)      | 110                 | 110                        | 110                                  | -            | 212                       | 2012 | 25          |
| Glow Energy CFB 3        | SPP  | GLOW (100%)      | 85                  | 85                         | 85                                   | 79           | -                         | 2010 | 10-20       |
| IRPC-CP Phase 1          | SPP  | GPSC (51%)       | 45                  | 23                         | 23                                   | 86.7         | -                         | 2015 | 25-27       |
| IRPC-CP Phase 2          | SPP  | GPSC (51%)       | 195                 | 99.4                       | 99.4                                 | 66.3         | -                         | 2017 | 25          |
| NNEG                     | SPP  | GPSC (30%)       | 125                 | 38                         | 38                                   | 9            | -                         | 2016 | 25          |
| NNEG Expansion           | SPP  | GPSC (30%)       | 60                  | 18                         | 18                                   | 3            | -                         | 2020 | 21          |
| BIC-1                    | SPP  | GPSC (25%)       | 117                 | 29.25                      | 29.25                                | 5            | -                         | 2013 | 25          |
| BIC-2                    | SPP  | GPSC (25%)       | 117                 | 29.25                      | 29.25                                | 5            | -                         | 2017 | 25          |
| <b>Total SPP</b>         |      |                  | <b>2,618</b>        | <b>2,196</b>               | <b>2,196</b>                         | <b>2,771</b> | <b>7,292</b>              |      |             |

# GPSC | Power Plant Portfolio (2/2)

| Name                                                 | Type  | Shareholding (%) | Total capacity (MW) | Equity Power capacity (MW) | Equity Operating Power capacity (MW) | Steam (T/H)  | Industrial water (Cu.m/H) | COD     | Tenor     |
|------------------------------------------------------|-------|------------------|---------------------|----------------------------|--------------------------------------|--------------|---------------------------|---------|-----------|
| <b>VSPP and others</b>                               |       |                  |                     |                            |                                      |              |                           |         |           |
| Rayong WTE                                           | VSPP  | GPSC (100%)      | 9.8                 | 9.8                        | 9.8                                  | -            | -                         | 2021    | 18        |
| Glow Energy Solar Plant                              | VSPP  | GLOW (100%)      | 1.55                | 1.55                       | 1.55                                 | -            | -                         | 2012    | 25        |
| CHPP                                                 | VSPP  | GPSC (100%)      | 5                   | 5                          | 5                                    | -            | -                         | 2008    | 30        |
| CHPP (Solar)                                         | VSPP  | GPSC (100%)      | 5                   | 5                          | 5                                    | -            | -                         | 2016    | 25        |
| ISP1                                                 | Solar | GPSC (100%)      | 20.8                | 20.59                      | 20.59                                | -            | -                         | 2017    | 20        |
| GRP (NPS, WXA, PPS)                                  | VSPP  | GPSC (50%)       | 39.5                | 19.75                      | 19.75                                | -            | -                         | 2014-15 | 25        |
| GRP1 (Sheng Yang)                                    | Solar | GPSC (45%)       | 55.8                | 25.11                      | 25.11                                | -            | -                         | 2016-21 | 20        |
| AEPL (Solar Power Platform)                          | Solar | GPSC (41.6%)     | 4,608               | 1,917                      | 917                                  |              |                           | 2018-23 | 10-25     |
| TSR (SSE1)                                           | VSPP  | GPSC (40%)       | 80                  | 32                         | 32                                   | -            | -                         | 2013    | 25        |
| NL1PC                                                | Hydro | GPSC (40%)       | 65                  | 26                         | 26                                   | -            | -                         | 2019    | 24        |
| Chonburi Clean Energy (CCE)                          | VSPP  | GLOW (33%)       | 8.6                 | 2.87                       | 2.87                                 | -            | -                         | 2019    | 20        |
| CFXD (Offshore wind farm)<br>(Under closing process) | Wind  | GPSC (25%)       | 595                 | 149                        | -                                    | -            | -                         | 2022-24 | 20        |
| Private PPA                                          | Solar | GPSC Gr. (100%)  | 23.40               | 23.40                      | 2.99                                 |              |                           | 2018-22 | Long-term |
| <b>Total VSPP and others</b>                         |       |                  | <b>5,518</b>        | <b>2,237</b>               | <b>1,068</b>                         | <b>-</b>     | <b>-</b>                  |         |           |
| <b>ERU</b>                                           |       |                  |                     |                            |                                      |              |                           |         |           |
| ERU (under construction)                             | Cogen | GPSC (100%)      | 250                 | 250                        | -                                    | 175          | -                         | 2023    | 25        |
| <b>Total ERU</b>                                     |       |                  | <b>250</b>          | <b>250</b>                 | <b>-</b>                             | <b>175</b>   | <b>-</b>                  |         |           |
| <b>Total capacity</b>                                |       |                  | <b>13,296</b>       | <b>7,122</b>               | <b>5,703</b>                         | <b>2,946</b> | <b>7,372</b>              |         |           |

**Note:** - Total committed equity capacity as of December 31, 2021.

- Equity capacity includes 100% stake in GLOW, CFXD, Private PPA and ERU

- On January 18, 2022, GPSC has raised the equity injection amounting USD 25 million in AEPL and shareholding proportion was increased to 42.93%



## 2022 Maintenance Schedule | Sriracha and Rayong Plants

|             |             |          | 2022 |     |      |      |     |     |      |      |      |       |     |       |
|-------------|-------------|----------|------|-----|------|------|-----|-----|------|------|------|-------|-----|-------|
| Description |             | Duration | Q1   |     |      | Q2   |     |     | Q3   |      |      | Q4    |     |       |
|             |             |          | Jan  | Feb | Mar  | Apr  | May | Jun | Jul  | Aug  | Sep  | Oct   | Nov | Dec   |
| CUP-1       | GTG-14      | 22 Days  | 10/1 | MI  | 31/1 |      |     |     |      |      |      |       |     |       |
|             | GTG-11      | 14 Days  | 15/2 |     | HGPI | 28/2 |     |     |      |      |      |       |     |       |
|             | AB11        | 13 Days  | 15/3 |     | 3Y   | 27/3 |     |     |      |      |      |       |     |       |
|             | GTG-15      | 22 Days  |      |     |      |      | 7/6 | 1Y  | 28/6 |      |      |       |     |       |
|             | GTG-16      | 22 Days  |      |     |      |      | 7/7 |     | 1Y   | 28/7 |      |       |     |       |
| CUP-2       | AB21        | 13 Days  |      |     |      |      | 1/7 |     | 3Y   | 13/7 |      |       |     |       |
| CUP-3       | STG31       | 15 Days  |      |     |      |      |     |     | 1/8  | MI   | 15/8 |       |     |       |
| CUP-4       | GTG-41      | 5 Days   | 6/2  |     | RMI  | 10/2 |     |     |      |      |      |       |     |       |
| SRC         | GT-11       | 9 Days   |      |     |      |      |     |     |      |      |      | 18/12 | CI  | 26/12 |
|             | GT-12       | 9 Days   |      |     |      |      |     |     |      |      |      | 18/12 | CI  | 26/12 |
| RDF         | BMH Machine | 7 Days   | 10/1 | 1Y  | 16/1 |      |     |     |      |      |      |       |     |       |
|             | BMH Machine | 30 Days  |      |     |      |      | 1/6 | 1Y  | 30/6 |      |      |       |     |       |

| Notes: Rayong Site |                                                  |         |               |                                       |                              | Notes: Sriracha Site |                                         |         |              |                                              |         |
|--------------------|--------------------------------------------------|---------|---------------|---------------------------------------|------------------------------|----------------------|-----------------------------------------|---------|--------------|----------------------------------------------|---------|
| <u>GTG</u>         |                                                  |         | <u>HRSR</u>   |                                       |                              | <u>GTG</u>           |                                         |         | <u>HRSR</u>  |                                              |         |
| HGPI               | Hot Gas Path Inspection for Gas Turbine          | 14 days | 1Y            | One Year Inspection HRSR              | 11 days                      | CI                   | Combustion Inspection for Gas Turbine   | 8 days  | 1Y           | One Year Inspection HRSR                     | 8 days  |
| MI                 | Major Inspection for Gas Turbine                 | 22 days | 3Y            | Three Year Inspection HRSR            | 14 days                      | HGPI                 | Hot Gas Path Inspection for Gas Turbine | 26 days | 3Y           | Three Year Inspection HRSR                   | 33 days |
| RMI                | Remote Minor Inspection for Gas Turbine          | 5 days  | <u>Others</u> |                                       |                              | MO                   | Major Overhaul for Gas Turbine          | 33 days | <u>Other</u> |                                              |         |
| <u>STG</u>         |                                                  |         | 1Y            | One Year Inspection NG Station Test   | Online                       | RCIE                 | Rotor and Casting Inspection Evaluation | 49 days | 1Y           | One Year Inspection NG Station Test Online   |         |
| Minor              | Minor Inspection for Steam Turbine               | 15 days | 5Y            | Five Year Inspection NG Station (NDT) | Online                       |                      |                                         |         | 5Y           | Five Year Inspection NG Station (NDT) Online |         |
| 1MO                | 2 <sup>nd</sup> Major Overhaul for Steam Turbine | 23 days | FO            | Forced Outage                         | Depending on physical damage |                      |                                         |         | FO           | Forced Outage Depending on physical damage   |         |
| 2MO                | 2 <sup>nd</sup> Major Overhaul for Steam Turbine | 27 days |               |                                       |                              |                      |                                         |         |              |                                              |         |
| <u>AB</u>          |                                                  |         |               |                                       |                              |                      |                                         |         |              |                                              |         |
| 1Y                 | One Year Inspection Aux. Boiler                  | 11 days |               |                                       |                              |                      |                                         |         |              |                                              |         |
| 3Y                 | Three Year Inspection Aux. Boiler                | 13 days |               |                                       |                              |                      |                                         |         |              |                                              |         |

# 2022 Maintenance Schedule | IRPC-CP

| Main Unit   | Description | Duration | 2021 |     |     |     |     |     |     |     |     |     |     |     |
|-------------|-------------|----------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|             |             |          | Q1   |     |     | Q2  |     |     | Q3  |     |     | Q4  |     |     |
|             |             |          | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Block 1     |             |          |      |     |     |     |     |     |     |     |     |     |     |     |
| CTG 21      | A           | 7 Days   |      |     |     | 7   |     |     |     |     |     |     |     |     |
| HRSg 21     | YI          | 7 Days   |      |     |     | 7   |     |     |     |     |     |     |     |     |
| CTG 22      | A           | 7 Days   |      |     |     | 7   |     |     |     |     |     |     |     |     |
| HRSg 22     | YI          | 7 Days   |      |     |     | 7   |     |     |     |     |     |     |     |     |
| STG 23      | YI          | 5 Days   |      |     |     | 5   |     |     |     |     |     |     |     |     |
| Block 2     |             |          |      |     |     |     |     |     |     |     |     |     |     |     |
| CTG 31      | A           | 7 Days   |      |     |     |     | 7   |     |     |     |     |     |     |     |
| HRSg 31     | YI          | 7 Days   |      |     |     |     | 7   |     |     |     |     |     |     |     |
| CTG 32      | A           | 7 Days   |      |     |     |     |     |     | 7   |     |     |     |     |     |
| HRSg 32     | YI          | 7 Days   |      |     |     |     |     |     | 7   |     |     |     |     |     |
| STG 33      | YI          | 5 Days   |      |     |     |     |     |     | 5   |     |     |     |     |     |
| Aux. Boiler | YI          | 7 Days   |      |     |     |     |     | 7   |     |     |     |     |     |     |

Notes:  
YI Yearly Inspection Aux Boiler 7 days  
A CTG/HRSg Inspection Level A 5/7 days

# 2022 Maintenance Schedule | GLOW's Main Units

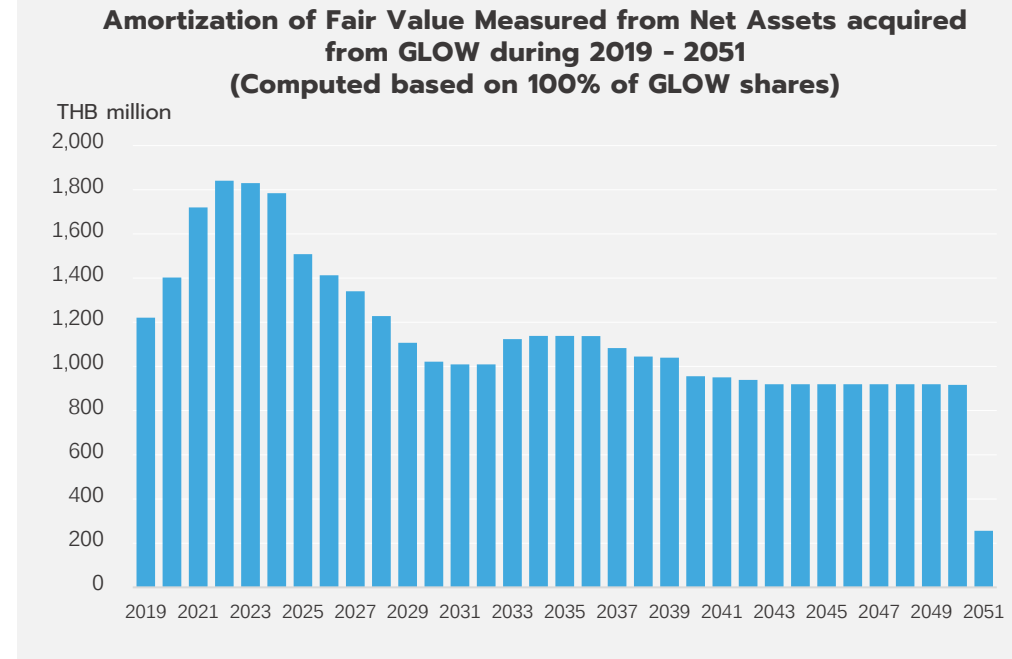
| Main Units              | Description | Duration | 2022           |                |      |                |      |     |                |      |     |                 |       |     |
|-------------------------|-------------|----------|----------------|----------------|------|----------------|------|-----|----------------|------|-----|-----------------|-------|-----|
|                         |             |          | Q1             |                |      | Q2             |      |     | Q3             |      |     | Q4              |       |     |
|                         |             |          | Jan            | Feb            | Mar  | Apr            | May  | Jun | Jul            | Aug  | Sep | Oct             | Nov   | Dec |
| <b>GE phase 4</b>       | CTG_3A      | 7 Days   | 10/1 <b>MI</b> | 16/1           |      |                |      |     |                |      |     |                 |       |     |
| <b>GSPP2</b>            | CTG_3A_3B   | 4 Days   | 10/1 <b>MI</b> | 13/1           |      |                |      |     |                |      |     |                 |       |     |
| <b>GSPP2</b>            | CTG_1A      | 7 Days   |                | 12/3 <b>MI</b> | 18/3 |                |      |     |                |      |     |                 |       |     |
| <b>GSPP2</b>            | CTG_1B      | 7 Days   |                |                |      | 6/5 <b>MI</b>  | 12/5 |     |                |      |     |                 |       |     |
| <b>GSPP2</b>            | CTG_2A      | 4 Days   |                |                |      |                |      |     | 25/8 <b>MI</b> | 28/8 |     |                 |       |     |
| <b>GSPP2</b>            | CFB_2       | 4 Days   |                |                |      |                |      |     | 26/8 <b>MI</b> | 29/8 |     |                 |       |     |
| <b>GSPP3</b>            | CFB_1&2     | 21 Days  |                |                |      |                |      |     | 22/8 <b>3Y</b> | 11/9 |     |                 |       |     |
| <b>GSPP11 (Plant 2)</b> | GT_1        | 5 Days   | 14/1 <b>MO</b> | 18/1           |      |                |      |     |                |      |     |                 |       |     |
| <b>GSPP11 (Plant 3)</b> | GE_2        | 16 Days  |                | 13/2 <b>MI</b> | 28/2 |                |      |     |                |      |     |                 |       |     |
| <b>GSPP11 (Plant 3)</b> | GE_1        | 16 Days  |                |                |      | 25/5 <b>MO</b> | 9/6  |     |                |      |     |                 |       |     |
| <b>GSPP11 (Plant 1)</b> | GT_100      | 15 Days  |                |                |      |                |      |     | 17/8 <b>MO</b> | 31/8 |     |                 |       |     |
| <b>HHPC (Unit 1)</b>    | Unit_1      | 14 Days  |                |                |      |                |      |     |                |      |     | 20/10 <b>MI</b> | 2/11  |     |
| <b>HHPC (Unit 2)</b>    | Unit_2      | 14 Days  |                |                |      |                |      |     |                |      |     | 3/11 <b>MI</b>  | 16/11 |     |



# Fair Value Measurement of Net Assets from Acquisition of Glow

unit: THB million

| Items                                          | Book Value of GLOW | Fair Value of GLOW | Differential Value |
|------------------------------------------------|--------------------|--------------------|--------------------|
| Assets                                         | 107,655            | 155,500            | 47,845             |
| Liabilities                                    | (56,246)           | (66,497)           | (10,251)           |
| <b>Net Assets of GLOW at 14 March 2019</b>     | <b>51,409</b>      | <b>89,003</b>      | <b>37,594</b>      |
| <b>Non-Controlling interests at 30.89%</b>     |                    | <b>(32,092)</b>    |                    |
| <b>Total Net Asset obtained GLOW at 69.11%</b> |                    | <b>56,911</b>      |                    |
| <b>Goodwill</b>                                |                    | <b>36,090</b>      |                    |
| <b>Proportion of acquisition cost 69.11%</b>   |                    | <b>93,001</b>      |                    |



GPSC has completed the acquisition of 69.11% on 14 March 2019 at a total of THB 93,001 million, the company has measured the fair value of GLOW net assets as follows:

- The fair value uplift of THB 37,594 million from **Purchase Price Allocation (PPA)**
- **The fair value recognition of net assets** acquired from GLOW will be amortized yearly (based on the remaining period of the contract, 5 to 31 years).
- **Goodwill** will be subjected to an impairment test on a yearly basis.



#### **Disclaimer**

The information contained here is being furnish on a confidential basis for discussion purposes only and only for the use of the recipient, and may be subject to completion or amendment through the delivery of additional documentation. Except as otherwise provided herein, this document does not constitute an offer to sell or purchase any security of engage in any transaction. The information contained herein has been obtained from sources that Global Power Synergy Public Company Limited ("GPSC") considers to be reliable; however, GPSC makes no representation as to, and accepts no responsibility or liability for, the accuracy or completeness of the information contained herein. Any projections, valuations and statistical analyses contained herein have been provided to assist the recipient in the evaluation of the matters described herein; such projections, valuations and analyses may be based on subjective assessments and assumptions and may utilize one among alternative methodologies that produce differing results; accordingly, such projections, valuations and statistical analyses are not to be viewed as facts and should not be relied upon as an accurate representation of future events. The recipient should make an independent evaluation and judgement with respect to the matters contained herein.