



*7th March 2018*

# THE **INNOVATIVE** POWER FLAGSHIP OF PTT GROUP

2017

**RESULTS PRESENTATION OPPORTUNITY DAY**

**GLOBAL POWER SYNERGY PUBLIC COMPANY LIMITED**

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## 2017 Highlights / 2018 Business Plan



### Investment in Affiliates



### Financial Performance



# GPSC stock's performance

(May 15 – Mar 18)

STANDARD & POOR'S FitchRatings

BBB-

A+ (tha)

Credit Rating  
(25 Jan 2017)



Included in SET50  
(4 Jul 2016)



Best CFO Award  
(15 Jul 2016)



Ranked "Excellent"  
for CGR Scoring  
(26 Oct 2016)



Thailand Sustainability  
Investment (THSI)  
(8 November 2017)



สมาคมนักลงทุนไทย  
THAI INVESTORS ASSOCIATION

Investors' Choice Award  
(27 Jul 2016)



Asia Pacific ex  
Japan Small Cap  
(19 Sep 2016)



Best CEO (Investor Relation)  
Best IR Company (Thailand)  
Best Environmental Responsibility  
(9 June 2017)



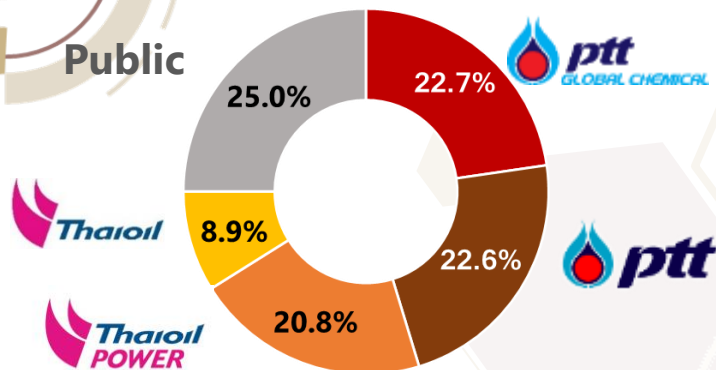
THB / Share



- **IPO in May 2015**, GPSC has been growing business with continuously increased market capitalization.
- Starting from January 2016, where GPSC has been included in **SET100** and progressed to **SET50** in July 2016. Moreover, GPSC has been included in Global standard namely **FTSE Index** later in September 2016.
- GPSC has been shortlisted in **ESG100** with sustainable business awarded by Thaipat Institute. In 2H/2016, GPSC's CFO received **Best CFO Award** from Investment Analysts Association. The company also received **Investors' Choice Award** from Thai Investors Association; **ranked "Excellent" for CGR Scoring** by Thai Institute of Directors and received **Most Progress in IR Award** from IR Magazine.
- In December 2016, GPSC has been initially ranked **BBB- rating by S&P's** and **A+(tha) by Fitch Ratings** with **Investment Grade and Stable Outlook**.
- In June 2017, GPSC was granted **Best CEO (Investor Relations), Best IR Company (Thailand) and Best Environmental Responsibility** from Corporate Governance Asia. Recently in November 2017, GPSC has been included in **Thailand Sustainable Investment (THSI)** from the Stock Exchange of Thailand.
- **These are the results of confidence on GPSC performance from all stakeholders.**

# GPSC Innovative Power Company at a Glance

## GPSC's Shareholding Structure



Thai Oil Power is 73.99% held by Thai Oil and 24.01% by PTT  
As of 27 February 2017

## Company Information

<b>Head Office</b>	555/2 Energy Complex Building B, 5th Floor, Vibhadi-Rangsit Road, Chatuchak, Bangkok
<b>Business Type</b>	Energy & Utilities
<b>Registered Capital (Fully Paid)</b>	THB 14,983 million
<b>Market Cap (As of 28 February 2018)</b>	THB 110,874 million

**GPSC's committed capacity is 1,922 Equity MW  
Electricity and 1,582 T/H Steam in year 2019**



Electricity 1,517 MW  
Steam 1,582 T/H  
Industrial Water 2,080 Cu.m./H  
Chilled Water 12,000 RT



Electricity 58 MW



Electricity 347 MW



24M Technologies, Inc. (USA)  
Business Service Alliance Co.,Ltd.



# Power Plant Definition and Revenue Structure

## IPP

### Independent Power Producer (IPP):

- A larger power producer who has electricity capacity more than 90 MW
- IPPs are obliged to sell their entire output to EGAT

## SPP

### Small Power Producer (SPP):

- A small power producer who sell their electricity no more than or equal to 90 MW to EGAT

### SPP Type

- Firm : Contract Term > 5 Years  
Non-Firm : Contract Term ≤ 5 Years
- SPPs can sell their electricity and steam to industrial customers located next to the SPP plant

## VSPP

### Very Small Power Producer (VSPP):

- A very small generator whose power generating process is generated from renewable energy, specific fuels, and energy with no more than 10 MW of electricity capacity
- VSPPs are able to sell power to the Distribution Utility

**Availability Payment**

+

**Energy Payment**

Availability %  
x  
Availability Payment Rate (APR)

Energy cost regarding % Dispatch to EGAT

### EGAT (Power)

Firm	Capacity Payment	+	Energy Payment
Non-Firm	K factor (seasonal weight)	×	Energy Payment

### Industrial Customers

Electricity	PEA tariff TOU Rate 4.2*
Steam	Steam Base Cost x (Gas index + CPI index)

**Base Tariff**

+

**Ft**

+

**adder**

**Feed in Tariff**

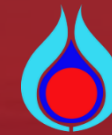
# Power Flagship of PTT Group with Solid Customers' Profiles

*GPSC's major customers are EGAT and PTT group, whom are one of those with best credit profiles in the country. Moreover, GPSC operated with long term off-take contracts.*



## GPSC OPERATES WITH LONG TERM OFF TAKE CONTRACTS

- ✓ Guaranteed market and source of revenue
- ✓ Guarantee a minimum level of profit in regards to their investment
- ✓ Price adjustment formula, varying with raw-material price



**58%**

MAJORITY OF GPSC'S REVENUE IS FROM ELECTRICITY, PTT GROUP IS GPSC'S MAJOR CUSTOMER, AND IT IS SECURED THROUGH LONG-TERM OFF TAKE CONTRACTS.



**33%**

GPSC AND ITS INVESTED COMPANIES SELL POWER TO INDUSTRIAL CUSTOMERS AND PUBLIC AGENCIES



**9%**

IN ADDITION, GPSC ALSO SELLS POWER GENERATION BY PRODUCTS TO INDUSTRIAL CUSTOMERS IN NEARBY AREAS, PREVENTING IT FROM A CUSTOMER MONOPOLY.

# GPSC's Business Portfolio in Thailand, Lao PDR and Japan

**3 Countries**

Today, GPSC's power plants continue to grow in locations, customer groups, and fuel types, as illustrates in the picture..



As of 28 February 2018, GPSC committed equity capacities below:

**POWER**



**1,922 megawatts\***

**STEAM**



**1,582 tons/hour\*\***

**CHILLED WATER**



**12,000 refrigeration tons**

**INDUSTRIAL WATER**



**2,080 cu.m./hour**

\*Of 1,922 megawatts: operates 1,509 MW and under construction 413 MW

\*\* of 1,582 tons/hour: operates 1,512 T/H

## CAPACITY BREAKDOWN

1,922 equity MW

IPP

**48%**

SPP

**31%**

Renew & Hydro

**21%**

VSPP

**0.003%**



Gas Power Plant



Hydro Power Plant



Solar Power Plant



Project under construction

# GPSC's Business Portfolio : 11 Affiliates in 4 Countries

## Combined Cycle / Cogeneration

### Sriracha Power Plant (IPP) 100%

- Electricity: 700 MW
- Industrial water: 80 Cu.m./h



### Rayong Power Plant (SPP Non-firm) 100%

#### CUP 1-3

- Electricity: 339 MW
- Steam: 1,340 T/H
- Industrial water: 2,000 Cu.m./h



#### Rayong Expansion

- Electricity: 45 MW
- Steam: 70 T/h

### IRPC Clean Power (SPP Firm) 51%

#### Total

- Electricity: 240 MW
- Steam: 300 T/h



#### Phase 1

- Electricity: 45 MW
- Steam: 170 T/h

#### Phase 2 (SCOD in Nov 2017)

- Electricity: 195 MW
- Steam: 130 T/h

### Combined Heat and Power Producing (VSPP) 100%

- Electricity: 5 MW
- Chilled water: 12,000 RT



### Nava Nakorn Electricity Generation (SPP Firm) 30%

- Electricity : 125 MW
- Steam: 30 T/h



### Bangpa-in Cogeneration (SPP Firm) 25%

#### Phase 1

- Electricity: 117 MW
- Steam: 20 T/h



#### Phase 2 (SCOD in June 2017)

- Electricity: 117 MW
- Steam: 20 T/h

### Ratchaburi Power (IPP) 15%

- Electricity: 1,400 MW



## Renewable Energy

### Thai Solar Renewable (VSPP) 40%

- Electricity: 80 MW



### Ichinoseki Solar Power 99%

#### (SCOD in Dec 2017)

- Electricity: 20.8 MW



### CHPP Solar Cooperatives (VSPP) 100%

- Electricity: 5 MW



## Hydroelectric

### Xayaburi Power (IPP) 25%

#### (SCOD in October 2019)

- Electricity: 1,285 MW



### Nam Lik 1 Power 40%

#### (SCOD in 2019)

- Electricity: 65 MW

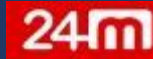


## Other Businesses

### Business Service Alliance 25%



### 24M Technologies 18%



Project under construction

Project COD in 2017



# Significant events in 2017



## Investment

24m

Geared up the investment in **24M** by cooperating with **US firm's** technology to produce and distribute **Lithium-Ion batteries in ASEAN**



Signed MOU with **NNCL** to develop the **Solar Rooftop, Energy Storage System and Smart Grid** project in **Nava Nakorn industrial zone**



Planned to build a **pilot project of lithium-ion battery** and to become **system integrator** by beginning with **Nava Nakorn industrial estate** and installation of solar rooftop to industrial users under **PTT group** and in Eastern Economic Corridor (**EEC**)



## Operation

**Bangpa-In Cogeneration Company Limited Phase 2 (BIC2)** started COD and supplied electricity to EGAT with total capacity of 117 MW of electricity and 20 tons/hour of steam.

**IRPC Clean Power Company Limited Phase2 (IRPC-CP)** started COD and supplied electricity to EGAT with total capacity of 240 MW for electricity and 180-300 tons/hour of steam.

**Ichinoseki Solar Power1 G.K. (ISP1)** started COD and supplied electricity to Tohoku Electric Power Co, Inc with total of 20.8 MW at FiT of 40 JPY per KWh for term of 20 years.



## Awards

Granted **3 awards** from the 7th Asian Excellence Award 2017 for **Asia's Best CEO Award, Best Investor Relations Company** and **Best Environmental Responsibility**.

Selected to include in **Thailand Sustainability Investment (THSI)** among other 65 listed companies by SET.

Selected to include in **ESG100** from Thaipat Institute as a company who transparently and fairly discloses information to the public.



## Financing

**Final dividend payment from the second half of 2017** operating result for **0.80 Baht** per share.

**Annual dividend payment from 2017** operating results for **1.25 Baht** per share.

**First debentures issuance** for **Baht 5,000 million** to institutional and major investors that resulted in the decrease in cost of fund of the company by 1%.

# 4Q 2017 Highlights

## GROWTH

**Robust growth in pipeline with new growth opportunities**

- ◇ **IRPC-CP Phase 2 and Ichinoseki Solar Power (ISP1) in Japan** started to COD in Q4/17 and supplied electricity to EGAT and Tohoku Electric Power Japan.
- ◇ **GPSC signed contract agreement with NNCL in solar rooftop and smart grid** development project in Nava Nakorn industrial zone.
- ◇ GPSC has planned to build a pilot project of lithium-ion battery to become **Energy Storage System Integrator**.

## SUSTAINABILITY

**Selected to include in THSI 2017 by SET**

- ◇ **GPSC is selected to include in Thailand Sustainability Investment (THSI)** by the Stock Exchange of Thailand (SET) in 2017.
- ◇ Responsibility towards the **environmental, social and governance, simultaneously with the creation of economic returns** to ensure sustainable growth and the efficiency in managing the supply chain risks.



***GROWING PROFIT  
WITH SUSTAINABILITY  
AND CONTROL***

## PROFIT

**72% Increase in Net profit YoY**

- ◇ **GPSC's Q4/17 net profit of THB 722 million** increased by THB 303 million YoY thanks to the rise in Ft rate, and **higher demand from customers at Rayong Plant, and the COD of IRPC-CP for both phases in Q4/17.**
- ◇ **2017 net profit of THB 3,175 million** increased by THB 475 million or 18% resulted from the rise in sales volume at Rayong Plant and IRPC-CP. Also, higher share of profits from NNEG and BIC2.

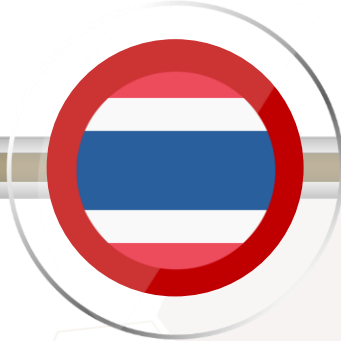
## CONTROL

**3 Projects in progress meet milestone as planned**

- ◇ **Nam Lik1, Xayaburi and CUP4** which are under construction are expected to **COD within 2019.**
- ◇ All the projects are closely monitored to meet the milestones.

# Strategic Growth : 3 Growth Engines between 2018-2022

## Thailand as Priority



- Focus in **MAPTAPHUT** and **EEC**
- Be **PTT Group's** power supplier of choice
- Contribute to **strategic priorities across the PTT group**
- Increase **new customers in Thailand**

### • Action Plan 2018-2019 •

#### ***PTT Group Power Flagship***

- ✓ *Target new customers from industrial customers under PTT Group*
- ✓ *Expand through PTT Group expansion*
  - *PTTGC: LLDPE2, PO/POL, MCC*

## International Business



### **"Focus Countries"**

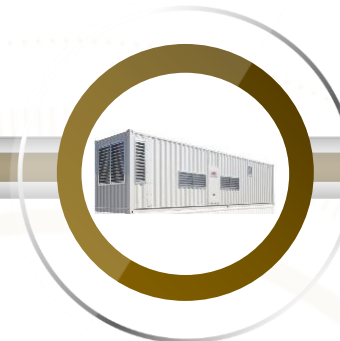
**Go into country where we can play multiple fuel to avoid risk.**

- **Myanmar and Laos**
- Enhance **country knowledge** and **relationship**
- **Strategic partners**
- **Conventional and renewable energies**

#### ***Develop Power Plant Project***

- ✓ *Myanmar*
  - *Industrial users*
  - *Gas to power*
- ✓ *Laos*
  - *Hydro power plant*

## Future Energy



- **Forefront of innovation** in energy sector
- **Leverage IP technology** license partnership
- **Leverage existing investments**, and PTT's asset base to deploy new technologies
- **EEC** as priority area
- **Smart grids** for smart cities

#### ***Energy Storage System Integrator***

- ✓ *First 100MWh battery pilot project targeted to COD within 2019*
- ✓ *Development of system integrator position*

# 2018 Business Plan

## MAXIMIZE



Productivity improvement through OEMS implementation

### Rayong CUP 1-3 Power Plant

- **Productivity improvement initiatives** to increase contribution margin of THB 100 million within Y2018
- Maximize Reliability 99.99%, Efficiency 65.1%, and Safety

### Sriracha IPP Power Plant

- Prefer to operate with “**Reserved shutdown scenarios**” for best profitability

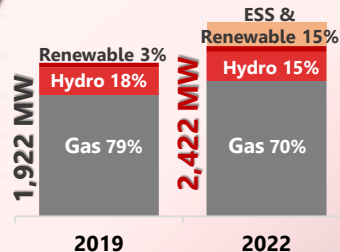
## MANAGE



Asset management strategic framework 2018

- Set target for CHPP to **install solar rooftop 10 MW** for PTT Group
- **Implement dashboard platforms** (JVs & Subsidiary)
- **Ensure** that JVs & Subsidiary's performance on target
- **Control 3 projects under construction** to meet schedule; **Nam Lik, XPCL and CUP-4**

## MOVE



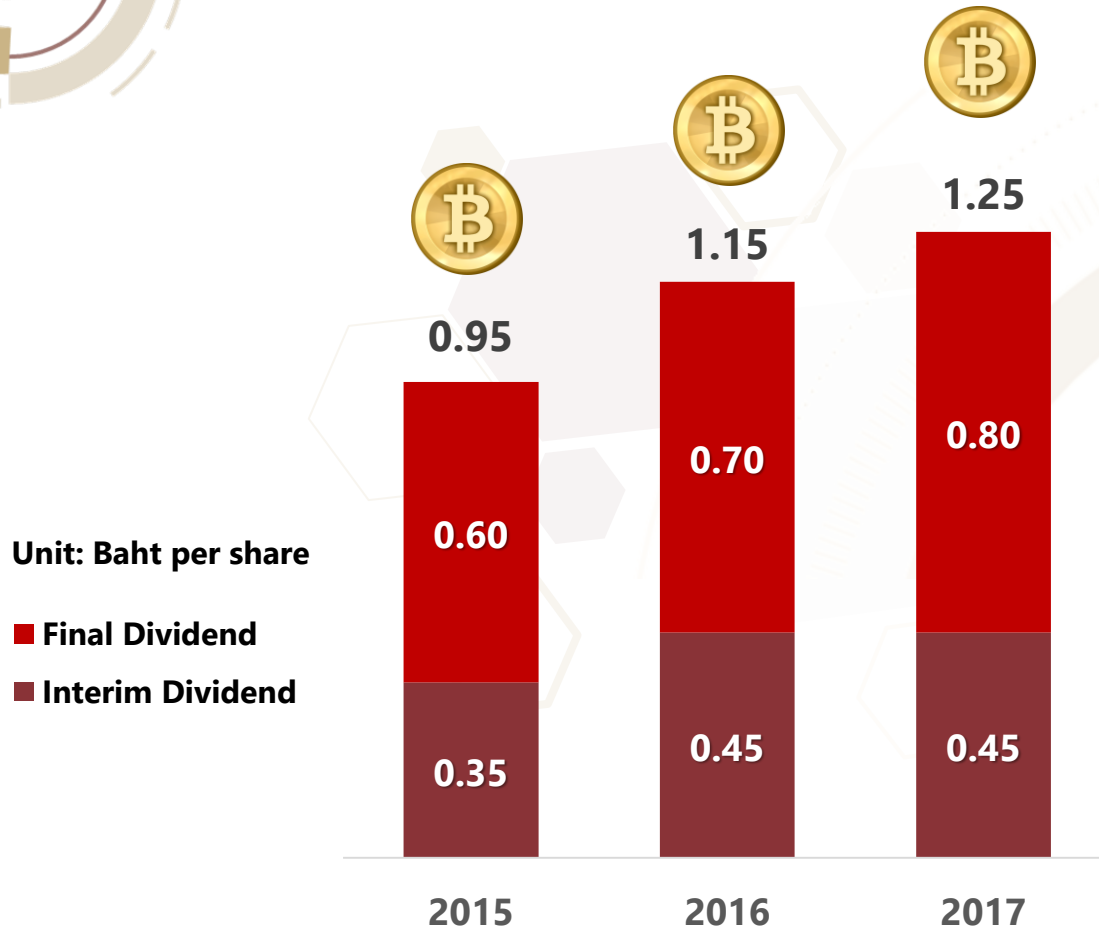
**500 MW Target growth with green portfolio 30% of total capacity**

**3M Strategy through Digitization**

- Operate business to fulfill PTT Group's demand both domestic and international base on **PTT Group's investment plan**
- Be PTT Group Power Flagship to develop utility project to support **EEC and EECi** to be a hub of innovation and technology of Thailand
- Develop **low cost battery manufacturing plant with standardized quality and environmentally friendly** that is capable to compete with market.
- Develop ESS pilot project by collecting data from **solar rooftop and ESS** that will be used for further development
- Develop **solar rooftop** business in **industrial estate, village, college** etc.
- Develop power plant project in **Laos** and potential industrial estate in **Myanmar**



# 2017 dividend payout ratio is 59% of FY2017 net income



- On 12 February 2018, BOD passed a resolution for the payment of **dividend for 2017 at Baht 1.25 per share** which is higher than 2016 dividend, resulting from the better operating results.
- The **dividend per share for 2H/17 is 0.80 Baht**
- The Record Date will be on 28 February 2018 for the right to receive the dividend.
- The dividend payment date will be on 20 April 2018 **after obtaining approval from 2018 AGM.**

- **Dividend Policy :**  
**Minimum of 30% of net income** according to a financial statement, after deductions of tax, reserve capital requirement (with additional conditions)

## 2017 Highlights / 2018 Business Plan



### Investment in Affiliates



### Financial Performance



# Nam Lik 1 Power Company Limited (Lao PDR)



**Type:**

**Run-of-River  
Hydropower**

**Electricity:**

**65 MW**

**SCOD:**

**Q1 2019**

**Progress Q3/2017:**

**66%**

**Progress YE2017:**

**76%**

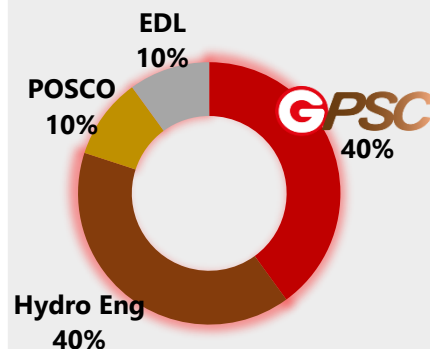
**Equity Investment :**

**37 M USD**

**D/E:**

**7:3**

**Shareholding:**



**Progress Update:**

- Construction progress of the project as appraised by technical advisor was 76.0 %, more than the plan at 73.2 %. When comparing with the end of Q3/17 at 66 %, in which about 10% increased as the main activities including construction of power house, 115 kV transmission line and reservoir clearing were able to continue after wet season.

**Customer:**

- Electricity: EDL 63.8 MW (30 years PPA)

# Xayaburi Power Company Limited (Xayaburi, Lao PDR)



**Type:**  
**Run-of-River  
Hydropower**

**Electricity:**  
**1,285 MW**

**SCOD**  
**2019**

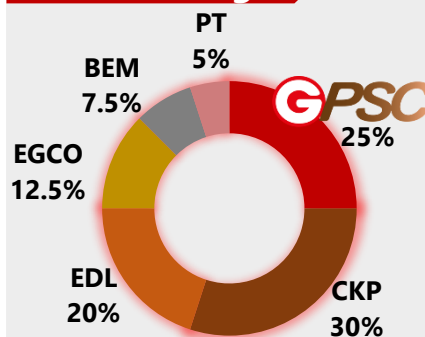
**Progress Q3/2017:**  
**84%**

**Progress YE2017:**  
**88%**

**Total Investment :**  
**136,751 MB**

**D/E:**  
**3:1**

**Shareholding:**



**Progress Update:**

- Construction progress of the project continued as planned at 88.1% as appraised by the government of Lao PDR's technical advisor. Main construction tasks such as power house, intermediate block fish ladder and 500 kV transmission line are progressed as planned.

**Customer:**

- Electricity: EGAT 1,220 MW
- EDL 60 MW



## Grow with PTT : Be PTT Group's Power in Petrochemical Complex

CUP-1



**Type:**

**Cogeneration**

**COD:**

**2006-2009**

**Shareholding:**



**Capacity:**

**CUP-1**

- Electricity: 226 MW
- Steam: 890 T/h
- Industrial water: 720 Cu.m/h

**CUP-2**

- Electricity: 113 MW
- Steam 170 T/h
- Industrial water: 510 Cu.m/h

**CUP-3**

- Steam: 280 T/h
- Industrial water: 770 Cu.m/h

**Contract:**

- CUP-1: 10-15 years ++
- CUP-2: 15 years ++
- CUP-3: 15 years ++

**Customer:**

- PTT Group
- Non-PTT Group industrial customers
- EGAT

CUP-2



CUP-3





## Type:

**Cogeneration**

## Electricity:

**45 MW**

## Steam:

**70 T/h**

## SCOD:

**2019**

## Progress Q3/2017:

**17%**

## Progress YE2017:

**19%**

## Total Investment :

**3,980 MB**

## Shareholding:



## Progress Update:

- In order to increase system's reliability and stability, the project is now in the design process of connecting CUP-4 with CUP-3 existing operation system.
- Currently, some of customers have signed PPA while new customers is under negotiation process.
- At the end of 2017, Main EPC has been awarded. Detail engineering design and equipment specification approval are on progress.

## Customer:

- PTT Group
- Non-PTT Group Industrial Customers
- EGAT

## 2017 Highlights / 2018 Business Plan



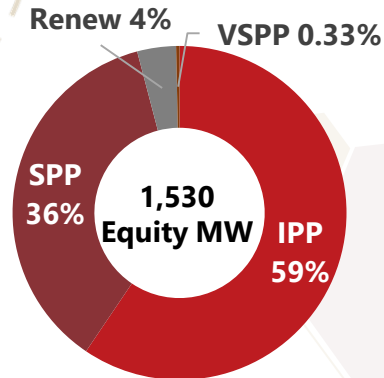
### Investment in Affiliates



### Financial Performance

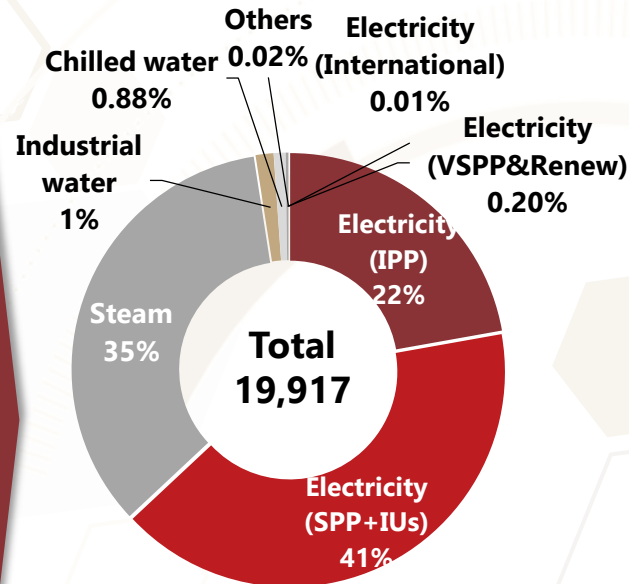
# Majority of GPSC's revenue is from electricity, PTT Group is GPSC's major customer

## ELECTRICITY CAPACITY BREAKDOWN (Unit: Equity Megawatt)



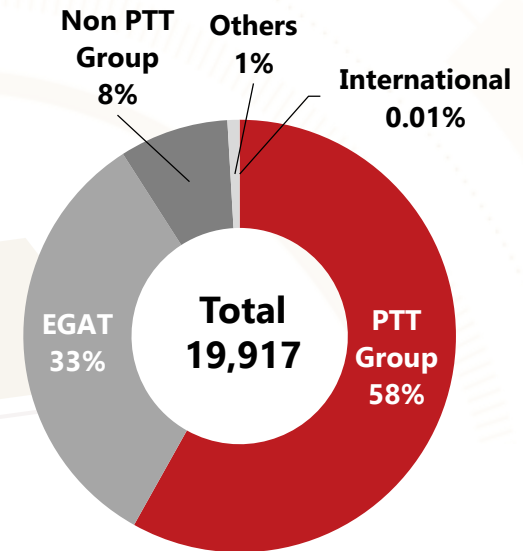
Name	Type	GPSC's share %	Total capacity (MW)	Equity capacity (MW)	Steam (T/H)
<b>IN OPERATION</b>					
Sriracha	IPP	100%	700	700	-
CUP-1	SPP	100%	226	226	890
CUP-2	SPP	100%	113	113	170
CUP-3	SPP	100%	-	-	280
CHPP	VSPP	100%	5	5	-
IRPC-CP Phase 1	SPP	51%	45	23	86.7
IRPC-CP Phase 2	SPP	51%	195	99.4	66.3
CHPP (Solar)	VSPP	100%	5	5	-
ISP1	Solar	99%	20.8	20.6	-
<b>Consolidate to Financial Statement</b>				<b>1,192</b>	<b>1,493</b>
TSR	Renew	40%	80	32	-
NNEG	SPP	30%	125	38	9
BIC-1	SPP	25%	117	29.25	5
BIC-2	SPP	25%	117	29.25	5
RPCL	IPP	15%	1,400	210	-
<b>Share of Profit / Dividend Income</b>				<b>338</b>	<b>19</b>
<b>Total operating</b>				<b>1,530</b>	<b>1,512</b>

## 2017 Revenue by product (THB Million)



- Electricity and Steam are major sources of GPSC's revenue, accounted for 98% of total revenue.

## 2017 Revenue by customer (THB Million)



- Accounted for more than 50% of total revenue, PTT Group is consistently the largest customer of GPSC in 2017.



# Q4/17 Revenue of THB 4,849 million, increased 14% QoQ

## Quarterly revenue & gross profit margin

(THB Million, %)

### Year-on-year

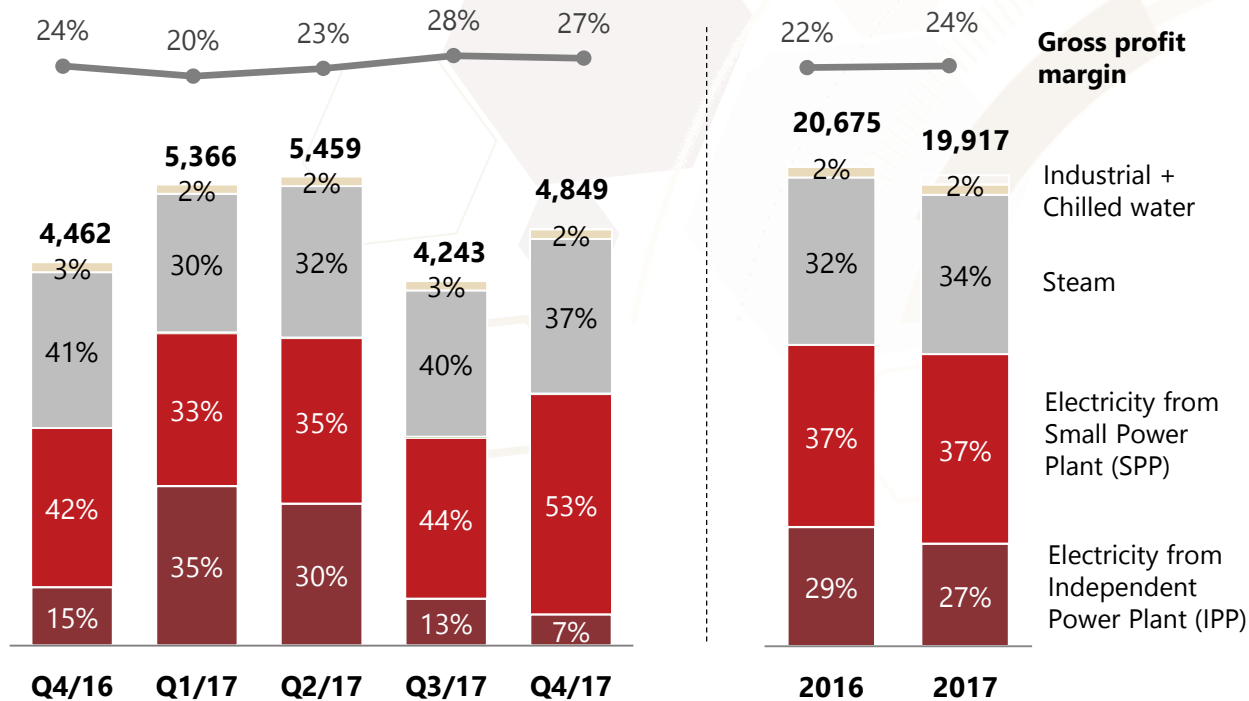
▲ Rev. +387 / 9%  
▲ GPM +3%

### Quarter-on-quarter

▲ Rev. +606 / 14%  
▼ GPM -1%

### 12 Months

▼ Rev. -758 / 4%  
▲ GPM +2%



### Q4/17 VS Q3/17 (QoQ)

■ **Operating revenue** in Q4/17 increased by THB 606 million or 14% due to higher demand from industrial customer also, the COD of IRPC-CP Phase 2 and the resume of Phase 1 in Q4/17.

### Q4/17 VS Q4/16 (YoY)

■ **Operating revenue** in Q4/17 increased by THB 387 million or 9% due to higher demand from industrial customer also, the COD of IRPC-CP Phase 2.

### 2017 VS 2016 (12M)

■ **Operating revenue** in 2017 decreased by THB 758 million or 4% mainly due to the reserved shutdown of Sriracha Power Plant per EGAT's dispatch instruction.

# Rayong Power Plant (SPP) : Revenue & GPM

## Quarterly revenue & gross profit margin

(THB Million, %)

### Year-on-year

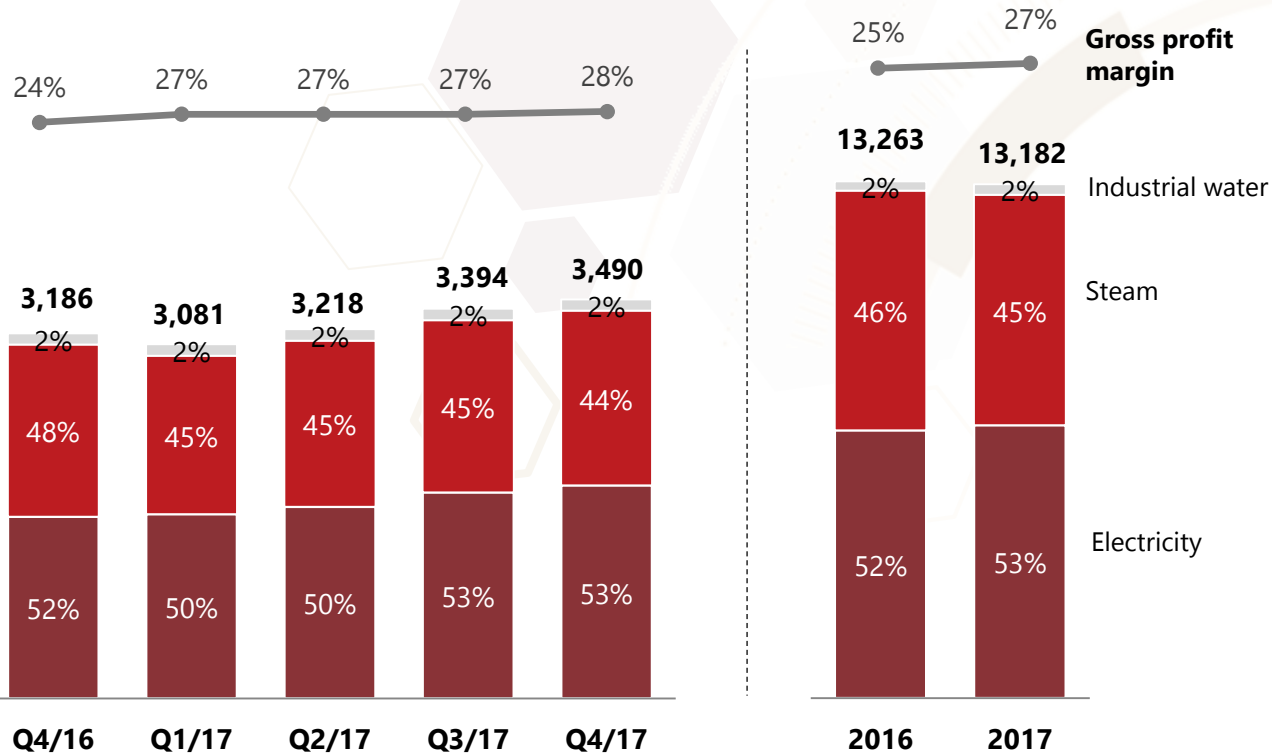
▲ Rev. +304 / 10%  
▲ GPM +4%

### Quarter-on-quarter

▲ Rev. +96 / 3%  
▲ GPM +1

### 12 Months

▼ Rev. -81 / 1%  
▲ GPM +2%



### Q4/17 VS Q3/17 (QoQ)

■ **Total revenue** in Q4/17 increased by THB 96 million or 3% because major customer resumed its operation from maintenance shutdown in Q3/17, and higher electricity exported to EGAT.

### Q4/17 VS Q4/16 (YoY)

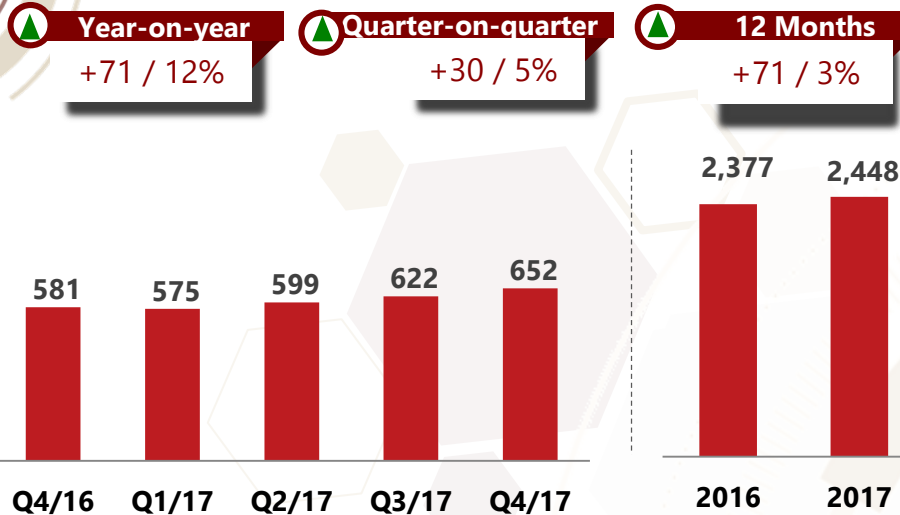
■ **Total revenue** in Q4/17 increased by THB 304 million or 10% due to higher average selling price followed the rising Ft.

### 2017 VS 2016 (12M)

■ **Total revenue** in 2017 decreased by THB 81 million or 1% due to lower average selling price of electricity and steam also, many customers shutdown for maintenance in 2017.

# Rayong Power Plant (SPP): Power

## Quarterly power sales volume (GWh)



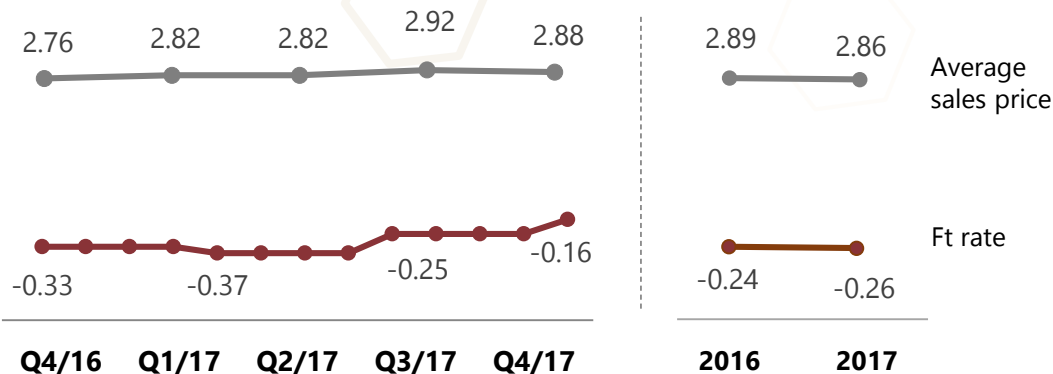
### Q4/17 VS Q3/17 (QoQ)

- Volume** increased by 30 GWh or 5% due to higher demand from customer after recovery from shutdown in Q3/17 and higher volume of electricity exported to EGAT.
- Price** decreased due to the sales of surplus steam from production process.

### Q4/17 VS Q4/16 (YoY)

- Volume** increased by 71 GWh or 12% from higher volume of exported electricity to EGAT resulted from higher steam production.
- Price** increased by 0.12 Baht per kWh or 4% due to the increase in Ft rate.

## Quarterly average sales price & Ft rate (THB/kWh, THB)



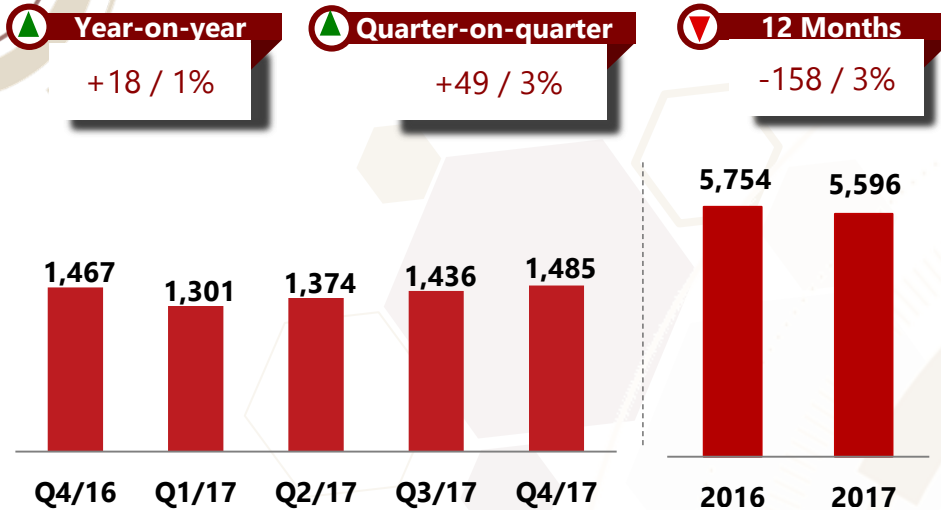
### 2017 VS 2016 (12M)

- Volume** increased by 71 GWh or 3% since there was Gas Turbine Generator shutdown in Q3/16.
- Price** slightly decreased by 0.03 Baht per kWh or 1% followed lower average Ft when compare to 2016.

# Rayong Power Plant (SPP): Steam

## Quarterly steam sales volume

('000 tons)



## Q4/17 VS Q3/17 (QoQ)

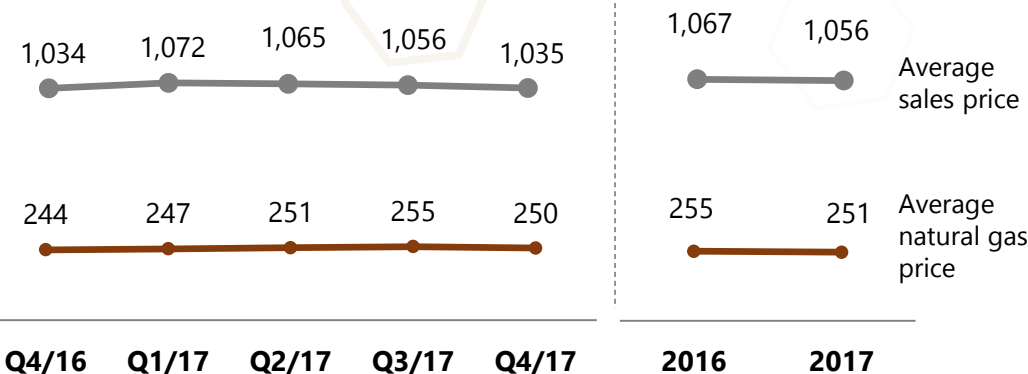
- Volume** increased by 49 thousand tons or 3% because major customer resumed its operation from maintenance shutdown in Q3/17.
- Price** decreased by 21 Baht per ton or 2% followed the decrease in natural gas price

## Q4/17 VS Q4/16 (YoY)

- Volume** increased by 18 thousand tons or 1% since there was no major customer shutdown in Q4/17.
- Price** increased in line with natural gas price.

## Quarterly average sales price & average natural gas price

(THB/ton, THB/MMBTU)



## 2017 VS 2016 (12M)

- Volume** decreased by 158 thousand tons or 3% due to planned maintenance shutdown of customers.
- Price** decreased by 11 Baht per ton or 1% followed the decline in natural gas price.



# Sriracha Power Plant: Revenue & GPM

## Quarterly revenue & gross profit margin

(THB Million, %)

### Year-on-year

▼ Rev. -317 / 47%  
▼ GPM -8%

### Quarter-on-quarter

▼ Rev. -183 / 34%  
▼ GPM -32%

### 12 Months

▼ Rev. -740 / 14%  
▲ GPM +2%

### Q4/17 VS Q3/17 (QoQ)

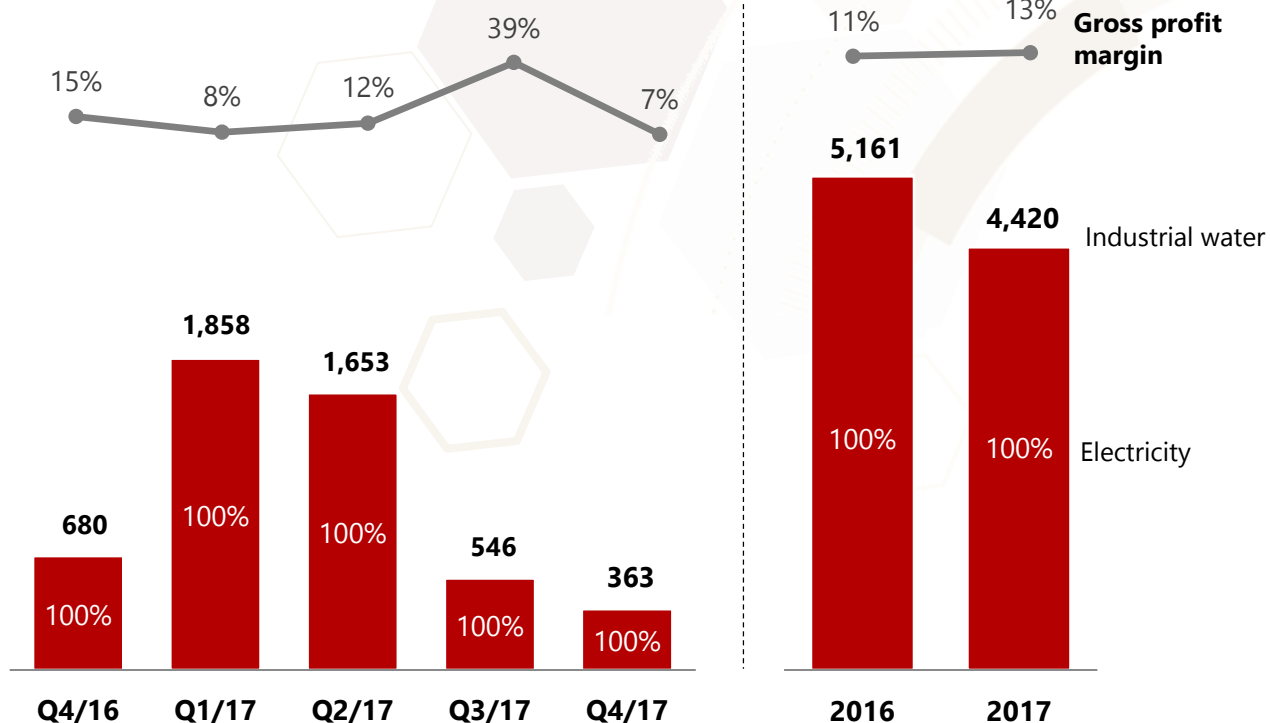
Total revenue in Q4/17 decreased by THB 183 million or 34% due to the decrease in Availability Payment (AP) followed the completeness of Contract Availability Hour (CAH) and also, maintenance shutdown for Combustion Inspection (CI).

### Q4/17 VS Q4/16 (YoY)

Total revenue in Q4/17 decreased by THB 317 million or 47% due to lower sales volume from reserved shutdown per EGAT's dispatch instruction and maintenance shutdown for CI which longer than in Q4/16.

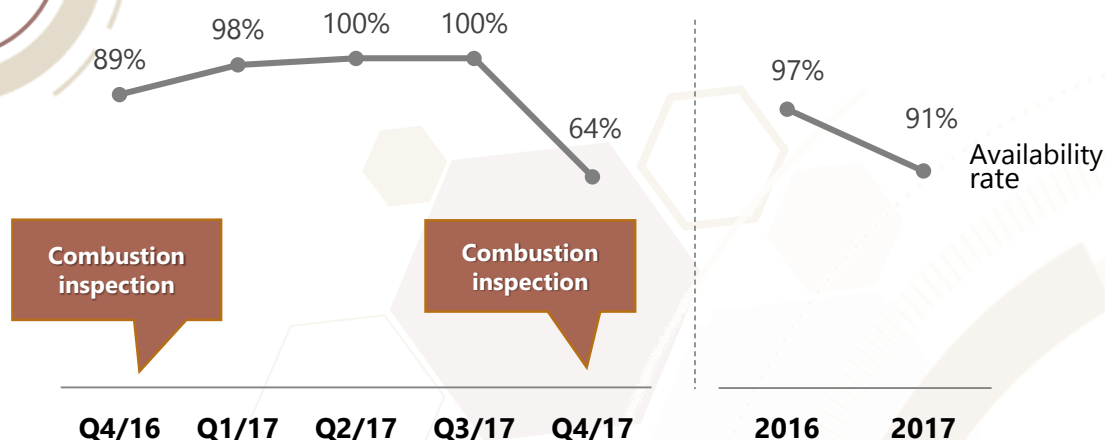
### 2017 VS 2016 (12M)

Total revenue in 2017 decreased by THB 741 million or 14% due to lower sales volume from reserved shutdown and maintenance shutdown for CI that was longer than in 2016.



# Sriracha Power Plant (IPP): Power

## Quarterly Availability Payment Rate (%)



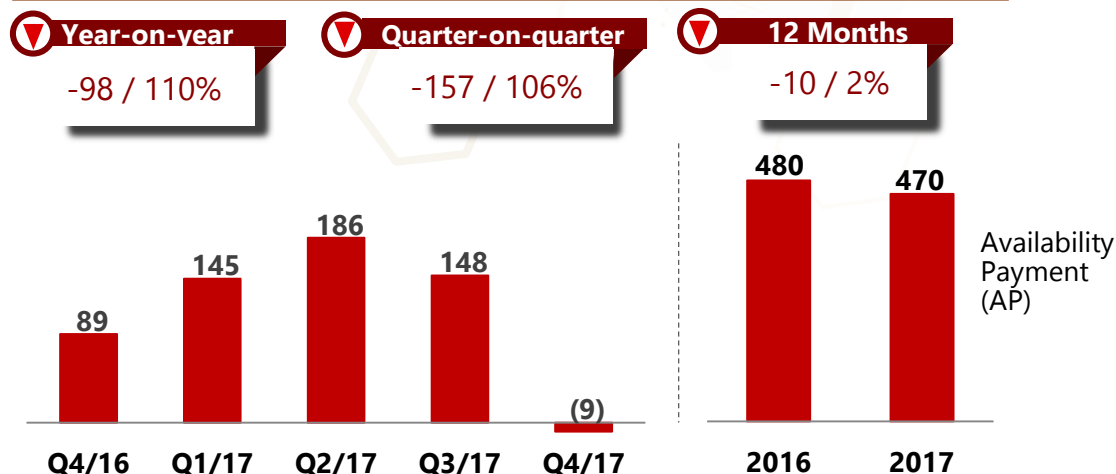
## Q4/17 VS Q3/17 (QoQ)

- Availability rate in Q4/17 dropped to 64% due to maintenance shutdown for combustion inspection (CI).
- Revenue from Availability Payment (AP) decreased by THB 157 million or 106% due to the complete of Contract Availability Hour (CAH) together with maintenance shutdown.

## Q4/17 VS Q4/16 (YoY)

- Availability rate in Q4/17 was lower than in Q4/16 due to longer period of maintenance shutdown for CI than in Q4/16.
- Revenue from Availability Payment in Q4/17 decreased by THB 98 million or 110% due to the complete of CAH together with longer period of CI.

## Quarterly revenue from Availability Payment (AP) (THB MM)



▼ Year-on-year  
-98 / 110%

▼ Quarter-on-quarter  
-157 / 106%

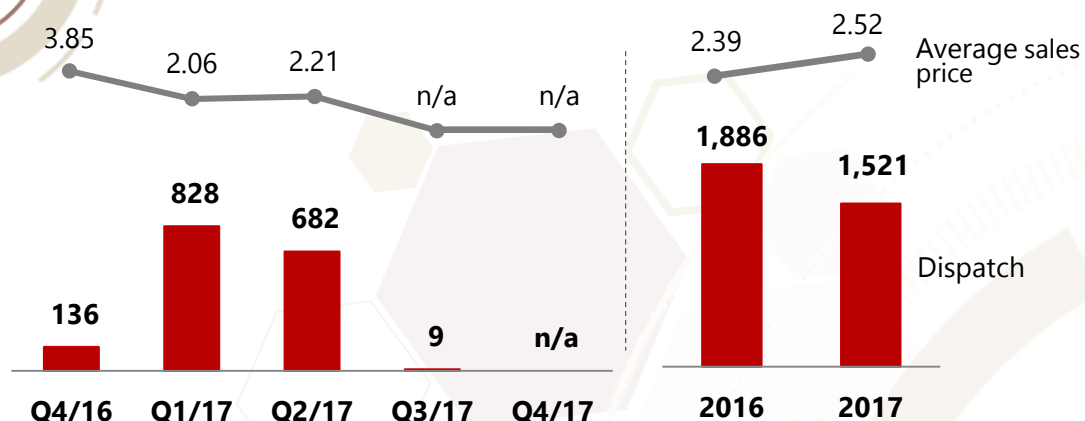
▼ 12 Months  
-10 / 2%

## 2017 VS 2016 (12M)

- Availability rate in 2017 was lower than 2016 due to the longer period of CI.
- Revenue from Availability Payment in 2017 decreased by THB 10 million or 2% due to the complete of CAH together with longer period of CI.

# Sriracha Power Plant (IPP): Power

## Quarterly average sales price & dispatch (Baht/kWh, GWh)



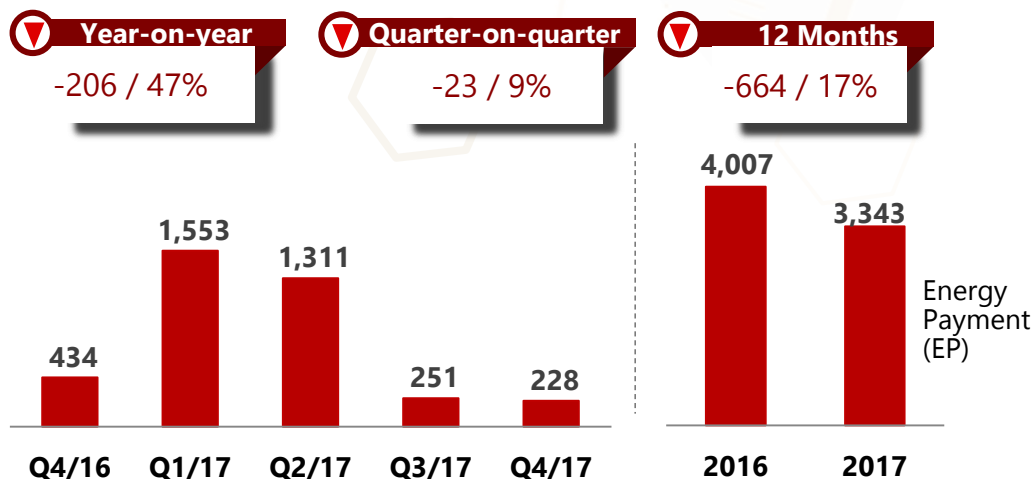
### Q4/17 VS Q3/17 (QoQ)

- Dispatch volume decreased by 9 GWh or 100% due to reserved shutdown per EGAT's dispatch instruction.
- Revenue from Energy Payment (EP) decreased by THB 23 million or 9% due to the decrease in dispatch volume.

### Q4/17 VS Q4/16 (YoY)

- Dispatch volume decreased by 136 GWh or 100% due to reserved shutdown as per EGAT's dispatch instruction.
- As a result, revenue from Energy Payment (EP) decreased by THB 206 million or 47%.

## Quarterly revenue from Energy payment (EP) (THB MM)



### 2017 VS 2016 (12M)

- Dispatch volume decreased by 365 GWh or 19% resulted from reserved shutdown.
- Revenue from Energy Payment (EP) also decreased by THB 664 million or 17% followed dispatch volume.

# IRPC-CP Power Plant (SPP): Revenue & GPM (1/3)

## Quarterly revenue & gross profit margin

(THB Million, %)

### Year-on-year

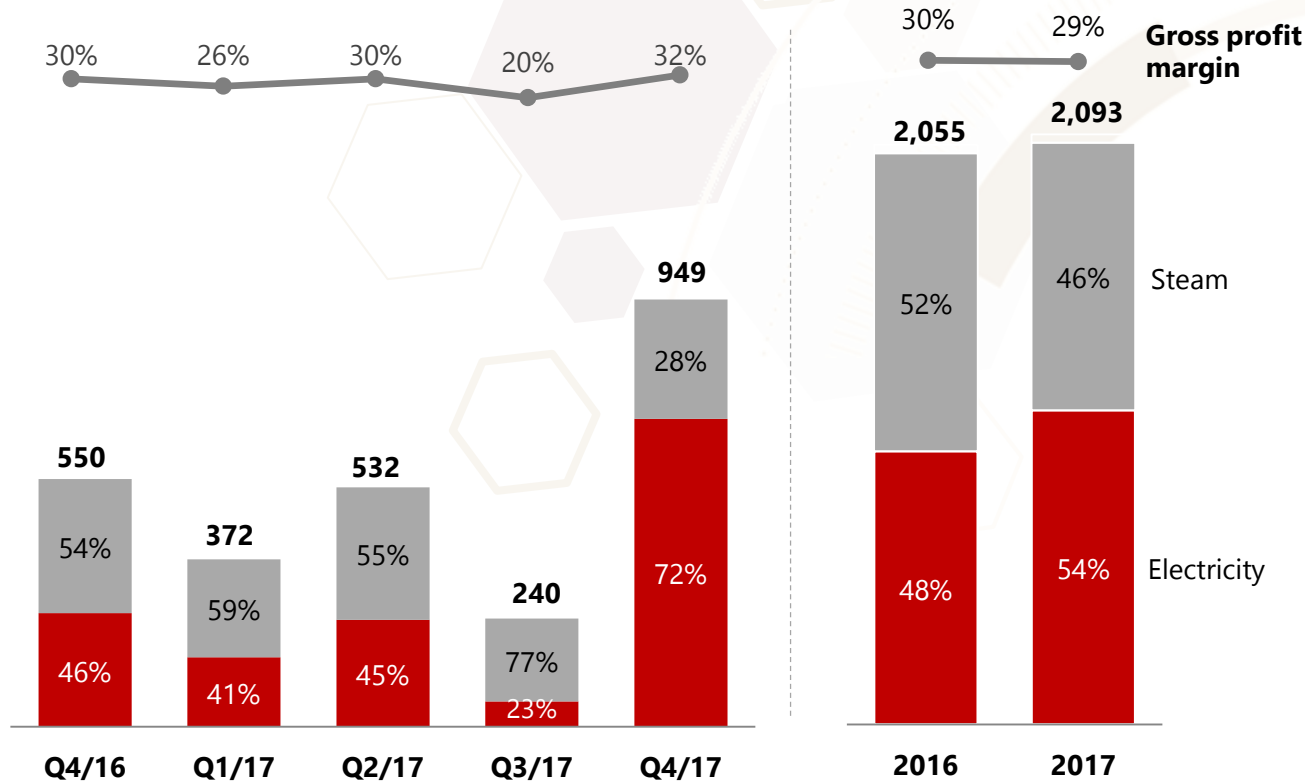
- ▲ Rev. +399 / 73%
- ▲ GPM +2%

### Quarter-on-quarter

- ▲ Rev. +709 / 295%
- ▲ GPM +12%

### 12 Months

- ▲ Rev. +38 / 2%
- ▼ GPM -1%



### Q4/17 VS Q3/17 (QoQ)

- **Total revenue** in Q4/17 increased by THB 709 million or 295% due to the commercialization (COD) of IRPC-CP Phase 2 and the resume of Phase 1 in Q4/17.
- **GPM** increased due to the COD of Phase 2 and the resume of Phase 1 after a shutdown for commissioning test in Q3/17.

### Q4/17 VS Q4/16 (YoY)

- **Total revenue** in Q4/17 increased by THB 399 million or 73% due to the COD of IRPC-CP Phase 2.
- **GPM** increased due to the COD of Phase 2 resulted in higher volume of electricity exported to EGAT.

### 2017 VS 2016 (12M)

- **Total revenue** in 2017 increased by THB 38 million or 2% due to the COD of IRPC-CP Phase 2.
- **GPM** dropped slightly by 1% due to higher maintenance cost according to maintenance schedule.



# IRPC-CP Power Plant (SPP): Power (2/3)

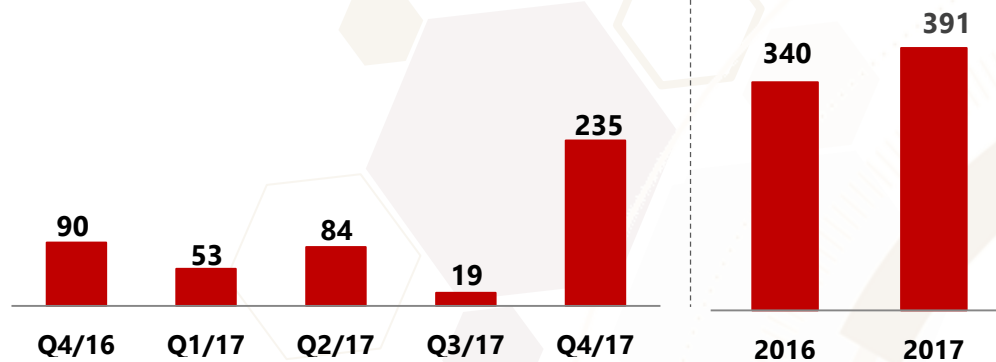
## Quarterly power sales volume

(GWh)

▲ Year-on-year  
+145 / 161%

▲ Quarter-on-quarter  
+216 / 1,137%

▲ 12 Months  
+51 / 15%



### Q4/17 VS Q3/17 (QoQ)

■ **Volume** increased by 216 GWh or 1,137% due to the commercialization (COD) of IRPC-CP Phase 2 and the resume of Phase 1 in Q4/17.

■ **Price** decreased 0.2 Baht per kWh or 0.7%.

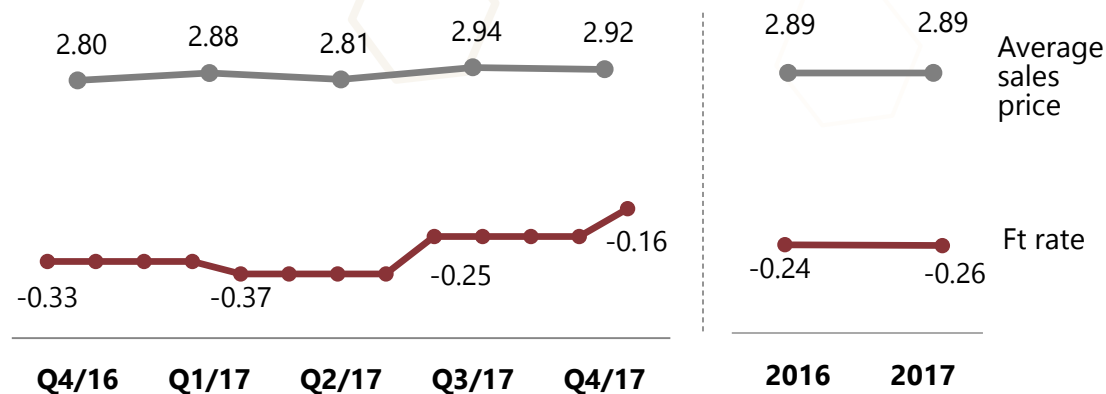
### Q4/17 VS Q4/16 (YoY)

■ **Volume** increased by 145 GWh or 161% due to the COD of IRPC-CP Phase 2.

■ **Price** increased 0.12 Baht per kWh or 4%.

## Quarterly average sales price & Ft rate

(THB/kWh, THB)



### 2017 VS 2016 (12M)

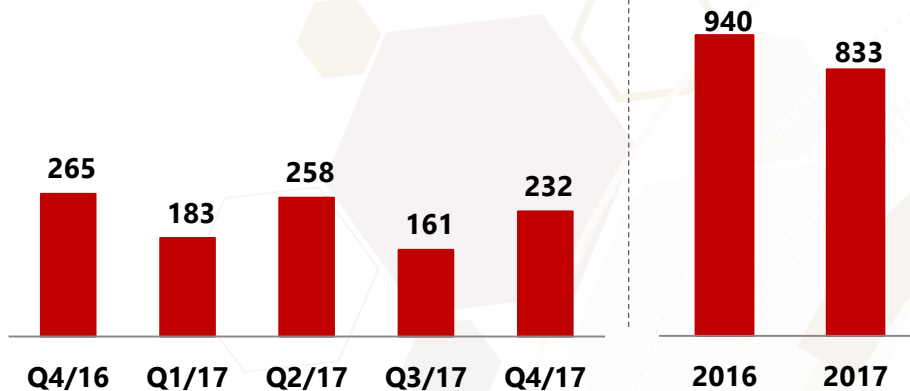
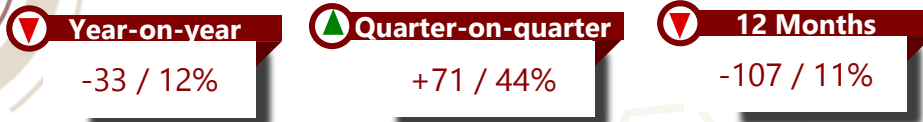
■ **Volume** increased by 51 GWh or 15% due to the COD of IRPC-CP Phase 2.

■ **Price** remained at 2.89 Baht per kWh.

# IRPC-CP Power Plant (SPP): Steam (3/3)

## Quarterly steam sales volume

('000 tons)



### Q4/17 VS Q3/17 (QoQ)

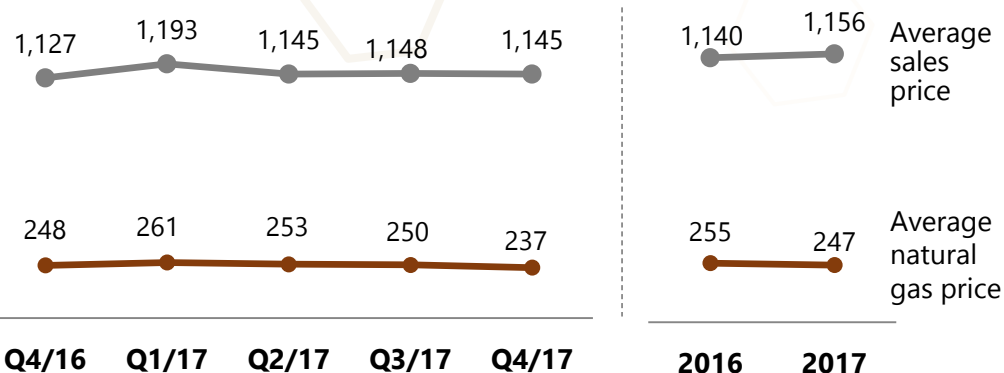
- Volume** increased 71 thousand tons or 44% due to the COD of Phase 2 therefore, the power plant can produce steam from both Cogeneration and Auxiliary boiler.
- Price** decreased by 3 Baht per ton or 0.3% due to lower natural gas price.

### Q4/17 VS Q4/16 (YoY)

- Volume** decreased by 33 thousand tons or 12% due to the shutdown for commissioning between Phase 1&2.
- Price** increased by 18 Baht per ton or 2%.

## Quarterly average sales price & average natural gas price

(THB/ton, THB/MMBTU)



### 2017 VS 2016 (12M)

- Volume** decreased by 107 thousand tons or 11% due to customer shutdown for maintenance in Q1/17 and the shutdown for commissioning between Phase 1&2.
- Price** increased by 16 Baht per ton or 1%.

# Decrease in cost of sales and services 12M mainly from reserved shutdown and customer shutdown

## Quarterly cost of sales and services\*

(THB Million)

### Year-on-year

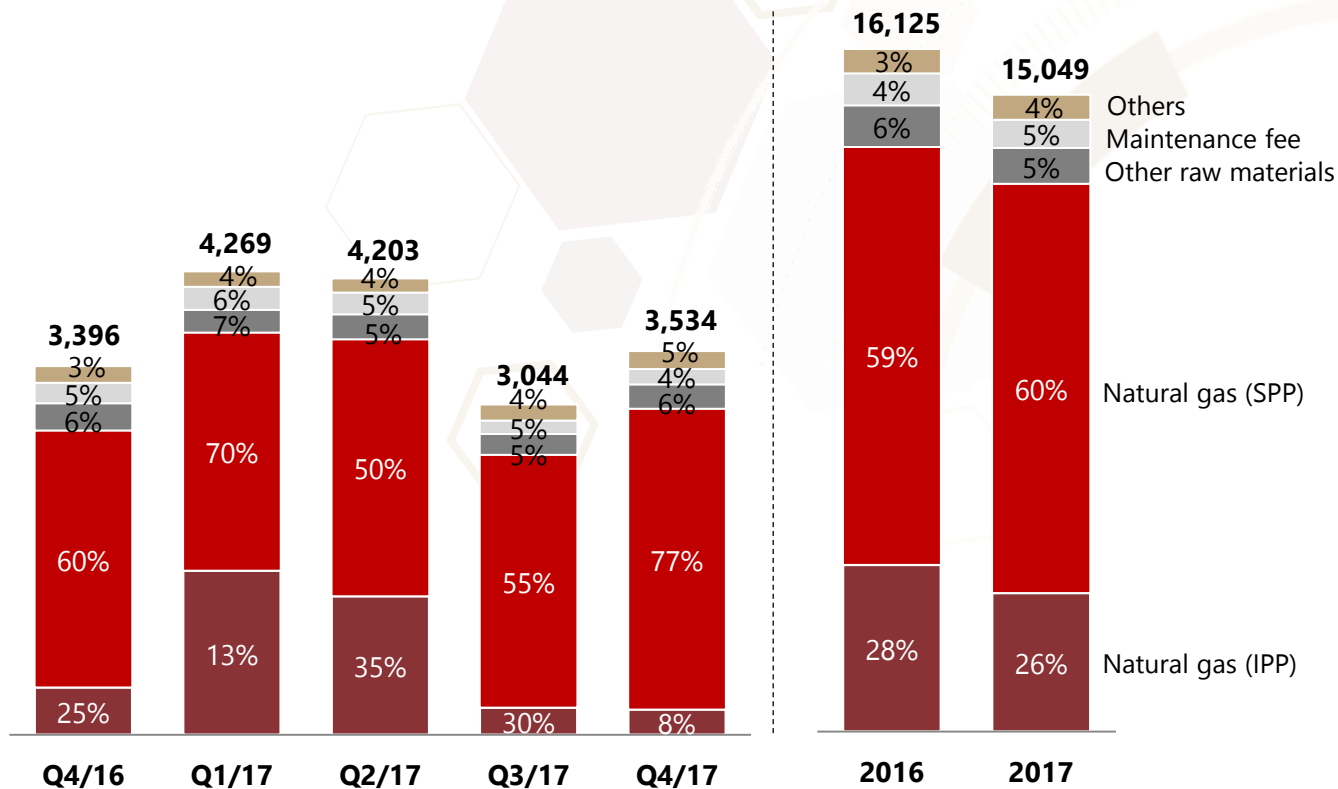
+138 / 4%

### Quarter-on-quarter

+490 / 16%

### 12 Months

-1,076 / -7%



### Q4/17 VS Q3/17 (QoQ)

Cost of sales and services in Q4/17 increased by THB 490 million or 16% due to the increase in cost of natural gas from IRPC-CP that COD full phases.

### Q4/17 VS Q4/16 (YoY)

Cost of sales and services increased by THB 138 million or 4% due to the increase in cost of natural gas from the COD of IRPC-CP Phase 2.

### 2017 VS 2016 (12M)

Cost of sales and service in 2017 decreased by THB 1,076 million or 7% due to lower natural gas price; lower sales volume of Sriracha Power Plant from reserved shutdown.

# SPP is GPSC's main and prospering profit generator

## Quarterly gross profit and gross profit margin\*

(THB Million, %)

### Year-on-year

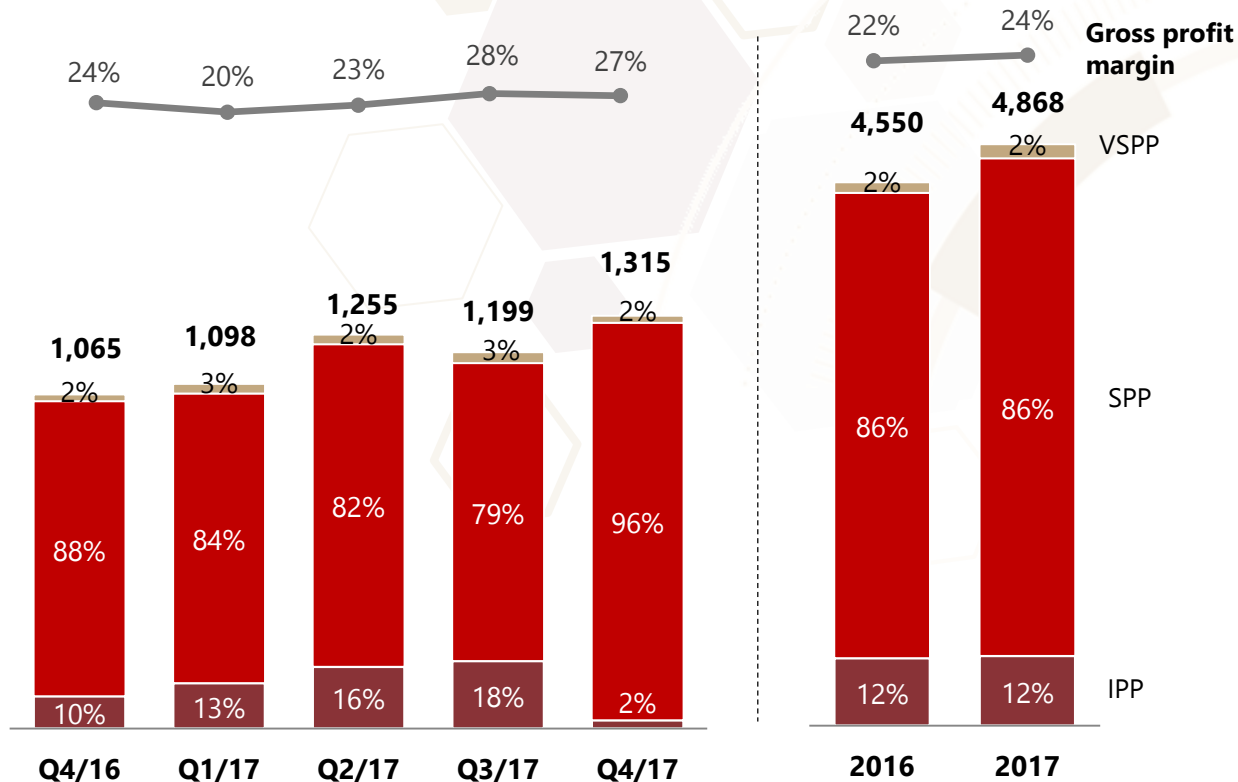
- ▲ GP +250 / 23%
- ▲ GPM +3%

### Quarter-on-quarter

- ▲ GP +116 / 10%
- ▼ GPM -1%

### 12 Months

- ▲ GP +318 / 7%
- ▲ GPM +2%



### Q4/17 VS Q3/17 (QoQ)

- Gross profit** in Q4/17 was THB 1,315 million increased by THB 116 million or 10% mainly due to the COD of IRPC-CP full phases and higher sales volume at Rayong Plant.
- Gross profit margin** slightly decreased by 1% due to higher maintenance cost of Sriracha Power Plant during CI.

### Q4/17 VS Q4/16 (YoY)

- Gross profit** increased by THB 250 million or 23% mainly due to the COD of IRPC-CP Phase 2 and higher sales volume at Rayong Plant.
- Gross profit margin** also increased by 3%.

### 2017 VS 2016 (12M)

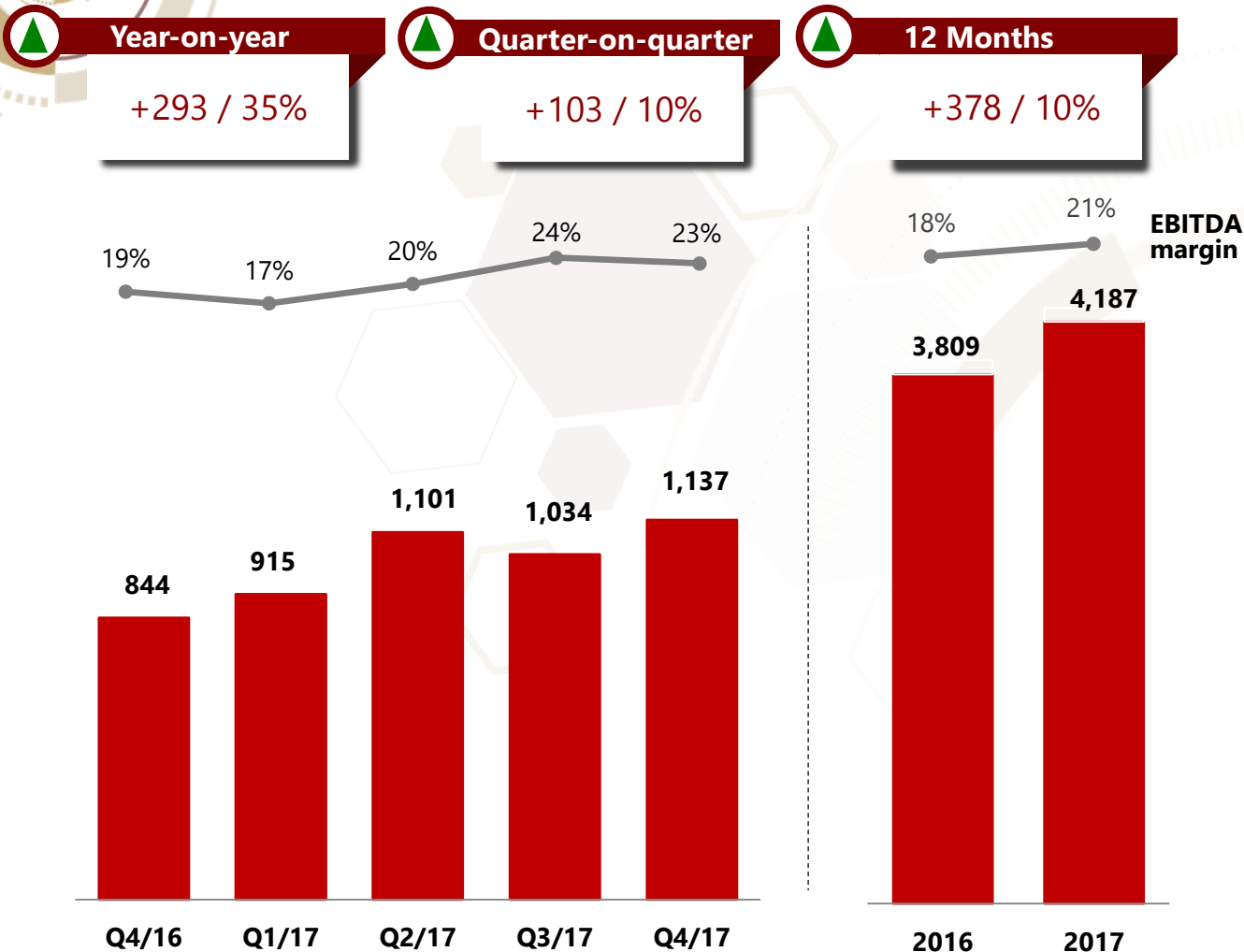
- Gross profit** in 2017 was THB 4,868 million increased by THB 318 million or 7% due to lower natural gas price and lower maintenance cost.
- Gross profit margin** also increased by 2%



# EBITDA increased by 10% QoQ

## Quarterly EBITDA and EBITDA margin

(THB Million, %)



### Q4/17 VS Q3/17 (QoQ)

■ **EBITDA** in Q4/17 was THB 1,137 million increased by THB 103 million or 10% mainly due to the rise in sales volume from Rayong Plant and IRPC-CP that COD full phases together with higher Ft.

### Q4/17 VS Q4/16 (YoY)

■ **EBITDA** increased by THB 293 million or 35% due to the rise in sales volume together with higher Ft.

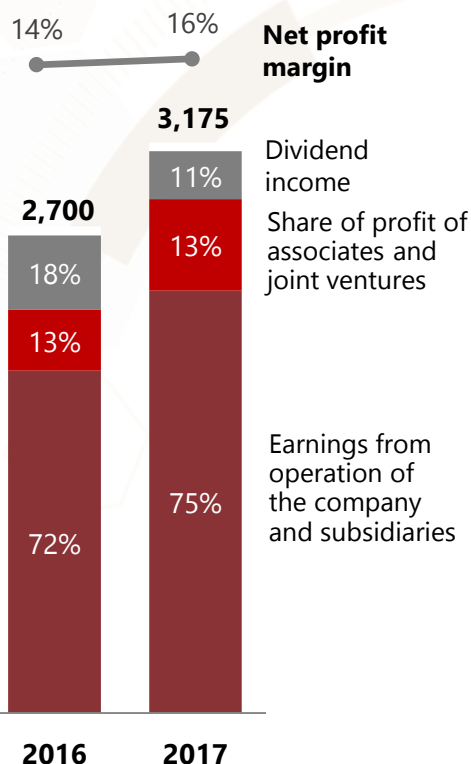
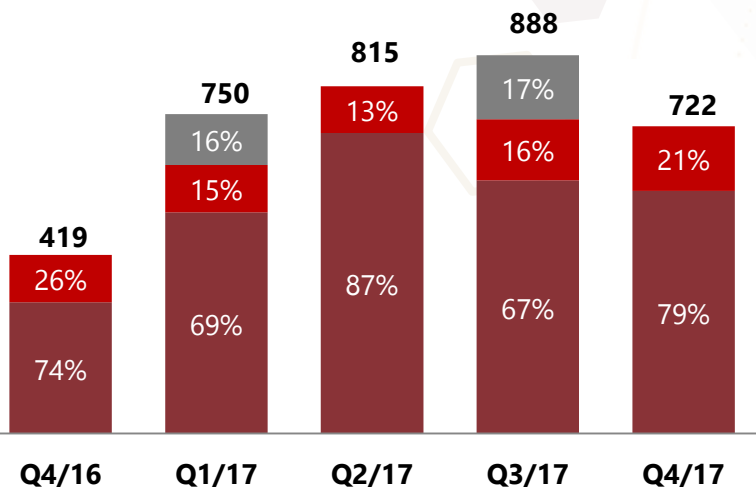
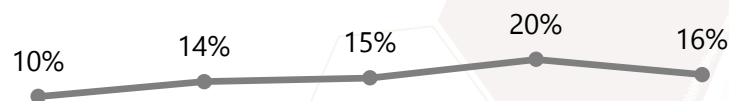
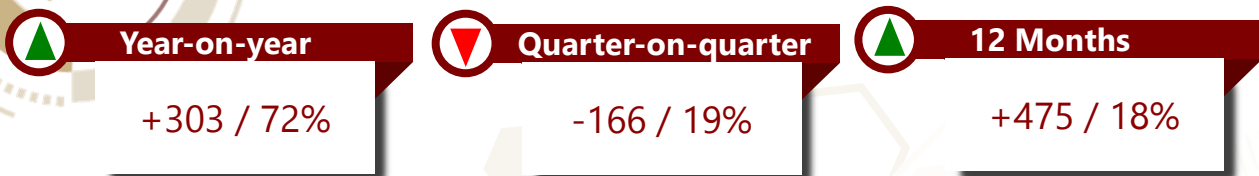
### 2017 VS 2016 (12M)

■ **EBITDA** in 2017 was THB 4,187 million increased by THB 378 million or 10% due to the rise in sales volume, lower natural gas price and, lower SG&A.

# Net profit grew 72% YoY from strong operating earnings and supported by return from investments

## Quarterly net profit and net profit margin

(THB Million, %)



### Q4/17 VS Q4/17 (QoQ)

**Net profit** decreased by THB 166 million or 19% resulted mainly from the dividend income from Ratchaburi Power Company Limited (RPCL) of THB 150 million and income from IRPC-CP Phase 1's contractor of THB 66 million that the company received in Q3/17.

### Q4/17 VS Q4/16 (YoY)

**Net profit** increased by THB 303 million or 72% resulted from the rise in sales volume at Rayong Plant together with higher Ft rate, and the COD of IRPC-CP full phases in Q4/17.

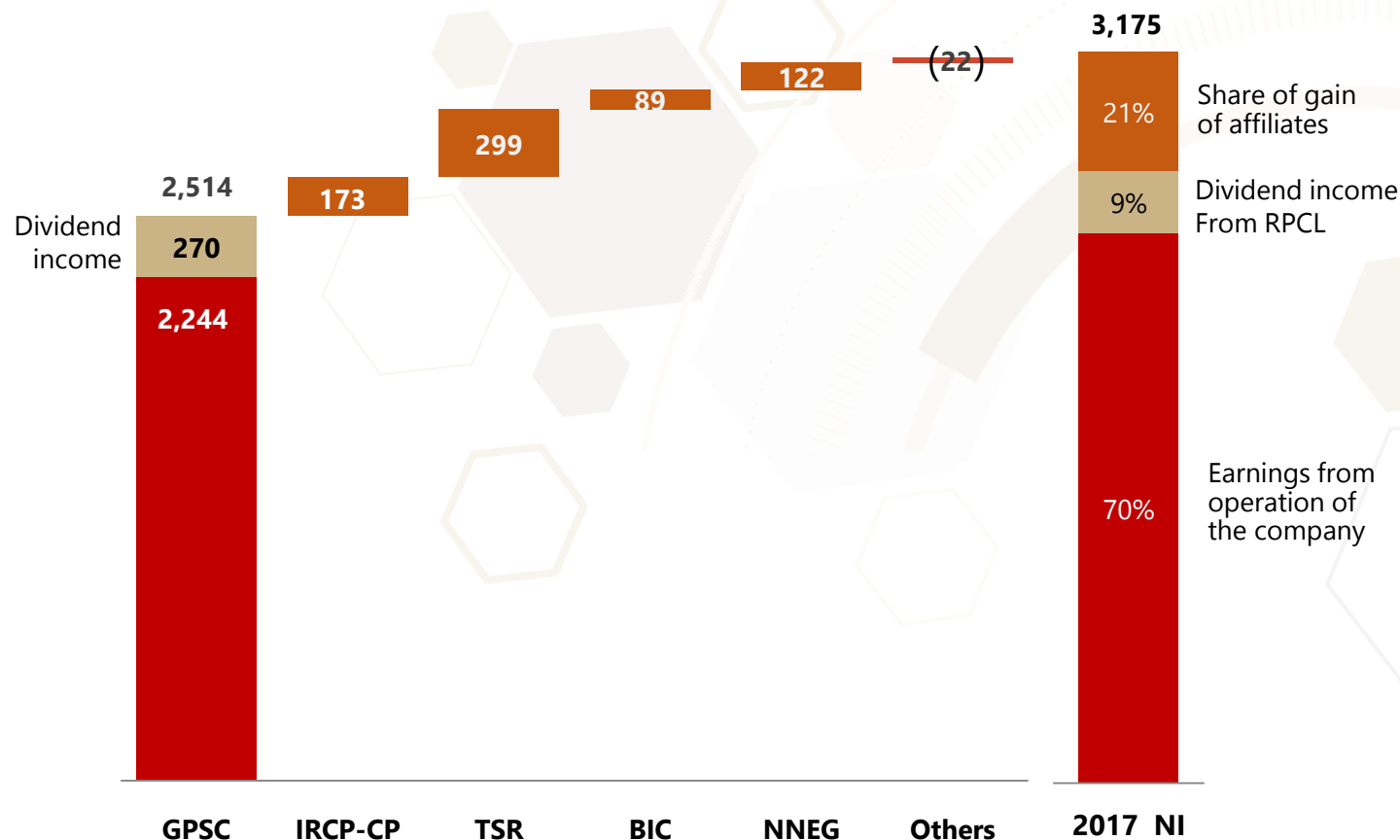
### 2017 VS 2016 (12M)

**Net profit** increased by THB 475 million or 18% due to the rise in sales volume at Rayong Plant and IRPC-CP with lower natural gas price. Also, supported by higher share of profits from NNEG (COD Q3/16) and BIC2 (COD Q3/17).

# IRPC-CP has contributed largest portion of Earning from operation of the company and subsidiaries in 2017

## Net profit breakdown by subsidiaries

(THB Million)



- Compare to other subsidiaries, IRPC-CP has contributed largest portion of earnings from operation of company and subsidiaries, THB 173 million and TSR has contribute largest share of gain, THB 299 million which also effect the NI as a whole to increase from 2016.

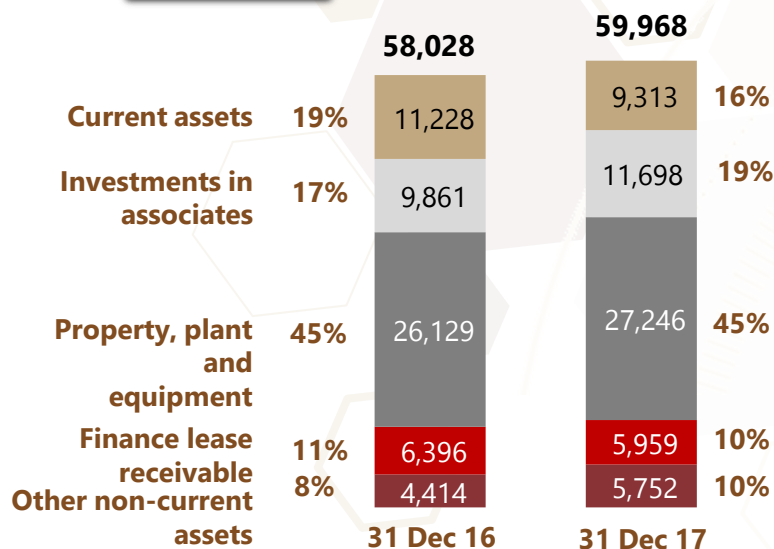
# Summary of financial position of GPSC and its subsidiaries

## Total Assets (THB MM)



Year-on-year

+1,940 / 3%



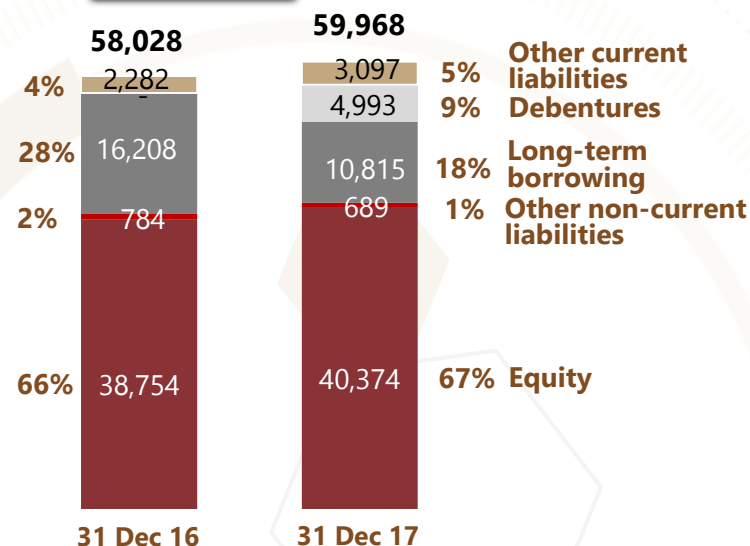
- Total assets as at 31 Dec 17 were THB 59,968 million, increased by THB 1,940 million or 3% from 31 Dec 16.
- The increase was mainly from the increase in investments due to the capital raising of XPCL and BIC as well as PPE of IRPC-CP and ISP1

## Total Liabilities & Shareholders equity (THB MM)



Year-on-year

+1,940 / 3%



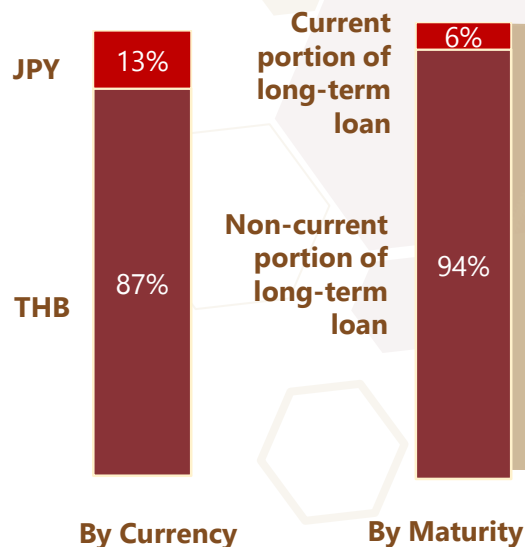
- Total liabilities were THB 19,594 million increased by THB 320 million or 2% mainly from account payable from construction for IRPC-CP and CUP-4.
- Equity were THB 40,374 million increased by THB 1,620 million or 4% mainly from an increase in the unappropriated retained earnings.



# Well-managed debt profile and continuous deleveraging

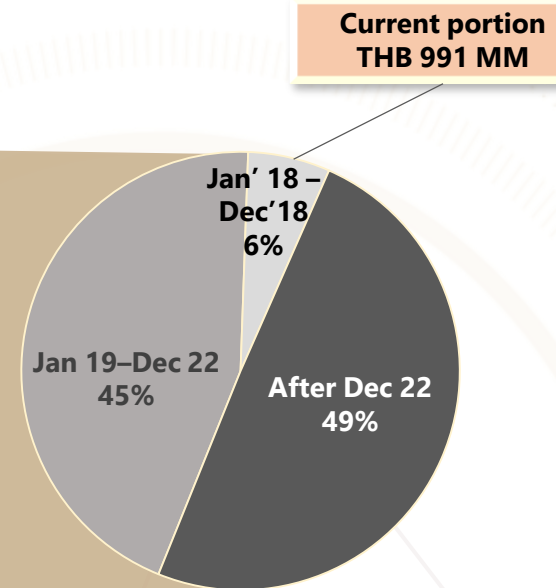
## Debt profile

Total interest-bearing debt : THB 15,808 million



- All debt balance as at 31 December 2017 is in THB and JPY currency.
- The interest-bearing debt is comprised of long-term loan and debentures which includes 6% of current portion.

## Debt repayment plan

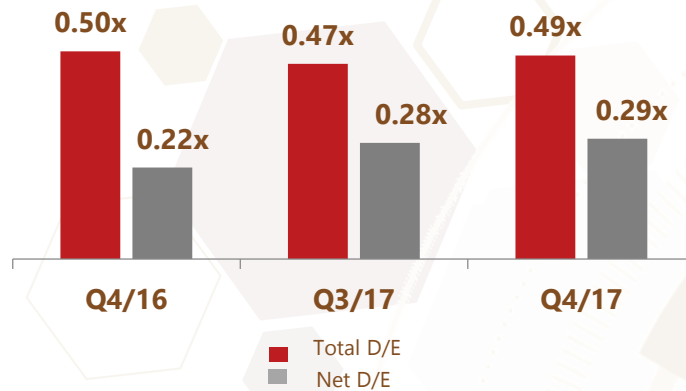


% of total interest-bearing debt

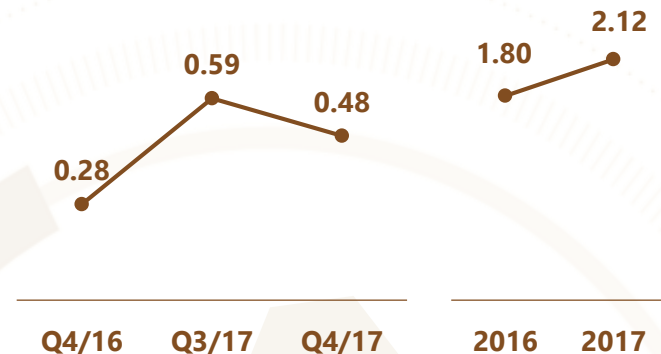
- Non-current portion of interest-bearing debt equals to THB 14,817 million while current portion equals to THB 991 million.
- 44% of total interest-bearing debt will be repaid between 2019 – 2022.

# Key financial ratios support GPSC's strong financial position

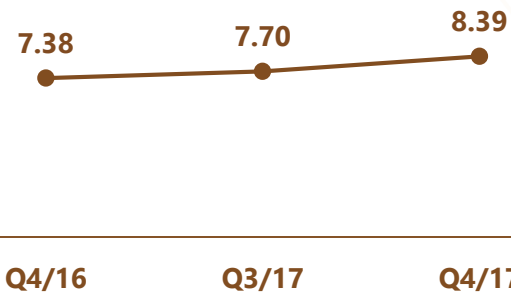
## Total D/E and Net Debt/ Equity ratio (Times)



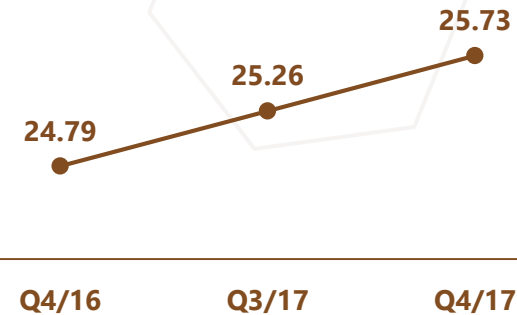
## Earning per share (EPS) (Baht/share)



## ROE (%)



## Book value per share (BVPS) (Baht/share)





บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี จำกัด (มหาชน)  
Global Power Synergy Public Company Limited

# THANK YOU

## **Global Power Synergy Public Company Limited**

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Ratios	Formula
Gross profit margin	$\frac{\text{Gross profit}}{\text{Revenue from sales of goods and service} + \text{Revenue from finance lease}}$
Net profit margin	$\frac{\text{Net profit}}{\text{Total Revenue}}$
Total Debt to Equity	$\frac{\text{Total liabilities}}{\text{Total shareholder's equity}}$
Net debt to Equity ratio	$\frac{\text{Interest bearing debts} - (\text{Cash and cash equivalents} + \text{Restricted cash} + \text{Current investments})}{\text{Total shareholder's equity}}$
DSCR	$\frac{\text{EBITDA for DSCR for the last 12 months}}{\text{Principal and Interest to be paid in the next 12 months}}$
Earning per share (EPS)	$\frac{\text{Net profit for the company}}{\text{Weighted average number of shares}}$
ROE	$\frac{\text{Net profit for the company}}{\text{Average shareholder's equity}}$
ROA	$\frac{\text{Net profit (last 12 months)}}{\text{Average assets}}$
Book value per share (BVPS)	$\frac{\text{Shareholder's equity for the company}}{\text{Average shareholder's equity for the company}}$



# 2018 Maintenance schedule: Sriracha and Rayong plants

Plant	Tag no.	Description	2018											
			Q1			Q2			Q3			Q4		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CUP-1	H-13701	Aux. Boiler.11		16 <b>1Y</b> 26										
	N-13901	GTG11												
	H-13702	HRSG11			5 <b>1Y</b> 16									
	N-13902	GTG12				7 <b>1Y</b> 17								
	H-13703	HRSG12							7 <b>HG</b> 20					
	N-13903	GTG13							7 <b>3Y</b> 20					
	H-13704	HRSG13												
	N-13904	GTG14												
	H-13705	HRSG14		3 <b>1Y</b> 13										
	N-13961	GTG15										16 <b>1Y</b> 26		
	H-13761	HRSG15												
	N-13962	GTG16												
	H-13762	HRSG16	21 <b>1Y</b> 31											
CUP-2	H-23701	Aux. Boiler.21							1 <b>1Y</b> 11					
	N-23901	GTG21			1 <b>HG</b> 14									
	H-23701	HRSG21			1 <b>3Y</b> 14									
	N-23902	GTG22						10 <b>1Y</b> 20						
	H-23702	HRSG22												
	N-23911	Steam Turbine21												
CUP-3	H-33701	Aux. Boiler 31							4 <b>1Y</b> 14					
	H-33711	Aux. Boiler 32										4 <b>1Y</b> 24		
	H-33712	Aux. Boiler 33									26/9 <b>1Y</b> 6/10			
SRC	11MB	GT11											<b>MO</b>	
	1-211-SG-101	HRSG#1						<b>3Y</b>						
	12MB	GT12											<b>MO</b>	
	1-211-SG-201	HRSG#2						<b>3Y</b>						
	STG	Steam Turbine 10											<b>MO</b>	

## Notes Rayong Site

### GTG

HGPI Hot Gas Path Inspection for Gas Turbine 14 days  
MI Major Inspection for Gas Turbine 22 days

### STG

Minor Minor Inspection for Steam Turbine 15 days  
1MO 2<sup>nd</sup> Major Overhaul for Steam Turbine 23 days  
2MO 2<sup>nd</sup> Major Overhaul for Steam Turbine 27 days

### AB

1Y One Year Inspection Aux. Boiler 11 days  
3Y Three Year Inspection Aux. Boiler 13 days

### HRSG

1Y One Year Inspection HRSG 11 days  
3Y Three Year Inspection HRSG 14 days

### Other

1Y One Year Inspection NG Station Test Online  
5Y Five Year Inspection NG Station (NDT) Online  
FO Forced Outage Depending on physical damage

## Notes Sriracha Site

### GTG

CI Combustion Inspection for Gas Turbine 8 days  
HGPI Hot Gas Path Inspection for Gas Turbine 26 days  
MO Major Overhaul for Gas Turbine 33 days

### HRSG

1Y One Year Inspection HRSG 8 days  
3Y Three Year Inspection HRSG 33 days

### Other

1Y One Year Inspection NG Station Test Online  
5Y Five Year Inspection NG Station (NDT) Online  
FO Forced Outage Depending on physical damage

# 2018 Maintenance schedule: IRPC-CP

Plant	Unit	2018			
		Q1	Q2	Q3	Q4
IRPC-CP	<b>Block 1</b>				
	CTG 21	E	A		
	HRSO 21	E	YI		
	CTG 22	E	A		
	HRSO 22	E	YI		
	STG 23				
	<b>Block 2</b>				
	CTG 31				
	HRSO 31		E		A
	CTG 32		E		YI
	HRSO 32	B			
	STG 33	B			
	Aux. Boiler			YI	

## Notes

YI	Yearly Inspection	5 days
YI	Yearly Inspection Aux Boiler	15 days
A	CTG Inspection Level A	5 days
B	CTG Inspection Level B	20 days
C	CTG Inspection Level C	24 days
E	EPC Inspection End of Warrantee	3 days