



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

# Q2 2016 Results Presentation Opportunity Day

*23<sup>rd</sup> August 2016*

## 11.8% committed CAGR

In Q2/16, GPSC has been recognizing **more revenue from the SPPs** and will gain more revenue from the under construction power plants once completed. GPSC's existing committed projects will add 546 MW more to achieve 1,922 operating MW by 2019, marking 11.8% committed CAGR within 3 years.



## THB 686 Million in profit

Net profit of Q2/16 decreased by THB 185 million from Q1/16 mainly due to there was a dividend income amounting to THB 180 million from RPCL in Q1/16.

However, **GPSC achieved significant higher net profit in 1H2016** by THB 552 million or 55% from 1H2015 from production capacity expansion and plant optimization.



## GPSC in SET50 Index

GPSC operates business following standards of corporate governance and fair disclosure of information contributing to the awards & recognitions received from the stakeholders including **ESG100, Best CFO Awards, Investors' Choice Award** and **currently was included in SET50**.



## NNEG COD as planned

NNEG started **COD on 3 June 2016 as planned** with operating capacity of 125 MW and steam capacity at 30 T/h. GPSC's Management team ensure efficient project management and high competent staffs, both domestic and international projects in order to meet the construction schedule.

## BUSINESS PORTFOLIO



### Combined Cycle / Cogeneration

- Electricity 1,517 MW
- Steam 1,582 T/H
- Chilled Water 12,000 RT



### Renewable Energy

- Electricity 58 MW



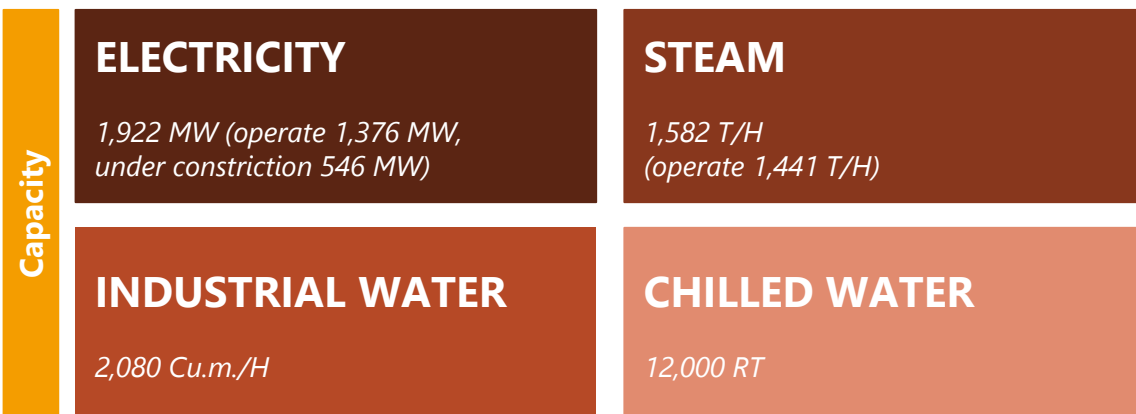
### Hydroelectric

- Electricity 347 MW



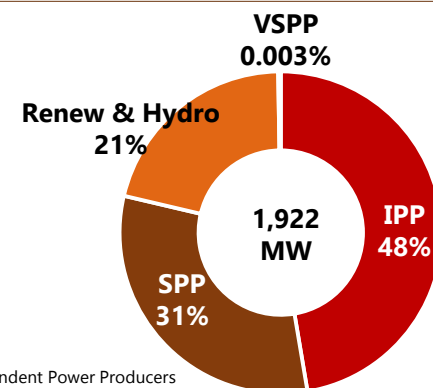
### Other Businesses

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



### ELECTRICITY CAPACITY BREAKDOWN

Unit: Megawatt



IPP Independent Power Producers  
 SPP Small Power Producers  
 VSPP Very Small Power Producers



## 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



#### CUP-4 (SCOD in Q1/2018)

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

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

#### Total

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



#### Phase 1 COD

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

Phase 2 under construction (SCOD in June 2017)

### 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 Q4/2017)

- Electricity: 20.8 MW



### CHPP Solar Cooperatives (VSPP) 100%

(SCOD in January 2017)

- Electricity: 5 MW



## Hydroelectric

### Kayaburi Power (IPP) 25%

(SCOD in October 2019)

- Electricity: 1,285 MW



### Nam Lik 1 Power 40%

(SCOD in 2018)

- Electricity: 65 MW



## Other Businesses

### Business Service Alliance 25%



### 24M Technologies 15.8%



Project under construction

Upcoming COD by 2017

## GPSC's Business Portfolio

|   |  |  |
|---|--|--|
| <br><b>Sriracha</b><br><b>700 MW</b>  | <br><b>Ratchaburi Power</b><br><b>1,400 MW</b>   | <br><b>Xayaburi Power</b><br><b>1,285MW</b>                    |
| <br><b>Nava Nakorn Electricity Generation</b><br><b>125 MW</b><br><b>30 T/h</b> | <br><b>Bangpa-in Cogeneration</b><br><b>Phase 1 : 117 MW</b><br><b>Phase 2 : 117 MW</b><br><b>20 T/h</b> <b>20 T/h</b> | <br><b>IRPC Clean Power</b><br><b>240 MW</b><br><b>300 T/h</b> |
| <br><b>CUP 1-4</b><br><b>384 MW</b> <b>1,410 T/h</b>                            |  |  |
| <br><b>Solar Cooperatives</b><br><b>5 MW</b>                                    | <br><b>Thai Solar Renewable</b><br><b>80 MW</b>  |  |

**ICHINOSEKI SOLAR POWER 1 GK Japan : ISP1 20.8 MW**

**NAM LIK 1 Lao PDR : NL1PC 65 MW**

## Pricing Structure

**IPP/Import = Availability Payment + Energy Payment**

|                 |  |   |
|-----------------|--|---|
| Investment cost | <ul style="list-style-type: none"> <li>• Equity Return</li> <li>• Financing Cost</li> <li>• Fix O&amp;M</li> </ul> | <ul style="list-style-type: none"> <li>• Fuel Cost</li> <li>• Variable O&amp;M</li> </ul> |
|-----------------|--|---|

**SPP (firm) = Capacity Payment + Energy Payment**

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Vary by type of fuel &amp; Contract Period</li> <li>• FX adjustment</li> </ul> | <ul style="list-style-type: none"> <li>• Vary by type of fuel</li> <li>• Fuel adjustment</li> </ul> |
|---|---|

**Cogen (SPP non-firm) = K factor(seasonal weight) x EP**

**Cogen (Sell to IU) = Electricity + Steam**

|                                    |                   |
|------------------------------------|-------------------|
| • Base Tariff (PEA : TOU 4.2) + Ft | • Cost Plus Basis |
|------------------------------------|-------------------|

**VSPP Renewable = Base tariff + Ft + Adder**

**VSPP Renewable = FiT**

**Renewable = FiT**

**Renewable = Fixed Rate with escalation**



## Q2 2016 Significant Events



Financial Performance

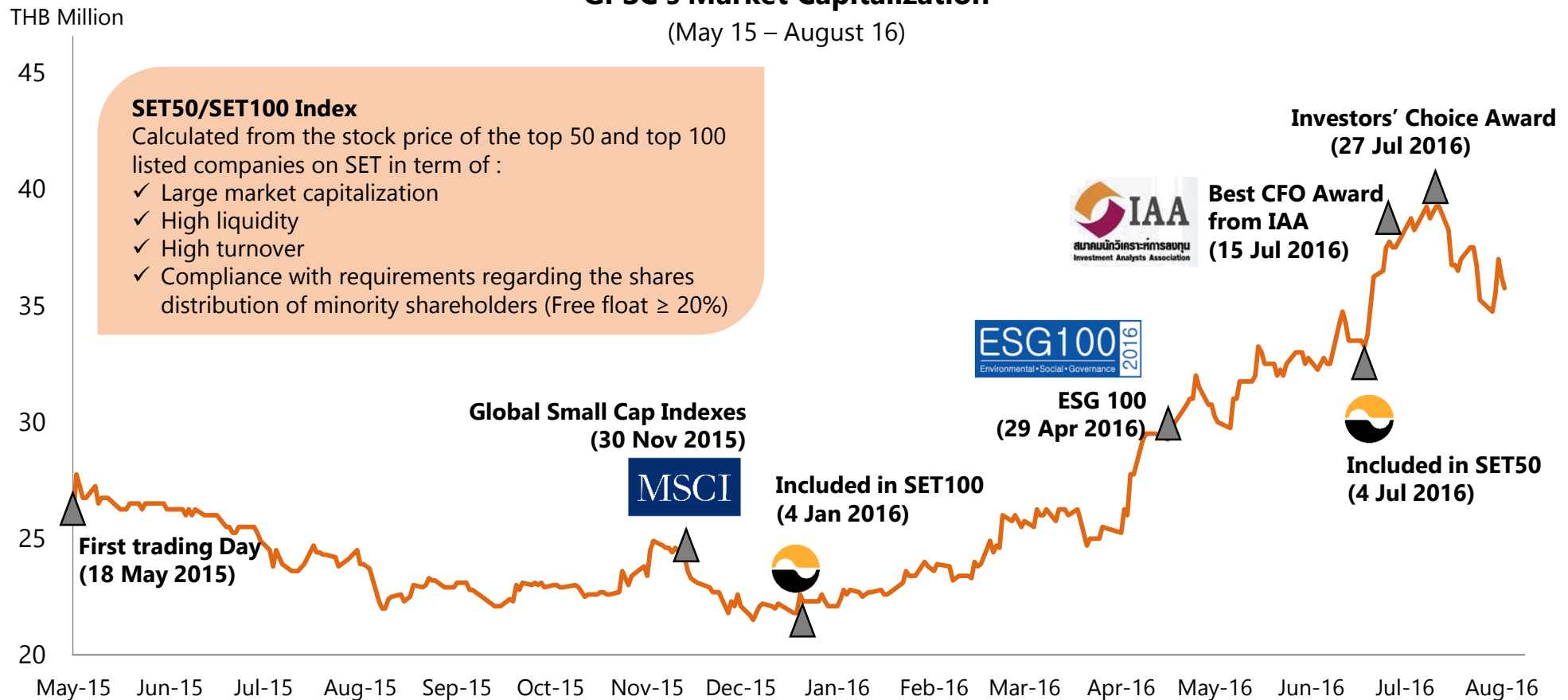


Project Update

# GPSC has been included in SET50 for 2H16 reflecting company's performance

## GPSC's Market Capitalization

(May 15 – August 16)



- IPO in May 2015, GPSC have been growing our business with continuously increased market capitalization.
- Starting from November 2015 where GPSC has been included in the Global standard, namely **MSCI Index**.
- GPSC was classified **to be in SET100** in January 2016 and recently in July 2016 **qualified as SET50**.
- In April 2016, GPSC has been shortlisted **in ESG 100** as one of 100 companies listed in SET with sustainable business by Thaipat Institute
- **These are the results of confidence on GPSC performance from all stakeholders.**



15Jul16: SET congratulates GPSC on being listed in **SET50**



14Jul16: **"Best CFO"** award from IAA



27Jul16: **Investors' Choice Award** from Thai Investor Association



29Apr16: Listed on 2016 **ESG 100** Sustainable Business

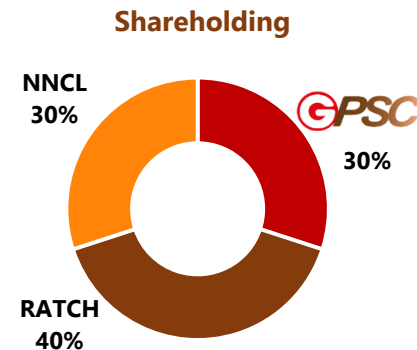


# NNEG has started COD as planned with a promising revenue generating



**Nava Nakorn Electricity Generating Company Limited (NNEG)**  
*Pathumthani Province*

- ✓ NNEG starts **COD on 3 June 2016 as planned** with operating capacity of 125 MW and steam capacity at 30 T/h
- ✓ In this Q2 2016, one month after COD, **NNEG generates revenue** from selling of electricity and steam account for **172 THB million**
- ✓ GPSC recognized the profit per the shareholding percentage and presented as the shares of profit of the joint ventures in the statement of income



# XPCL receives subsidies from Lao PDR's Government to compensate for higher cost for environmental concerns

Fish passing facilities



Powerhouse concrete work



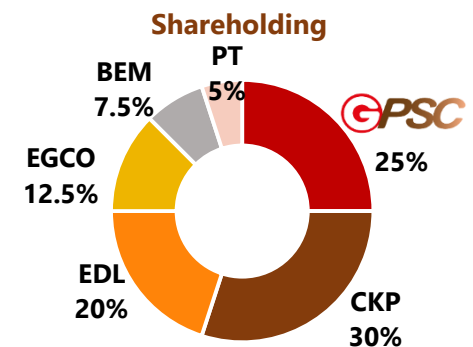
XAYABURI POWER

## Xayaburi Power Company Limited (XPCL)

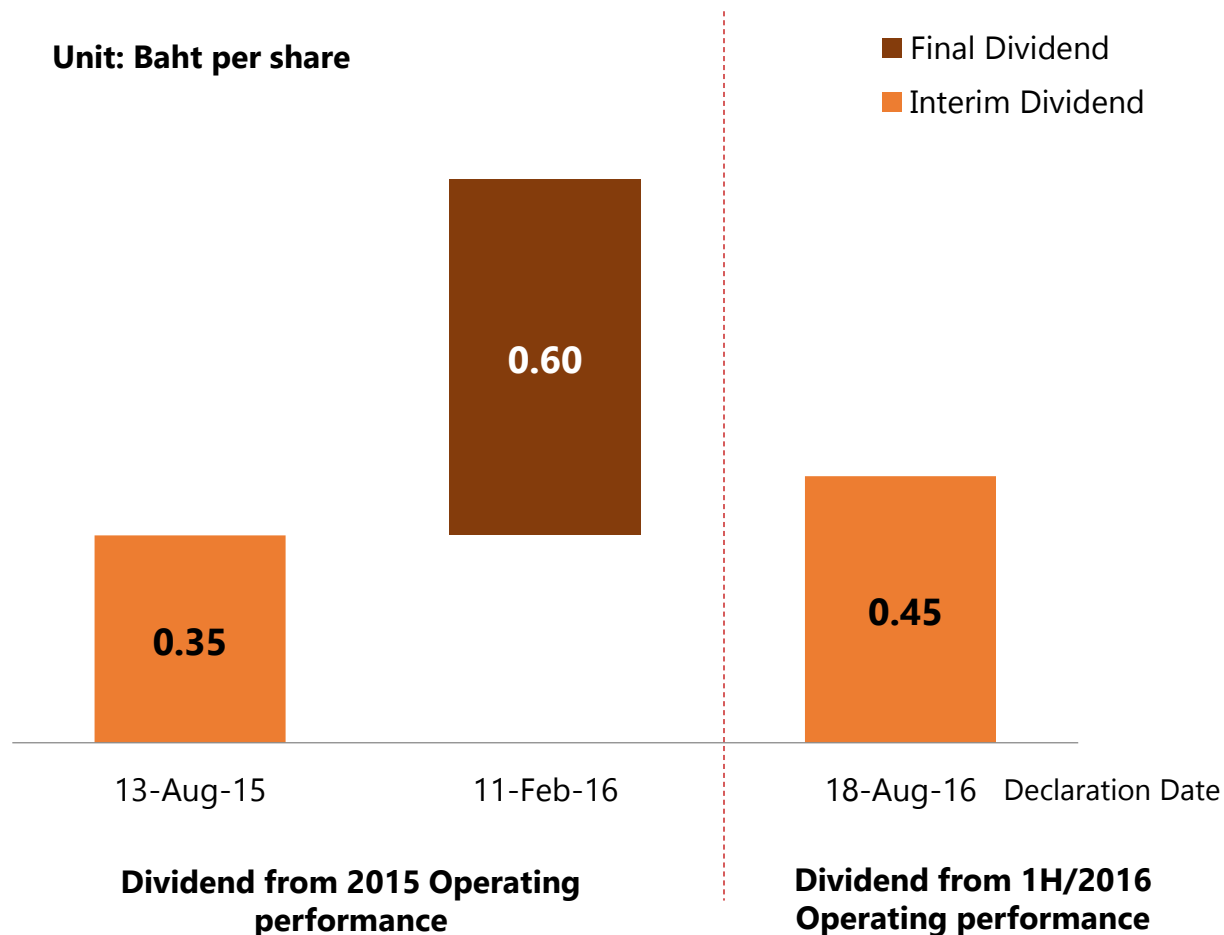
*Xayaburi, Lao PDR*

The additional requirements from Lao PDR's Government upon an environmental concerns in constructing XPCL power plant has caused an incremental construction costs . Therefore, the Government granted XPCL the compensations which are:

- ✓ **Decrease of corporate income tax**
- ✓ **Decrease of royalty fee**
- ✓ **Extend concession period for another 2 years** (after COD date);  
Total 31 years



Unit: Baht per share



- **On 18 August 2016, BOD approved** a resolution for the payment of interim dividend for 1H/2016.
- The **dividend per share is 0.45 Baht** which is higher than 2015 interim dividend, resulting from the better operating results.
- **The Record Date will be on 1 September 2016** for the right to receive the dividend.
- **The dividend payment date will be on 14 September 2016.**
- The dividend will be paid from the tax exemption profit portion wherein **individual shareholders shall not include as taxable income** and not be entitled to a dividend tax credit.

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



Q2 2016 Significant Events



**Financial Performance**

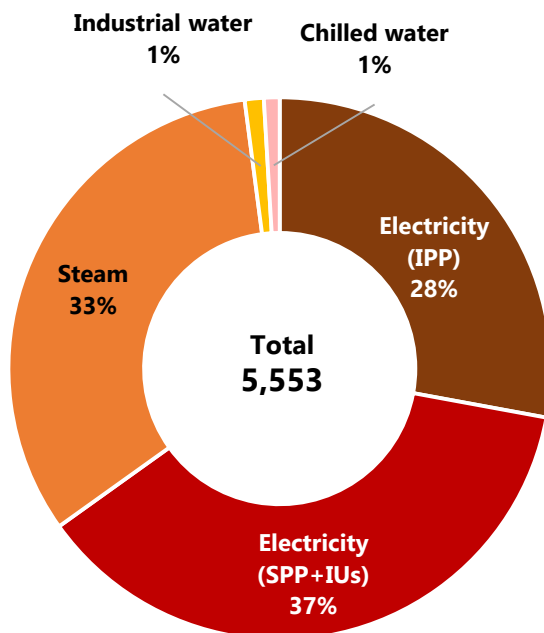


Project Update



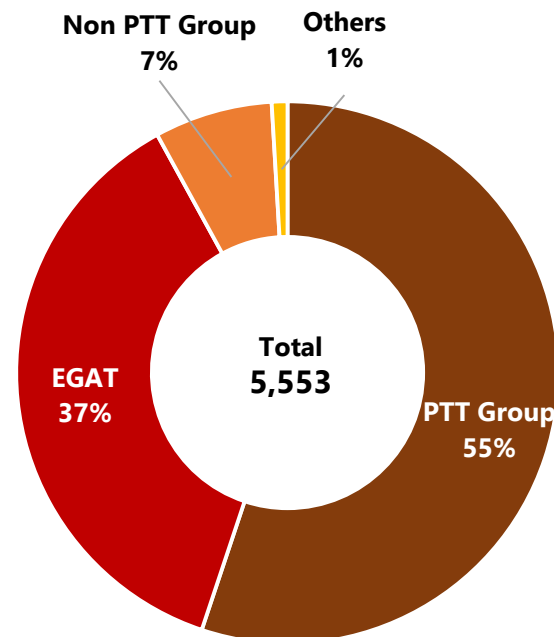
# Majority of GPSC's revenue is from electricity, PTT Group is GPSC's major customer

**Q2/16 Revenue by product**  
(THB million)



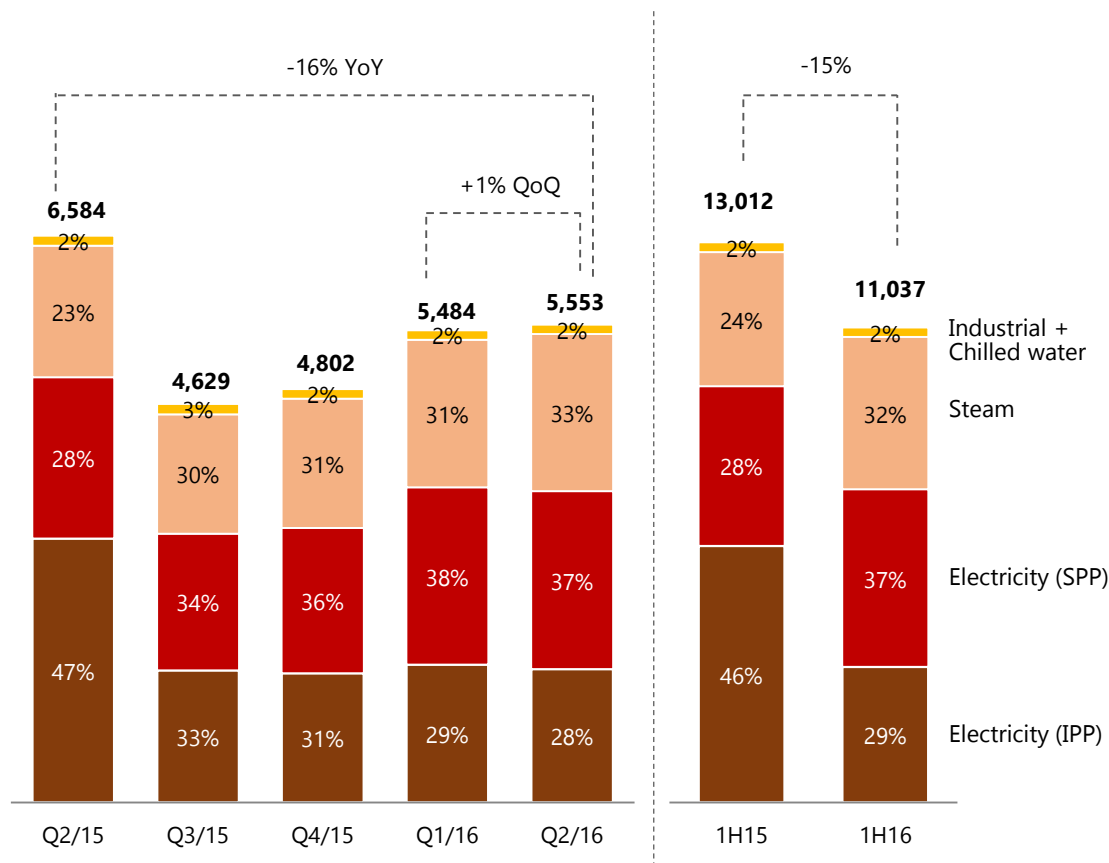
- Electricity and Steam are major source of GPSC's revenue, accounted for 98% of total revenue.

**Q2/16 Revenue by customer**  
(THB million)



- Accounted for more than 50% of total revenue, PTT Group is the largest customer of GPSC in Q2/16.

## Quarterly revenue (THB million)



### Q2/16 VS Q1/16 (QoQ)

- Operating revenue in Q2/16 increased by THB 69 million or 1%.
- The increase were mainly caused by higher sales volume from the company's operating power plants.

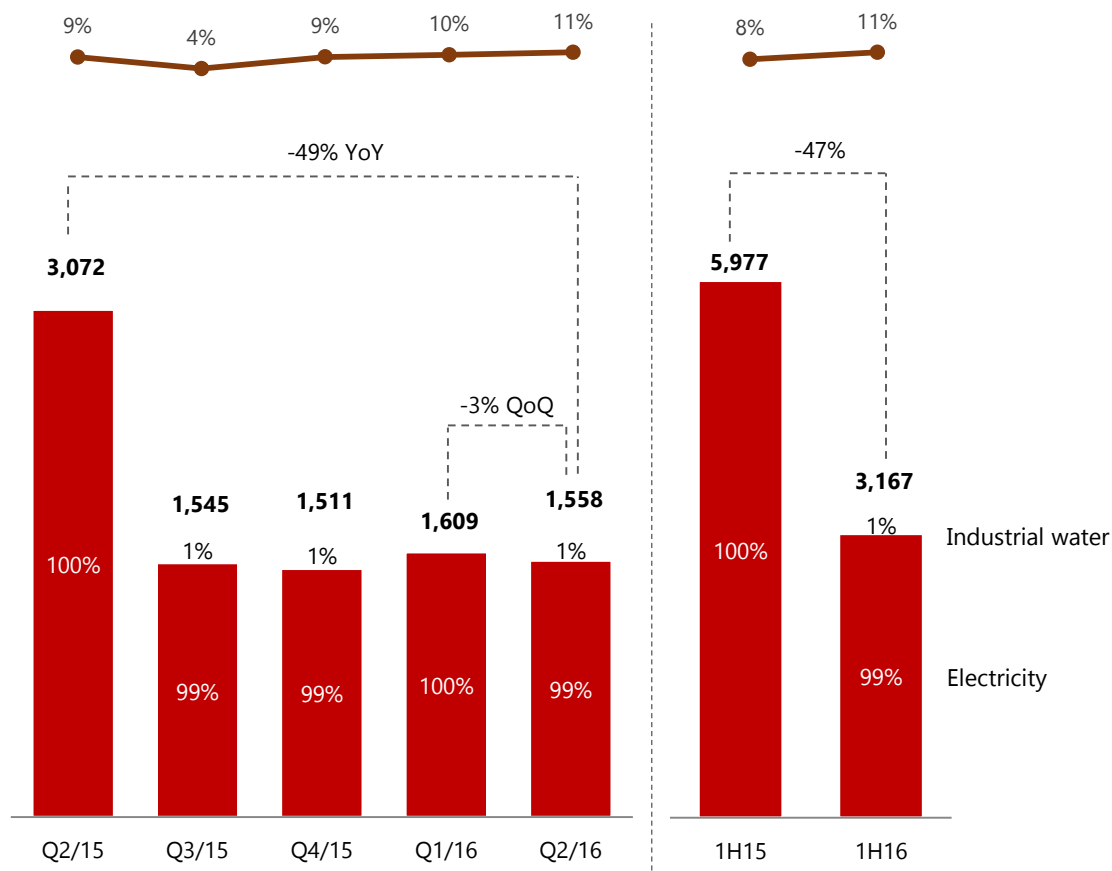
### Q2/16 VS Q2/15 (YoY)

- Operating revenue in Q2/16 decreased by THB 1,031 million or 16%.
- The decrease was due to the decline in revenue from Energy Payment (EP), from the lower sales volume of Sriracha plant and the lower sales price due to the reduction of Ft.

### 1H16 VS 1H15

- Operating revenue in 1H16 decreased by THB 1,975 million or 15% from lower sales volume to EGAT of Sriracha plant and the declining in the sales price followed the reduction in gas price.

## Quarterly revenue & gross profit margin (THB million, %)



### Q2/16 VS Q1/16 (QoQ)

- Total revenue in Q2/16 decreased by THB 51 million or 3% due to lower selling price resulted from lower gas price than in Q1/16.
- Gross profit increased by THB 14 million or 9% due to higher availability rate, weight factor and sales volume.

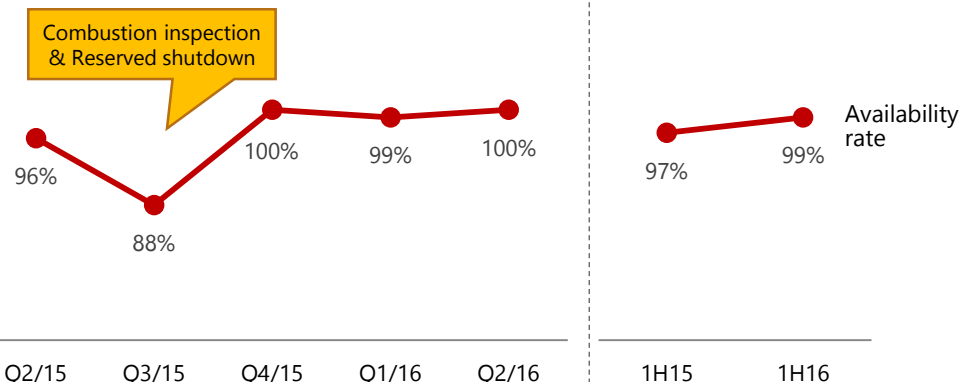
### Q2/16 VS Q2/15 (YoY)

- Total revenue in Q2/16 decreased by THB 1,514 million or 49% from lower sales volume per EGAT's dispatch instruction and the lower sales price due to reduction of gas price.
- Gross profit also decreased by THB 95 million or 35% due to the lower sales volume per EGAT's dispatch instructions.
- However, gross profit margin increased by 2% because of the lower variable maintenance cost by the decreases in the production volume.

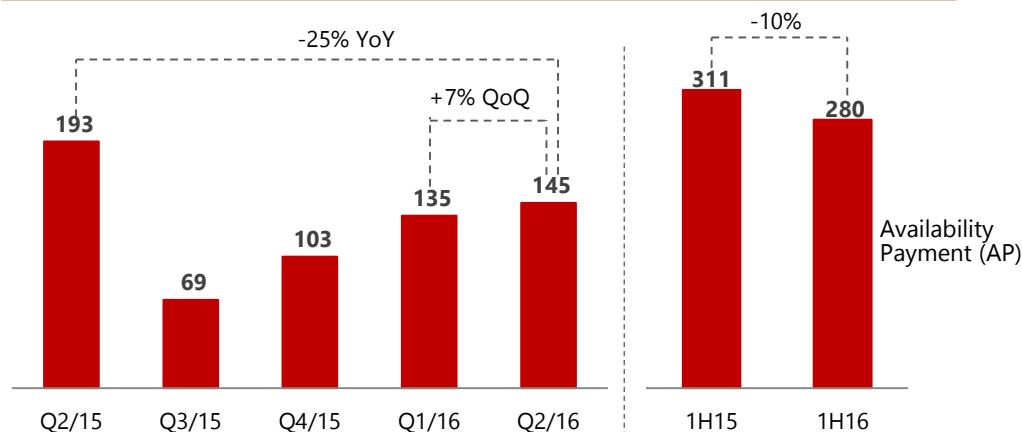
### 1H16 VS 1H15

- Total revenue in 1H16 decreased by THB 2,810 million or 47% because of lower dispatch and sales prices.
- Gross profit margin increased by 3% resulted from the lower maintenance cost caused by the lower production volume.

## Quarterly Availability Payment Rate (%)



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



### Q2/16 VS Q1/16 (QoQ)

- Availability payment rate in Q2/16 increased to almost 100% thanks to an improvement in plant management.
- Revenue from Availability Payment (AP) in Q2/16 increased by THB 10 million or 7% from higher weight factor, mainly affected by the increase in demand of power consumption in Q2/16.

### Q2/16 VS Q2/15 (YoY)

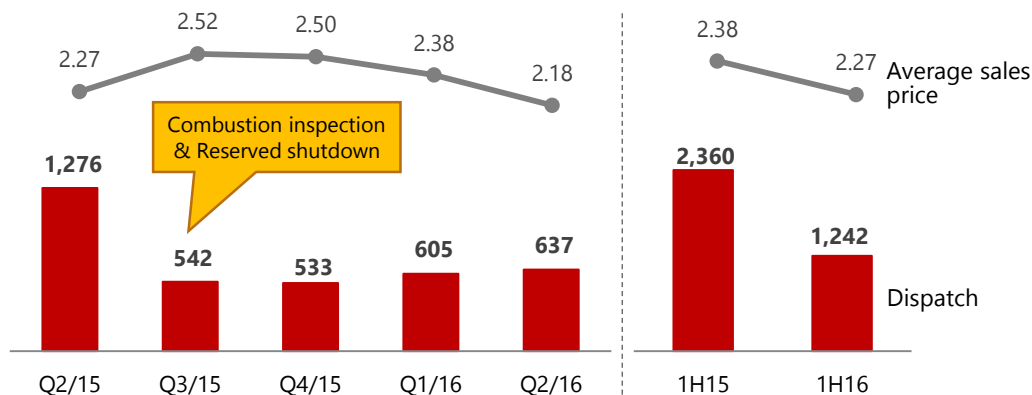
- Availability payment rate in Q2/16 increased by 4% from Q2/15 when there was scheduled plant shutdown for inspection.
- Revenue from Availability payment decreased by THB 48 million or 25% due to the lower weight factor in 2016 than in 2015.

### 1H16 VS 1H15

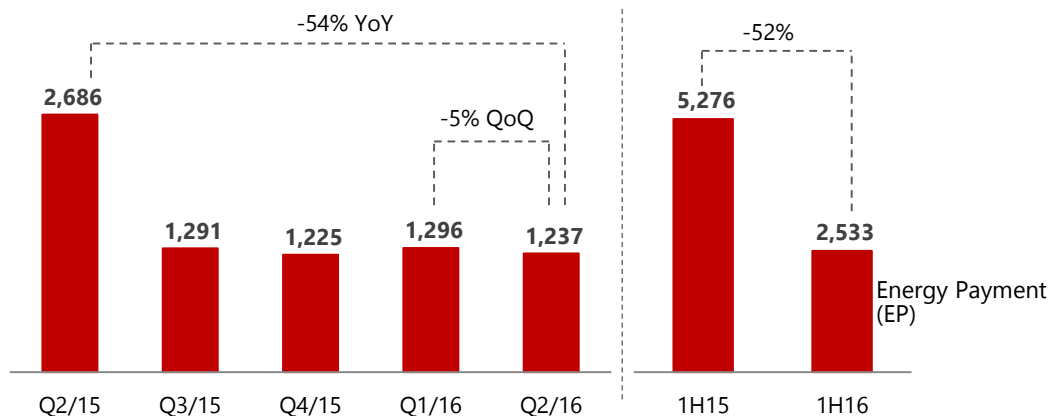
- Availability payment rate in 1H16 increased by 2% from higher reserved capacity for EGAT.
- However, revenue from AP decreased by THB 31 million or 10% resulted from the lower weight factor in 2016 than in 2015.



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



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



### Q2/16 VS Q1/16 (QoQ)

- Average sales price in Q2/16 decreased by 0.20 Baht per kWh, from the lowering of gas price.
- In Q2/16, dispatch volume increased by 32 GWh or 5% because of the higher submitted electricity volume per EGAT's instruction.
- Revenue from Energy Payment (EP) decreased by THB 59 million or 5% from reduction of gas price.

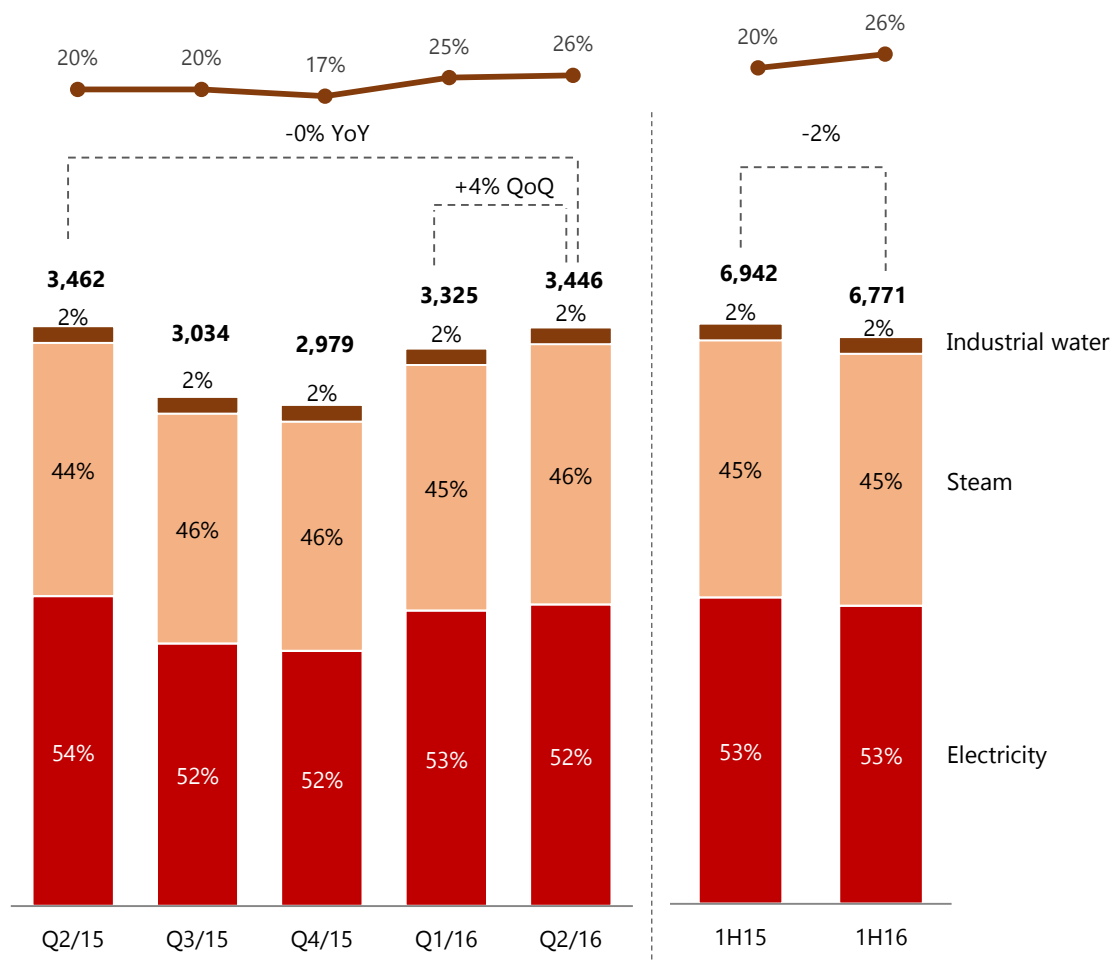
### Q2/16 VS Q2/15 (YoY)

- Average sales price in Q2/16 decreased by 0.09 Baht per kWh or 4% from Q2/15 from the lower gas price.
- Dispatch volume also significantly decreased by 636 GWh or 50% resulted from the decrease in sales volumes per EGAT's instruction.
- As a result, revenue from EP decreased by THB 1,449 million or 54%.

### 1H16 VS 1H15

- Average sales price in 1H16 decreased by 0.11 Baht per kWh or 4%, resulted from the decrease in gas price.
- Also, dispatch volume dramatically decreased by 1,118 GWh or 47%.
- Revenue from EP in 1H16 decreased by THB 2,743 million or 52% from lower sales price and sales volume.

## Quarterly revenue & gross profit margin (THB million, %)



### Q2/16 VS Q1/16 (QoQ)

- Total revenue in Q2/16 increased by THB 121 million or 4% from higher sales volume from the increases in the demands
- Also, gross profit increased by THB 50 million or 6% and GPM increased by 1% due to higher sales volume.

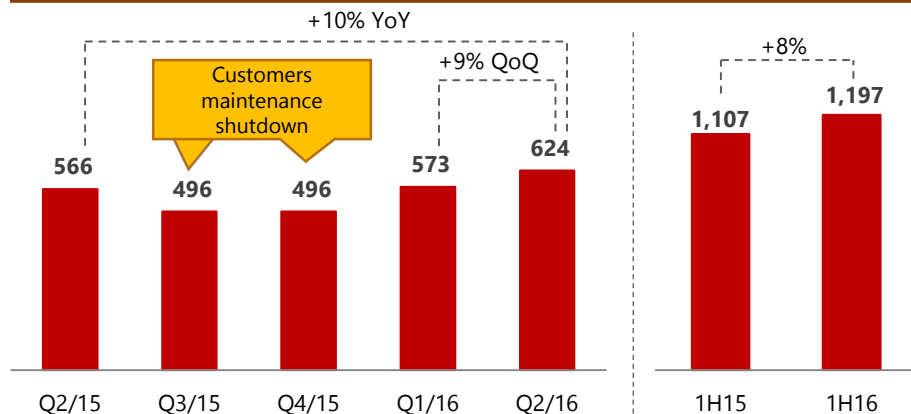
### Q2/16 VS Q2/15 (YoY)

- Total revenue in Q2/16 slightly decreased by THB 16 million or 0.5% from a decrease in the sales price of both electricity and steam caused by the drop in Ft rate and natural gas price.
- However, gross profit in Q2/16 increased by THB 189 million or 27% and GPM increased by 6%

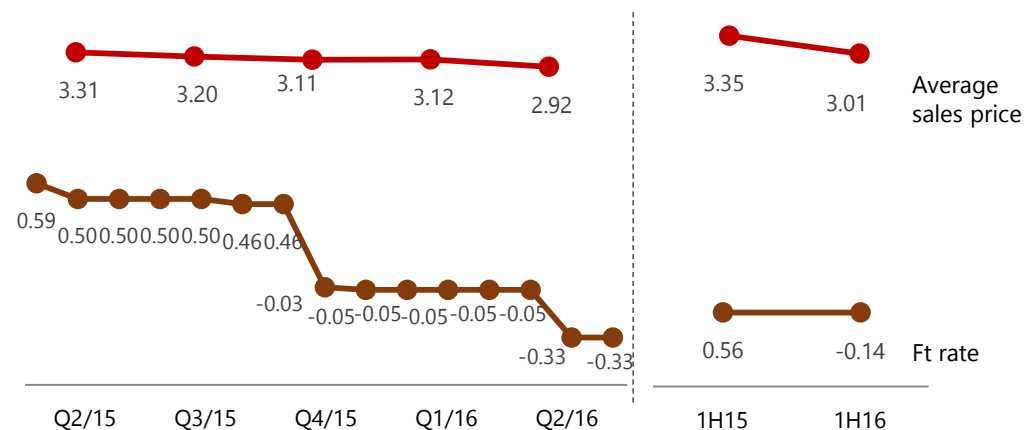
### 1H16 VS 1H15

- Total revenue in 1H16 decreased by THB 171 million or 2% from a decrease in the sales price from the reduction in Ft rate and natural gas price.
- Gross profit significantly increased by THB 337 million or 24% and GPM increased by 6% because of the increase in the sales volume and better cost management.

## Quarterly power sales volume (GWh)



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



### Q2/16 VS Q1/16 (QoQ)

- Volume** : increased by 51 GWh or 9% due to higher demands from EGAT and one customer started commissioning in Feb 2016.
- Price** : decreased by 0.20 Baht per kWh or 6% due to the decreases in Ft rate and natural gas price.

### Q2/16 VS Q2/15 (YoY)

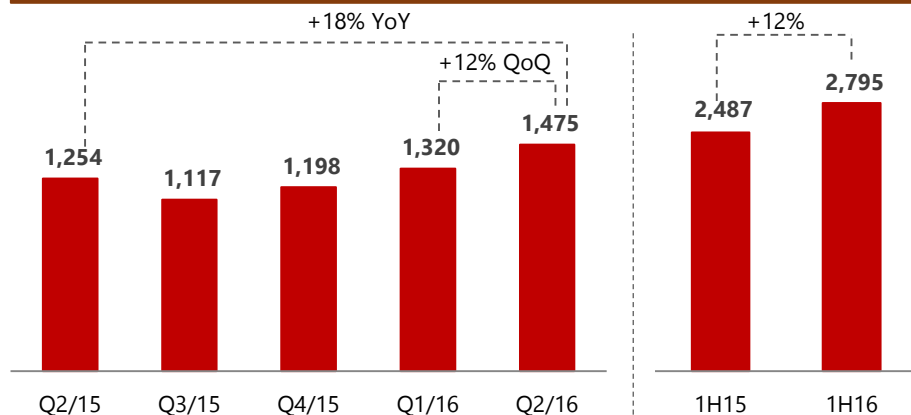
- Volume** : increased by 58 GWh or 10% resulted from higher demands from customers following the growth of the economy and warmer climate.
- Price** : decreased by 0.39 Baht per kWh or 12% due to the decreases in Ft rate and natural gas price.

### 1H16 VS 1H15

- Volume** : increased by 90 GWh or 8% from higher demands from existing and new customers while there was power plant shutdown for inspection in Q1/15.
- Price** : decreased by 0.34 Baht per kWh or 10% due to the decreases in Ft rate and natural gas price.

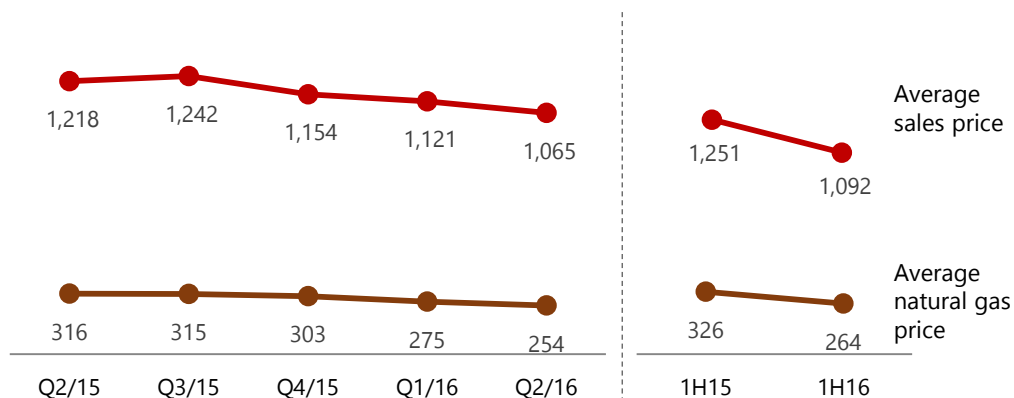
## Quarterly steam sales volume

('000 tons)



## Quarterly average sales price & average natural gas price

(THB/ton, THB/MMBTU)



## Q2/16 VS Q1/16 (QoQ)

- Volume** : increased by 155 thousand tons or 12% in Q2/16 resulted from higher demands from existing customer who started commissioning in Feb 2016.
- Price** : decreased by 56 Baht per ton or 5% in Q2/16 due to the decreases in natural gas price.

## Q2/16 VS Q2/15 (YoY)

- Volume** : increased by 221 thousand tons or 18% from higher demands from customers since there was no customer's plant shutdown and full operation after commissioning.
- Price** : decreased by 153 Baht per ton or 13% due to the decrease in natural gas price.

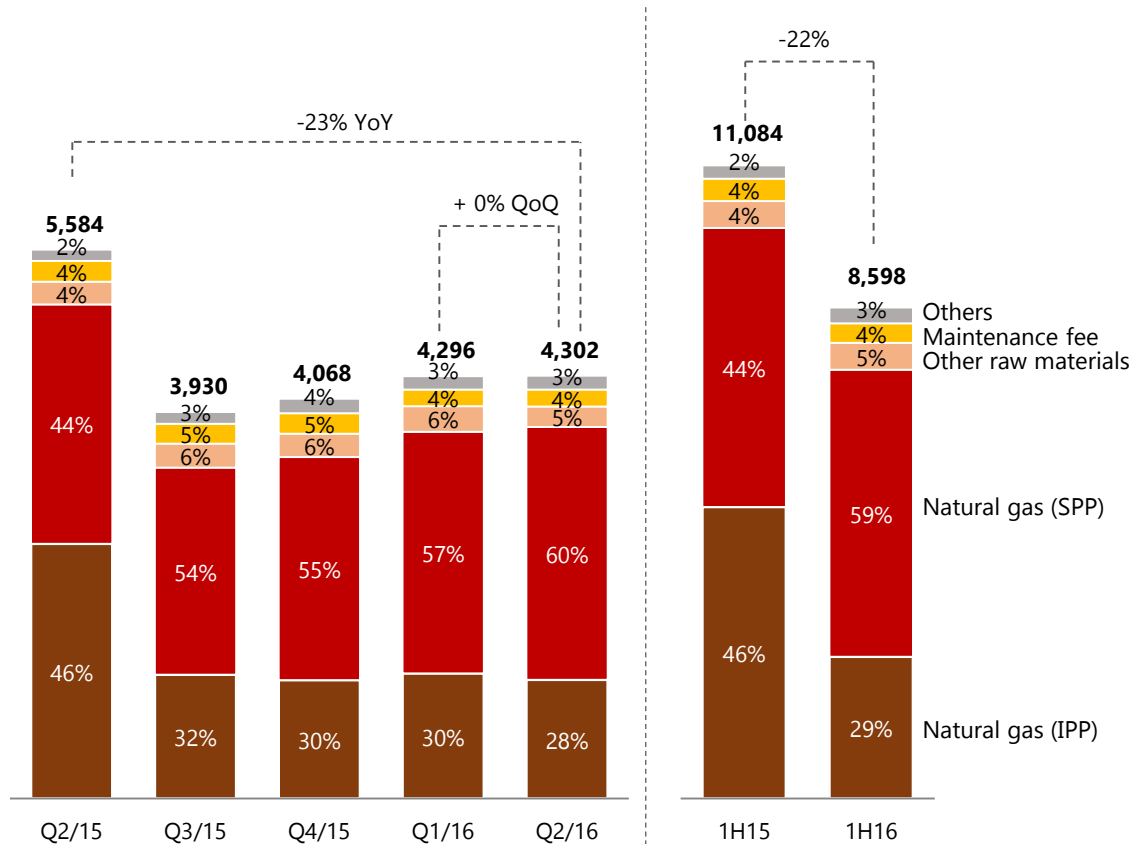
## 1H16 VS 1H15

- Volume** : increased by 308 thousand tons or 12% in 1H16 resulted from higher demands from the existing and new customers.
- Price** : decreased by 159 Baht per ton or 13% following the decrease in natural gas price.



# Decrease in cost of sales and services YoY mainly from lower gas price and plant optimization

## Quarterly cost of sales and services\* (THB million)



### Q2/16 VS Q1/16 (QoQ)

- Cost of sales and services in Q2/16 was approximately the same as in Q1/16.
- While the sales volume increased sharply, Rayong plant was able to manage the production cost to be relatively the same as in Q1/16

### Q2/16 VS Q2/15 (YoY)

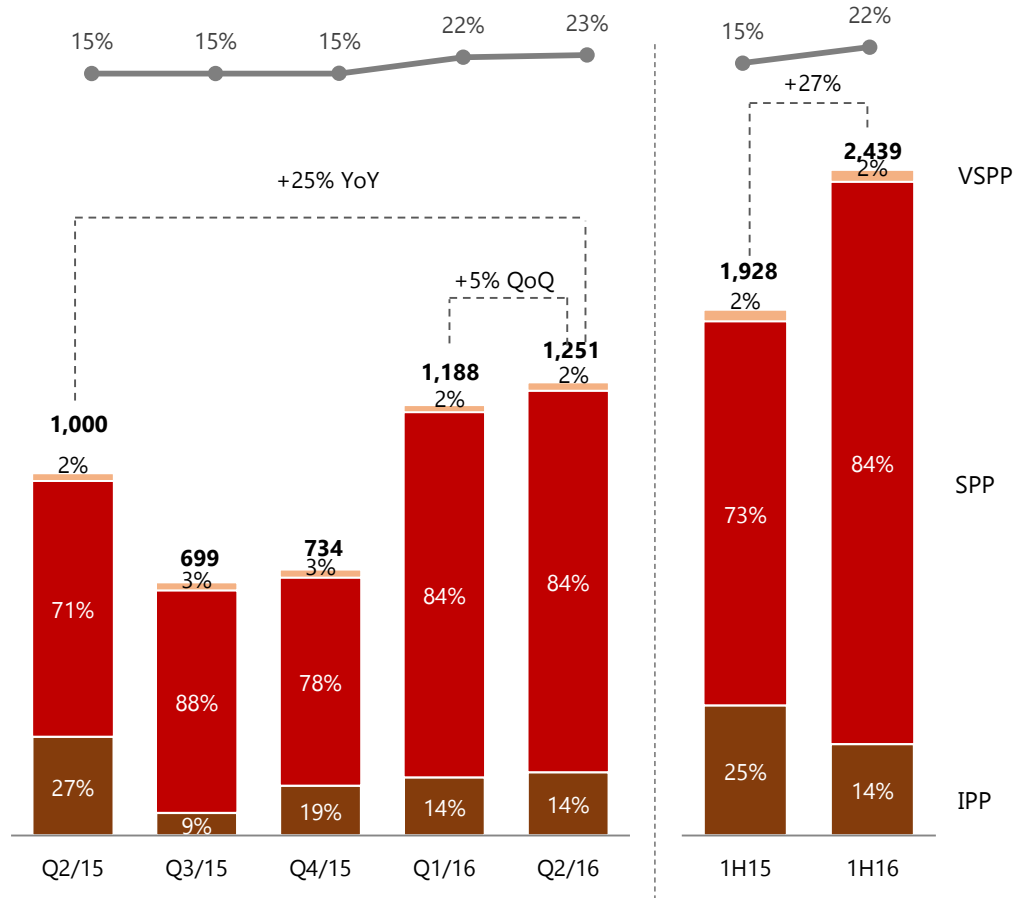
- When compared with Q2/15, cost of sales and services significantly decreased by THB 1,282 million or 23%.
- The decrease was caused by a drop in cost of raw materials from lower dispatch to EGAT and gas price together with the decrease in maintenance costs in line with the decrease in the sales volume.

### 1H16 VS 1H15

- Cost of sales and services in 1H16 significantly decreased by THB 2,486 million or 22%.
- The decrease in natural gas price, following the declining of the oil price, is the main factor in the reduction reinforced with the reduces in the dispatch volume.

# Gross profit improved 25% YoY, GPM improved to 23% from plant optimization and higher SPP's sales volume

## Quarterly gross profit and gross profit margin\* (THB million, %)



### Q2/16 VS Q1/16 (QoQ)

- Gross profit in Q2/16 was THB 1,251 million increased by THB 63 million or 5%.
- This mainly due to the increase in sales volume from higher demand from the customers at Rayong and IRPC-CP Phase 1 plants
- Higher %GPM from higher K and weight factors during summer season.

### Q2/16 VS Q2/15 (YoY)

- Compare with Q2/15, gross profit increased by THB 251 million or 25%.
- The increase was from more efficient production process from Rayong's plants optimization and the drop in maintenance costs.
- Moreover, the starting of IRPC-CP Phase 1 in Nov 2015 also enhance company's gross profit.

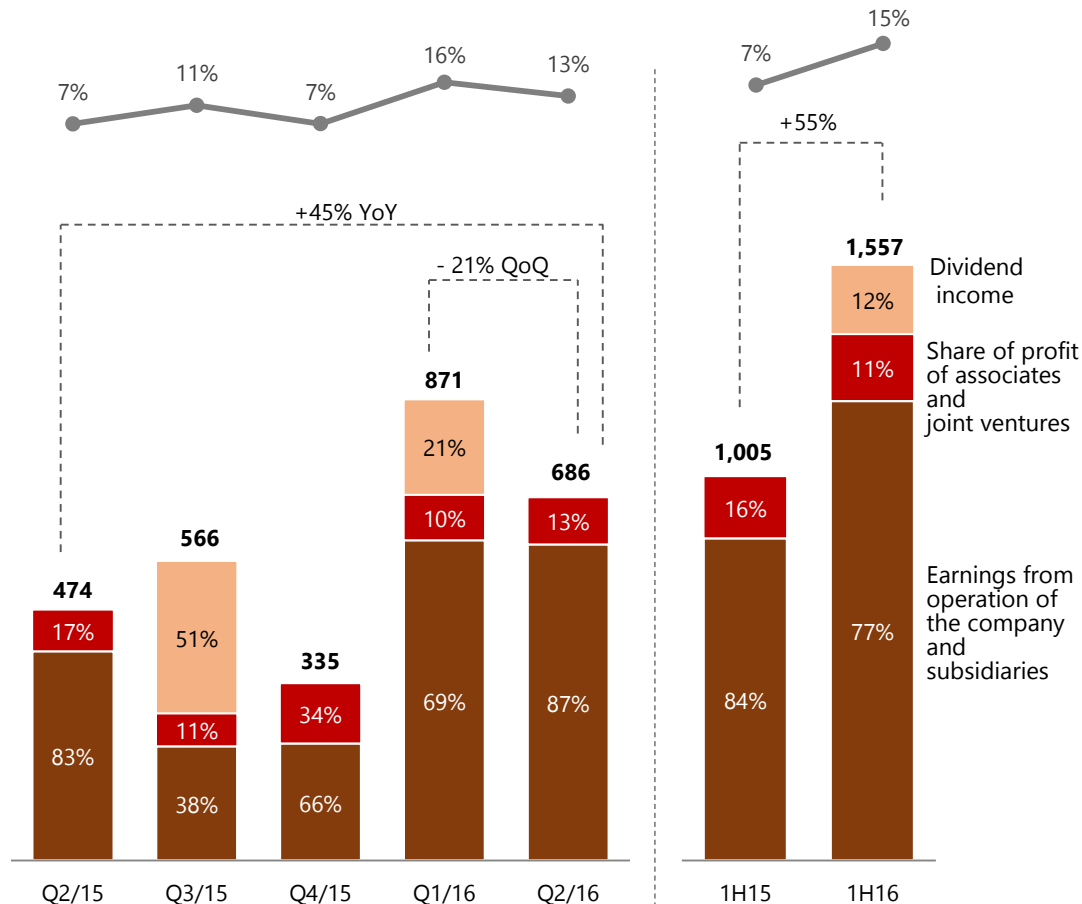
### 1H16 VS 1H15

- Gross profit in 1H16 significantly increased by THB 511 million or 27%.
- The plant optimization and revenue recognition from the SPP power plants (higher margin) were the main contribution of the significant increase in the gross profit and GPM in 1H16.

# Net profit for 1H16 for the company increased outstandingly from better operating results and dividend income

## Quarterly net profit and net profit margin

(THB million, %)



### Q2/16 VS Q1/16 (QoQ)

- Net profit for the company in Q2/16 was THB 686 million decreased by THB 185 million or 21%.
- The decrease due to the fact that there was dividend income of THB 180 million from Ratchaburi Power Company Limited (RPCL) in Q1/16.

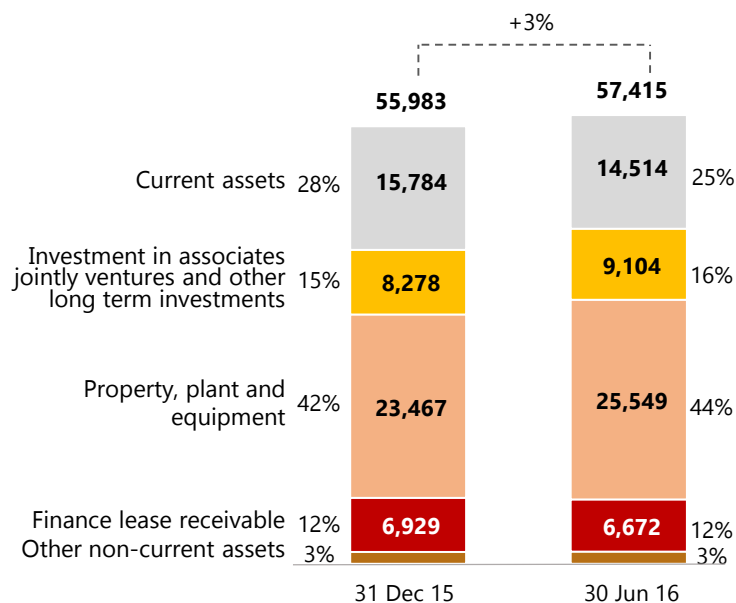
### Q2/16 VS Q2/15 (YoY)

- Net profit for the company increased by THB 212 million or 45%.
- The increase was due to increase in demand of electricity and steam consumptions from the existing and new customers, and better cost management from the plant optimization.

### 1H16 VS 1H15

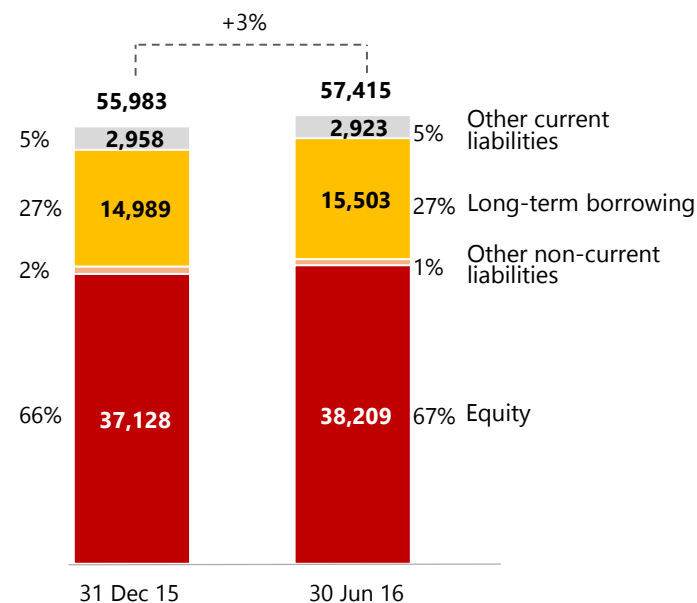
- Net profit in 1H16 significantly increased by THB 552 million or 55%.
- The increase in the net profit came from 2 parts:
  - Increase in earnings from operation from production capacity expansion and optimization of production process.
  - Dividend income increase from Ratchaburi Power Company Limited (RPCL) for THB 180 million during Q1/16.

## Total Assets (THB million)



- Total assets were THB 57,415 million, increased by 3% from THB 55,983 million.
- The increase was mainly from increases in investments from the better operating result of the associates and JV and increase in assets under constructions of IRPC-CP Phase 2.

## Total Liabilities & Shareholders equity (THB million)

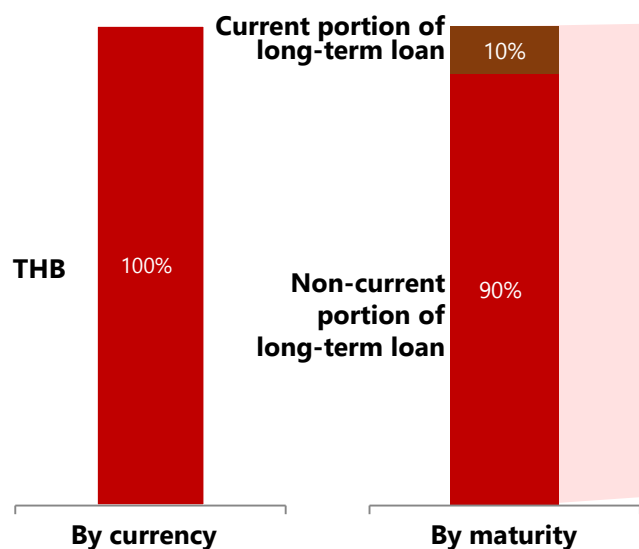


- Total liabilities were THB 19,206 million increased by THB 351 million or 2% mainly from the additional drawdowns of long-term loans for power plant constructions.
- Equity were THB 38,209 million increased by THB 1,082 million or 3% mainly from an increase in the unappropriated retained earnings and gains from translation of foreign currency.

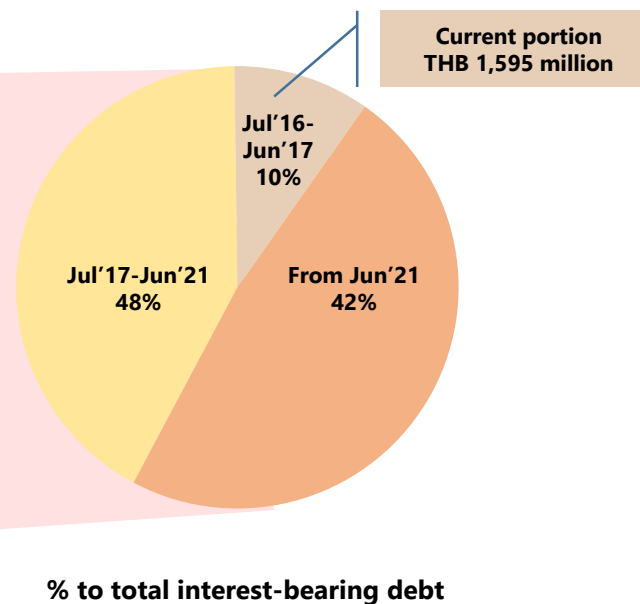


## Debt profile

Total interest-bearing debt: THB 15,503 million



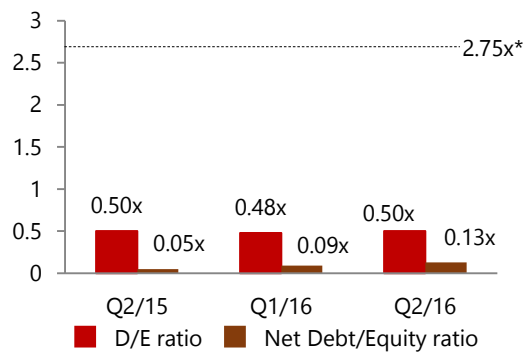
## Debt repayment plan



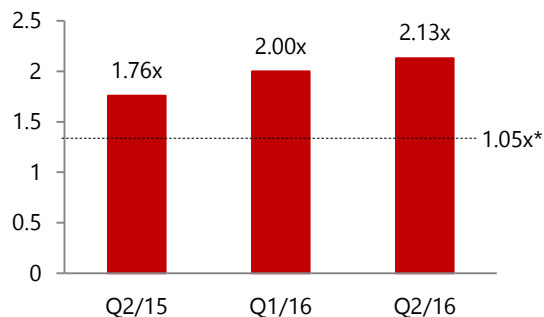
- All debt balance as at 30 June 2016 is in THB currency.
- 100% of total interest-bearing debt is long-term loan which includes 10% of current portion.

- Non-current portion of long-term debt equals to THB 13,908 million while current portion equals to THB 1,595 million.
- 48% of total interest-bearing debt will be repaid between July 2017 – June 2021.

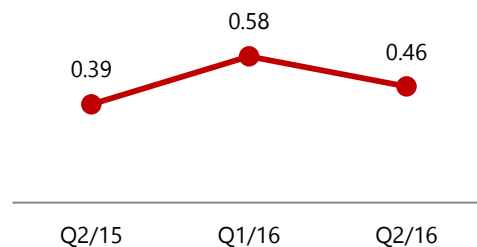
## Total D/E and Net Debt/ Equity ratio (Times)



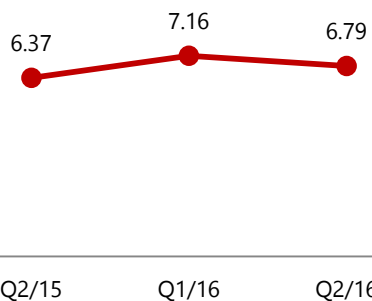
## DSCR (Times)



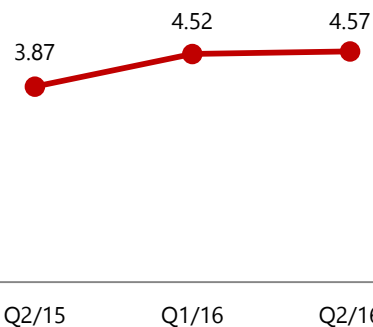
## Earning per share (EPS) (Baht/share)



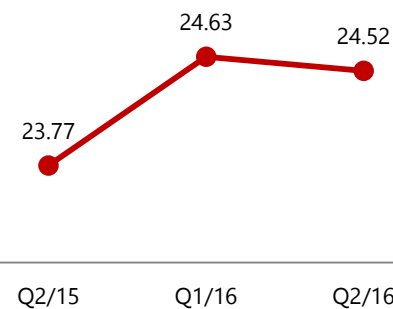
## ROE (%)



## ROA (%)

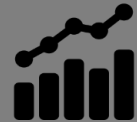


## Book value per share (BVPS) (Baht/share)





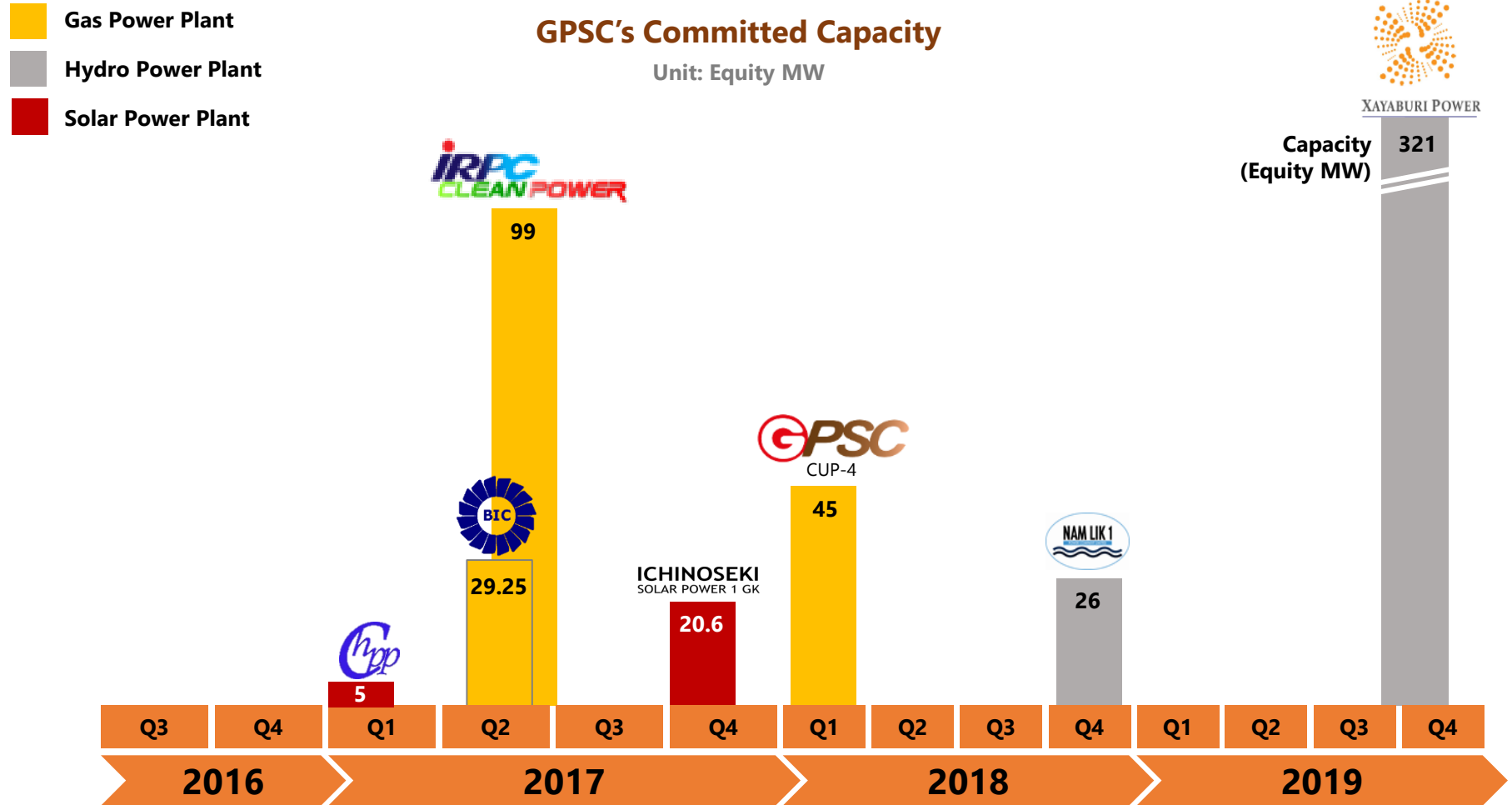
Q2 2016 Significant Events



Financial Performance



**Project Update**



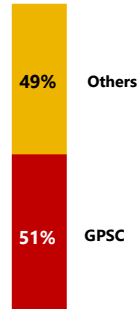


## IRPC Clean Power Company Limited (IRPC-CP)

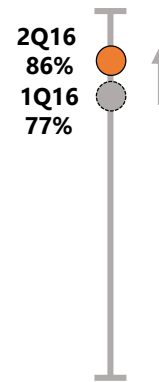
In IRPC Industrial Zone at Choeng Noen, Rayong Province (118 Rai)



**Equity Investment**  
3,400 THB Million



**% Progress**



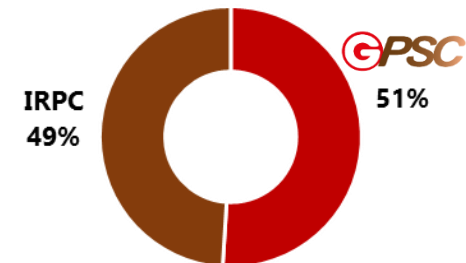
|                  |  |
|------------------|--|
| Type             | SPP Cogeneration   |
| Capacity*        | <ul style="list-style-type: none"> <li>Electricity: 240 MW</li> <li>Steam: 180-300 T/H</li> </ul>  |
| Customer*        | <ul style="list-style-type: none"> <li>Electricity: EGAT 2x90 MW (25 years), IRPC 60 MW (27 years)</li> <li>Steam: IRPC 180-300 T/H</li> </ul> |
| SCOD             | June, 2017   |
| Total Investment | 13,600 THB Million   |
| D/E              | 3:1  |

### Progress update

#### Phase 2 Under Construction

- Installed 2 units of Combustion Turbine Generator (CTG)
- Transmission line construction in progress

### Shareholding

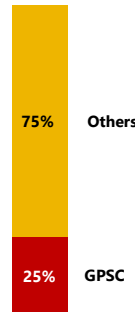




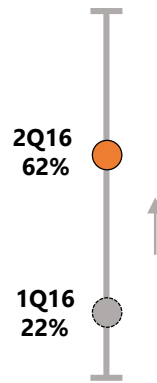


**Bangpa-In Cogeneration Company Limited  
(Phase 2)**  
Ayutthaya Province

**Equity Investment**  
**1,335 THB million**



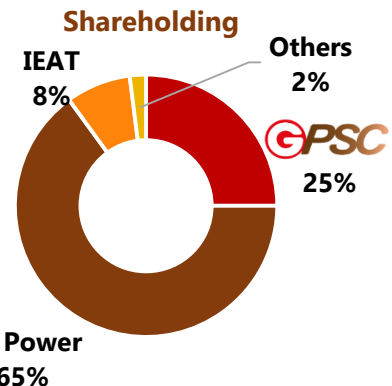
**% Progress**



| Type             | Gas-Fired Power Plant  |
|------------------|--|
| Capacity         | <ul style="list-style-type: none"> <li>Electricity: 117 MW (gross)</li> <li>Steam: 20 T/h</li> </ul>                       |
| Customer         | <ul style="list-style-type: none"> <li>Electricity: EGAT 90 MW (25 years), IUs 27 MW</li> <li>Steam: IUs 20 T/h</li> </ul> |
| SCOD             | June, 2017   |
| Total Investment | 5,340 THB Million  |
| D/E              | 3:1  |

## Progress update

- EIA has been approved
- BOI has been approved
- Commenced construction in February 2015
- Power and steam sales is under negotiation with IUs within industrial estates
- The installation of the main equipment is in process



| Schedule        | Actual | 2015   |        |        |        |        |        |        |        |        |        |        |        | 2016   |        |        |        |        |        |        |        |        |        |        |        | 2017   |        |        |        |  |  |  |  |  |  |  |  |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|--|--|--|--|--|--|
|                 |        | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % | Gen %  | Acc. % |  |  |  |  |  |  |  |  |
| 15.81%          | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% | 15.81% | 12.01% |  |  |  |  |  |  |  |  |
| 4.08%           | 79.11% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% | 4.08%  | 81.71% |  |  |  |  |  |  |  |  |
| 14.41%          | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% | 14.41% | 48.41% |  |  |  |  |  |  |  |  |
| 12.21%          | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% | 12.21% | 51.87% |  |  |  |  |  |  |  |  |
| 7.08%           | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% | 7.08%  | 54.01% |  |  |  |  |  |  |  |  |
| 8.21%           | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% | 8.21%  | 47.79% |  |  |  |  |  |  |  |  |
| 12.04%          | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% | 12.04% | 19.58% |  |  |  |  |  |  |  |  |
| 17.51%          | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% | 17.51% | 36.15% |  |  |  |  |  |  |  |  |
| 5.54%           | 7.82%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  | 5.54%  | 6.08%  |  |  |  |  |  |  |  |  |
| 9.01%           | 0.86%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  | 9.01%  | 0.62%  |  |  |  |  |  |  |  |  |
| 19.41%          | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% | 19.41% | 12.01% |  |  |  |  |  |  |  |  |
| Schedule B.0    | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1    | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.1  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.2  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.3  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.4  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.5  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.6  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.7  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.8  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.9  | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.10 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.11 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.12 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.13 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.14 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.15 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.16 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.17 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.18 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.19 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.20 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.21 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.22 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.23 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.24 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.25 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.26 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.27 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.28 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.29 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.30 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.31 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |        |  |  |  |  |  |  |  |  |
| Schedule B.1.32 | Gen %  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |  |  |  |  |



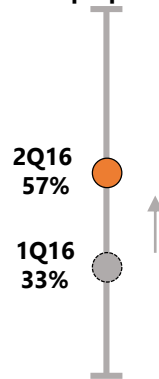
## ICHINOSEKI SOLAR POWER 1 GK

**Ichinoseki Solar Power (ISP1)**  
Ichinoseki City, Japan

**Equity Investment**  
~2,080 YEN Million



**% Progress Site preparation**

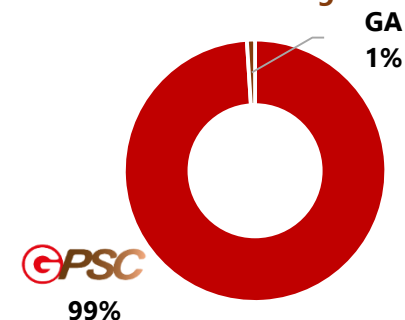


| Type             | Solar                              |
|------------------|------------------------------------|
| Capacity         | • Electricity: 20.8 MW             |
| Customer         | • Tohoku Electric Power (20 years) |
| SCOD             | Q42017                             |
| Total Investment | ~10,000 JPY million                |
| D/E              | 4:1                                |

### Progress update

- PPA contract with Tohoku Electric Power Company is concluded; secured FiT at 42 JPY/kWh (exclude tax) for 20 years
- EPC contracts and Facility agreement have been executed
- Installation will start in Q3/2016
- Finalized loan agreement and ready to start drawdown the loan
- GPSC first international project to COD in 2017

### Shareholding

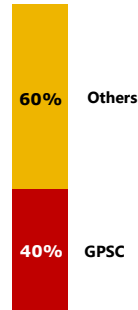




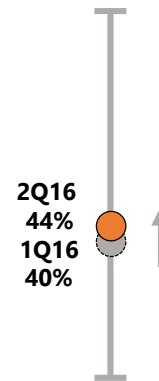
## Nam Lik 1 Power Company Limited (NL1PC) Lao PDR



**Equity Investment**  
~37 USD Million



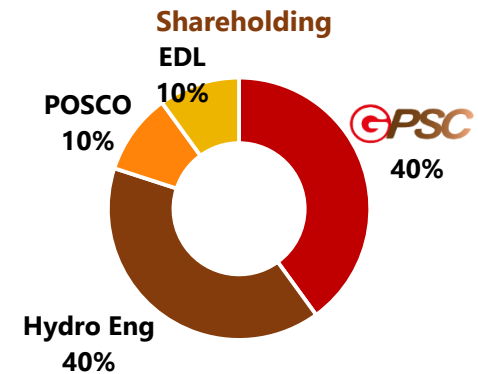
**% Progress**



|                  |   |
|------------------|---|
| Type             | Run-of-River Hydropower                   |
| Capacity         | • Electricity: 65 MW                      |
| Customer         | • Electricity: EDL 63.8 MW (30 years PPA) |
| SCOD             | 2018                                      |
| Total Investment | ~123 USD Million                          |
| D/E              | 7:3                                       |

### Progress update

- The construction works for the period were related powerhouse dam, diversion tunnel, 115kv transmission line
- The constructor is preparing to continue the work after rainy season

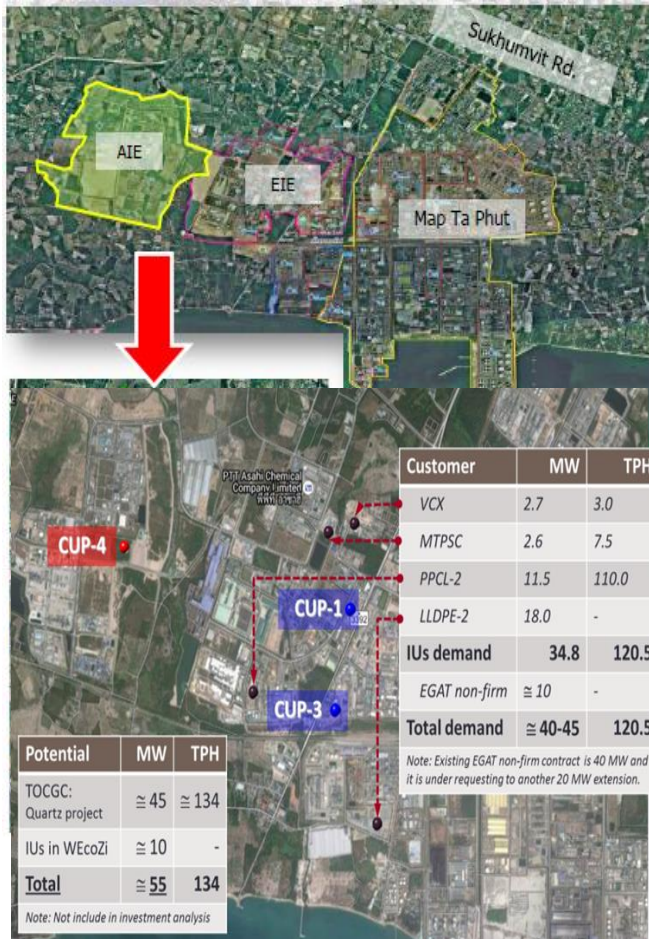






## Central Utility Plant Project 4 (CUP-4)

PTT's WEcoZi, Asia Industrial Estate (AIE) Rayong Province



**Equity Investment**  
**<4,000 THB Million**



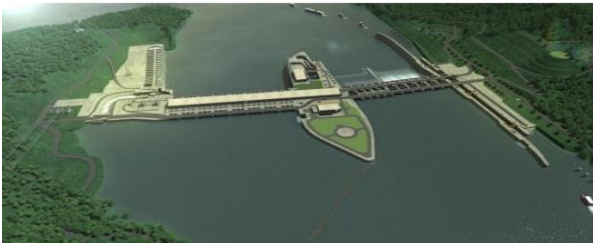
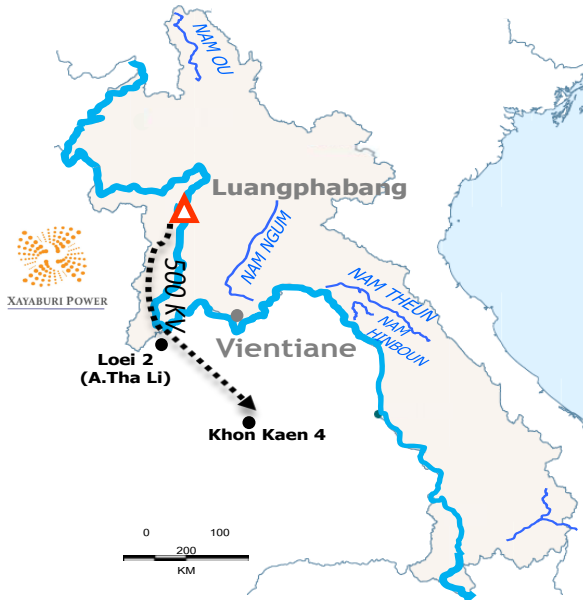
|          |  |
|----------|--|
| Type     | Gas-fired Cogeneration Power Plant/Utilities   |
| Capacity | <ul style="list-style-type: none"> <li>Electricity: 390 MW (Phase 1: 45 MW)</li> <li>Steam: 900 T/H (Phase 1: 70 T/H)</li> </ul>             |
| Customer | <ul style="list-style-type: none"> <li>Electricity: IUs 30 MW</li> <li>Electricity: Non-firm SPP 10 MW</li> <li>Steam: IUs 70 T/H</li> </ul> |
| SCOD     | Q12018   |

### Progress update

- Currently, conducting on ITB-GTG, ITB-EPC
- Plan to award EPC in Q3 2016
- Plan to start construction in later Q1 2017

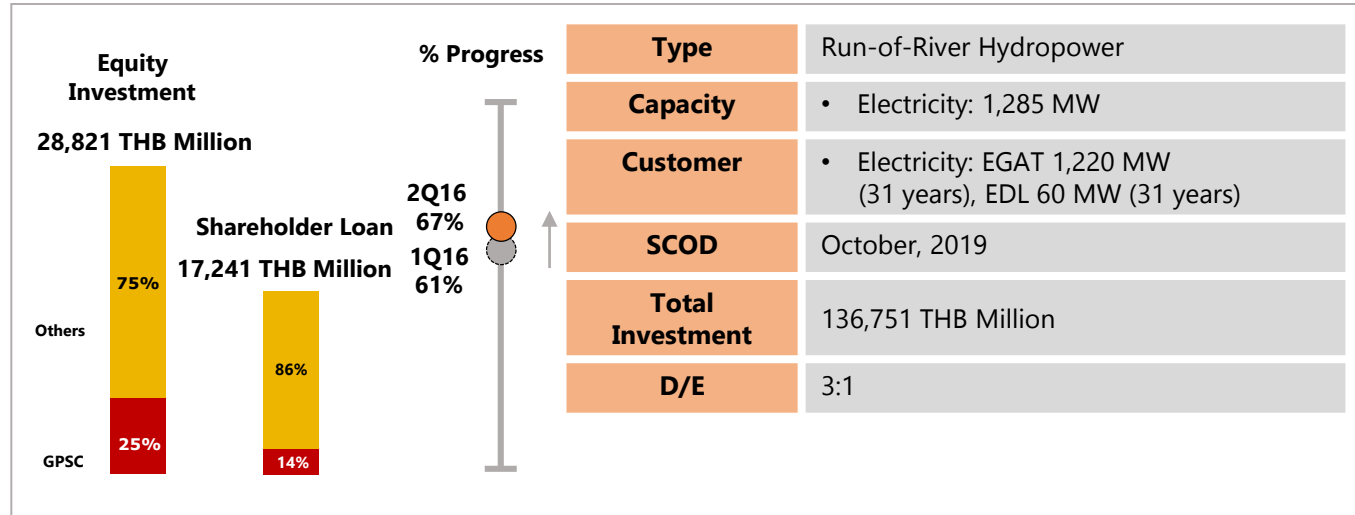
### Shareholding





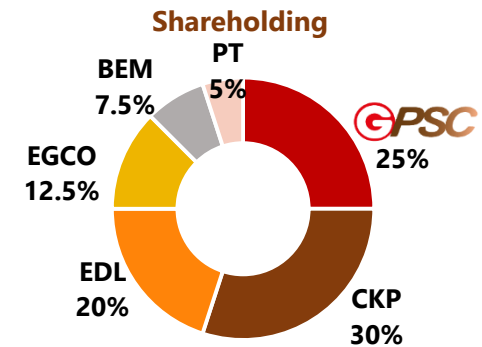
## Xayaburi Power Company Limited (XPCL)

Xayaburi, Lao PDR

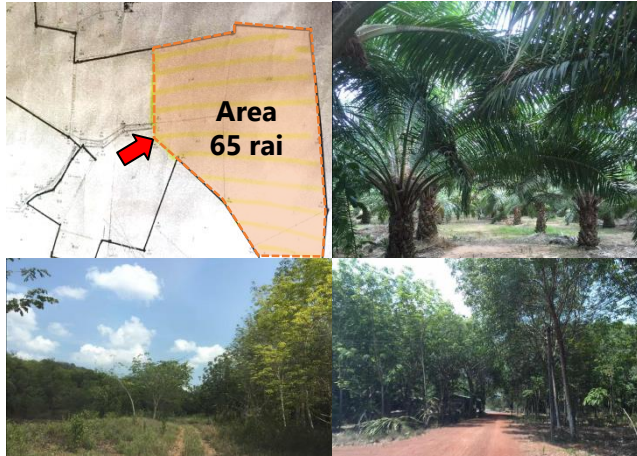


### Progress update

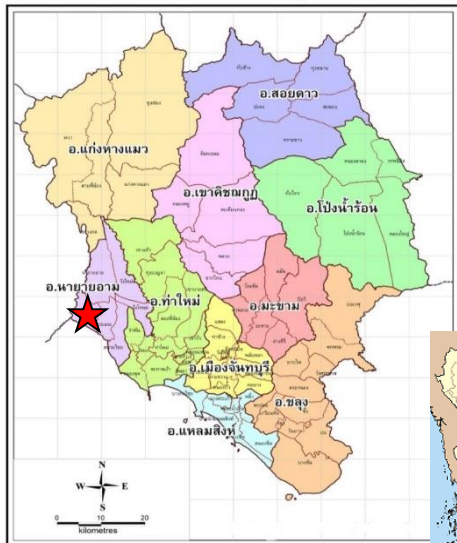
- Concrete work at intermediate bock, powerhouse and Fish Ladder can continue with no interruption
- Hydro-Mechanical work and Electro-Mechanical work progressed as plan
- Erection of 500kV transmission line tower at section 2-3 work progressed as plan







จังหวัดจันทบุรี



## CHPP Solar Cooperatives Chanthaburi Province

|                  |   |
|------------------|---|
| Type             | Solar   |
| Capacity         | • Electricity: 5 MW   |
| Customer         | • PEA   |
| SCOD             | December, 2016  |
| Total Investment | 244 THB million   |
| Contract         | <ul style="list-style-type: none"> <li>• FiT THB 5.66/unit</li> <li>• 25 years</li> <li>• End 2041</li> </ul> |

### Progress update

- The project is awarding for the Engineering Procurement and Construction (EPC) contract
- Project finance on progress

### Shareholding





24m

**24M Technologies, Inc. (24M)**

Cambridge, Massachusetts (MA), USA

|                         |                                      |
|-------------------------|--------------------------------------|
| <b>Business</b>         | Lithium-Ion Battery (LFP) technology |
| <b>Application</b>      | • Energy Storage System (ESS)        |
| <b>Status</b>           | • Series C                           |
| <b>Next Step</b>        | High Volume Manufacturing            |
| <b>Total Investment</b> | 21.67 USD million*                   |

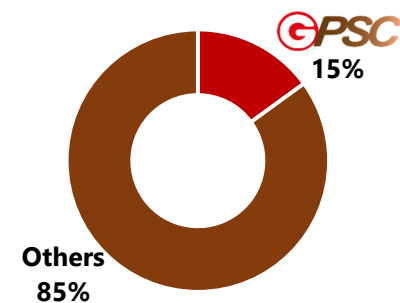
**Progress update**

- The 1st generation battery chemistry has already done and Lithium-ion battery cell development was satisfied
- The company has signed an MOU with NEC Energy Solutions (NECES) to supply Semisolid Lithium-Ion battery to NECES energy storage system
- Currently, 24M is working on the **development of High Volume Manufacturing production line**

**Proven technology from many awards and funding from the U.S. government**

During 2H2016, 24M has received many awards and recognition from the industry including:

- **2016 Energy Innovation Pioneers** : CERAWEEK, IHS Energy
- **2016 New Energy Pioneers** : **Future of Energy Summit**, Bloomberg New Energy Finance
- Listed in **"50 Smartest Companies 2016"** : MIT Technology Review
- **Technology Pioneers 2016** : World Economic Forum
- **The United States Advanced Battery Consortium LLC (USABC)** has announced the award of a **\$7 million contract** to 24M, to leverage its breakthrough cell design and manufacturing process to deliver lower cost, automotive lithium-ion batteries, demonstrating their potential for mass production.

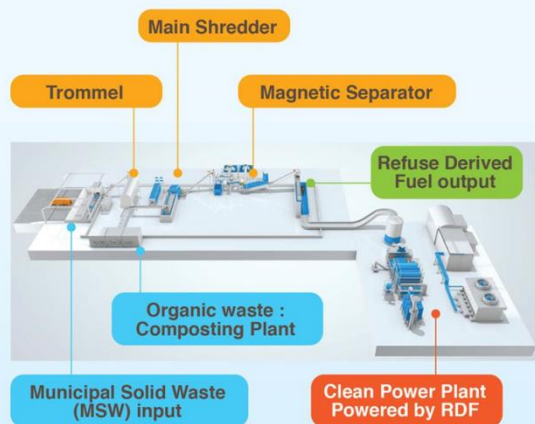
**Shareholding**

**Bloomberg  
NEW ENERGY  
PIONEERS**

Remark: \*GPSC acquired preferred stock from 24M Technologies at 15 MN USD as of July, 2014 (doesn't include project investment) and further invested in Series C for 6.67 MN USD in May 2016



## Waste Management Project Rayong Province



| Type             | RDF  | Waste to energy Power Plant     |
|------------------|--|---------------------------------|
| Capacity         | Treat MSW at least 500 ton/day   | Electricity 8 MW                |
| Customer         | RDF Power Plant/ Cement Plant  | PEA                             |
| SCOD             | 2018   | 2019                            |
| Total Investment | ~600 Million THB   | ~1600 Million THB               |
| Contract         | Waste Management Contract between GPSC & Rayong PAO (Secure feedstock) | PPA under Feed-in-tariff scheme |

### Progress update

- Under the Public and Private Partnership (PPP), the Waste Management Contract is being proved by the Attorney General Thailand
- During process of apply PPA under Feed-in-tariff scheme
- ESA/CoP has been finished
- Completed Basic Engineering Design Package (BED)
- Construction of RDF Plant will start within Q4/2016 and power plant within 2017

### Shareholding





## Thanlyin Project

|                 |   |
|-----------------|---|
| <b>Location</b> | Yangon Region, Myanmar                  |
| <b>Type</b>     | Combined Cycle Gas Turbine              |
| <b>Capacity</b> | Approx. 400 MW (Phase 1: approx. 140MW) |
| <b>Customer</b> | • MEPE                                  |
| <b>SCOD</b>     | • 2020                                  |
| <b>Status</b>   | • FSR Clarification                     |



## Myeik Project

|                 |                             |
|-----------------|-----------------------------|
| <b>Location</b> | Tanintharyi Region, Myanmar |
| <b>Type</b>     | Coal-Fired Power Plant      |
| <b>Capacity</b> | 2,500 MW                    |
| <b>Customer</b> | • MEPE<br>• EGAT            |
| <b>SCOD</b>     | • 2021 - 2022               |
| <b>Status</b>   | • FSR Clarification         |



## Ayeyarwady Project

|                 |                            |
|-----------------|----------------------------|
| <b>Location</b> | Ayeyarwady Region, Myanmar |
| <b>Type</b>     | Combined Cycle Gas Turbine |
| <b>Capacity</b> | Approx. 500 MW             |
| <b>Customer</b> | • MEPE                     |
| <b>SCOD</b>     | • 2020                     |
| <b>Status</b>   | • Negotiating MOA          |

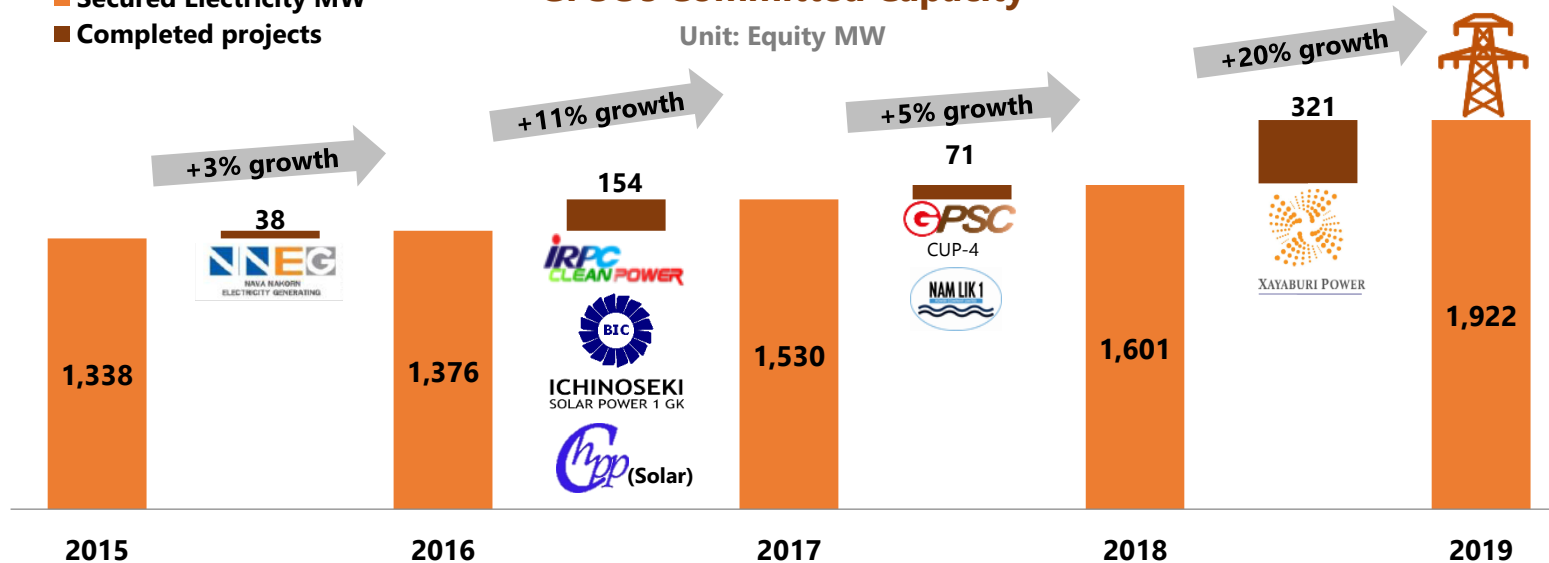


## GPSC's Committed Capacity

- Secured Electricity MW
- Completed projects

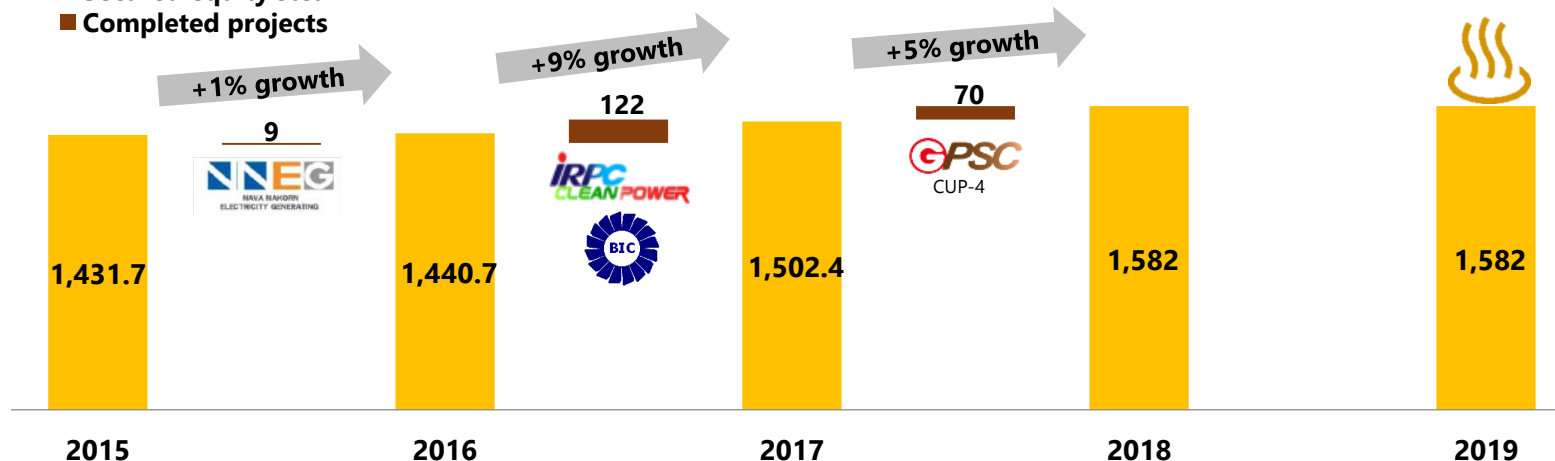
Unit: Equity MW

Unit: Equity MW



- Secured equity steam
- Completed projects

Unit: T/h



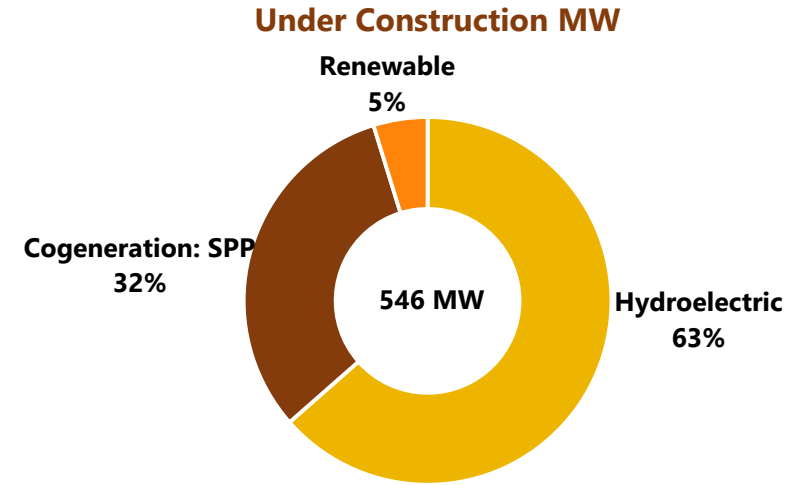
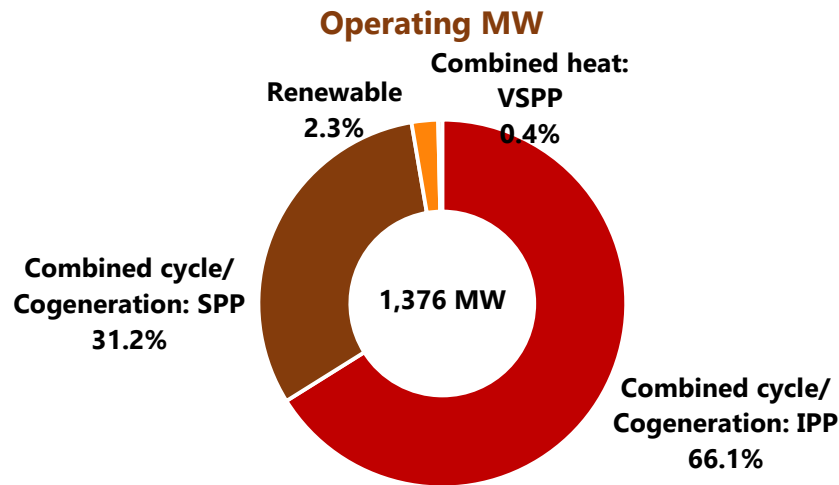


## Appendix





# Electricity: Operating capacity of 1,376 MW, with another 546 MW in pipeline

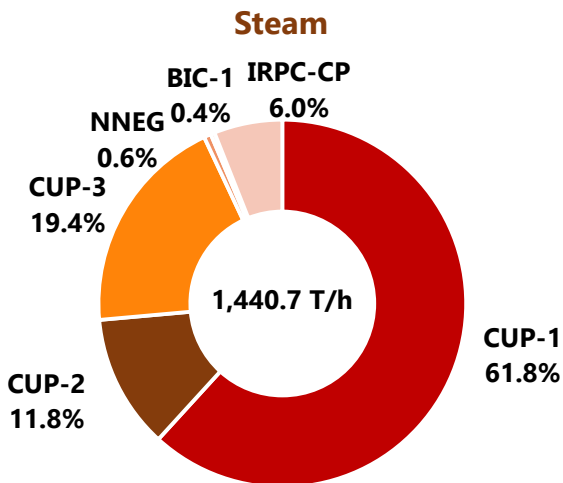


| Name            | Type  | GPSC's share % | Total capacity (MW) | Equity capacity (MW)    |
|-----------------|-------|----------------|---------------------|-------------------------|
| Sriracha        | IPP   | 100%           | 700                 | 700                     |
| CUP-1           | SPP   | 100%           | 226                 | 226                     |
| CUP-2           | SPP   | 100%           | 113                 | 113                     |
| CHPP            | VSPP  | 100%           | 5                   | 5                       |
| IRPC-CP Phase 1 | SPP   | 51%            | 240                 | 122<br>(Phase 1: 23 MW) |
| NNEG            | SPP   | 30%            | 125                 | 38                      |
| TSR             | Solar | 40%            | 80                  | 32                      |
| BIC-1           | SPP   | 25%            | 117                 | 29.25                   |
| RPCL            | IPP   | 15%            | 1,400               | 210                     |
| <b>Total</b>    |       |                |                     | <b>1,376</b>            |

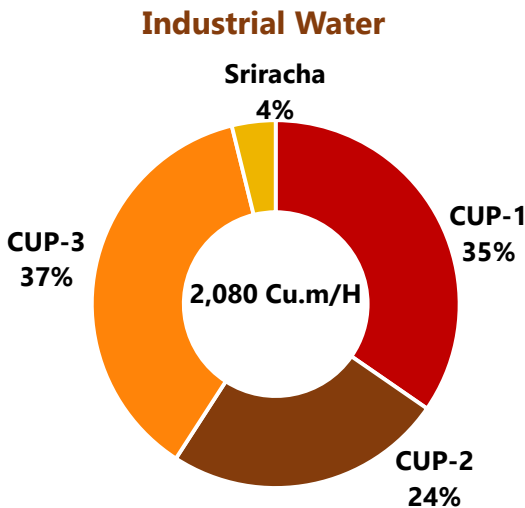
| Name            | Type  | GPSC's share % | Total capacity (MW) | Equity capacity (MW)    | SCOD |
|-----------------|-------|----------------|---------------------|-------------------------|------|
| CUP-4           | SPP   | 100%           | 45                  | 45                      | 2018 |
| CHPP (Solar)    | Solar | 100%           | 5                   | 5                       | 2017 |
| ISP-1           | Solar | 99%            | 20.8                | 20.6                    | 2017 |
| IRPC-CP Phase 2 | SPP   | 51%            | 240                 | 122<br>(Phase 2: 99 MW) | 2017 |
| NL1PC           | Hydro | 40%            | 65                  | 26                      | 2017 |
| BIC-2           | SPP   | 25%            | 117                 | 29.25                   | 2017 |
| XPCL            | Hydro | 25%            | 1,285               | 321                     | 2019 |
| <b>Total</b>    |       |                |                     | <b>546</b>              |      |



# Operate 1,441 T/h of Steam and 2,080 Cu.m./h of Industrial Water



| Name            | Operating capacity (T/h) | Under construction Capacity (T/h) |
|-----------------|--------------------------|-----------------------------------|
| CUP-1           | 890                      |                                   |
| CUP-2           | 170                      |                                   |
| CUP-3           | 280                      |                                   |
| NNEG            | 9                        |                                   |
| BIC-1           | 5                        |                                   |
| IRPC-CP Phase 1 | 86.7                     |                                   |
| CUP-4           |                          | 70                                |
| IRPC-CP Phase 2 |                          | 66.3                              |
| BIC-2           |                          | 5                                 |
| Total           | 1,440.7                  | 141.3                             |



| Name     | Operating capacity (Cu.m/h) |
|----------|-----------------------------|
| Sriracha | 80                          |
| CUP-1    | 720                         |
| CUP-2    | 510                         |
| CUP-3    | 770                         |
| Total    | 2,080                       |

| Name                     | Type  | Location                   | Fuel Type              | Technology                                    | GPSC's share % | Total capacity (MW) | Equity capacity (MW)    | Steam (T/h) | Industrial water (Cu.m/h) | COD  | Tenure/ Expiry year |
|--------------------------|-------|----------------------------|------------------------|---|----------------|---------------------|-------------------------|-------------|---------------------------|------|---------------------|
| IN OPERATION             |       |                            |                        |   |                |                     |                         |             |                           |      |                     |
| Sriracha                 | IPP   | Chonburi                   | Natural gas            | Combined cycle                                | 100%           | 700                 | 700                     | -           | 80                        | 2006 | 25/2025             |
| CUP-1                    | SPP   | Rayong                     | Natural gas            | Cogeneration                                  | 100%           | 226                 | 226                     | 890         | 720                       | 2006 | 10-15/2021          |
| CUP-2                    | SPP   | Rayong                     | Natural gas            | Cogeneration                                  | 100%           | 113                 | 113                     | 170         | 510                       | 2008 | 15/2022             |
| CUP-3                    | SPP   | Rayong                     | Natural gas            | Cogeneration                                  | 100%           | -                   | -                       | 280         | 770                       | 2009 | 15/2023             |
| CHPP                     | VSPP  | Rayong                     | Natural gas            | Combined heat and power with district cooling | 100%           | 5                   | 5                       | -           | -                         | 2008 | 30/2038             |
| IRPC-CP Phase 1          | SPP   | Rayong                     | Natural gas            | Cogeneration                                  | 51%            | 240                 | 122<br>(Phase 1: 23 MW) | 86.7        | -                         | 2015 | 25/2040             |
| TSR                      | VSPP  | Suphanburi & Karnchanaburi | Solar                  | Solar   | 40%            | 80                  | 32                      | -           | -                         | 2013 | 10/2023             |
| NNEG                     | SPP   | Pathum-thani               | Natural gas            | Cogeneration                                  | 30%            | 125                 | 38                      | 9           |                           | 2016 | 25/2041             |
| BIC-1                    | SPP   | Ayutthaya                  | Natural gas            | Cogeneration                                  | 25%            | 117                 | 29.25                   | 5           | -                         | 2013 | 25/2038             |
| RPCL                     | IPP   | Ratchaburi                 | Natural gas            | Combined cycle                                | 15%            | 1,400               | 210                     | -           | -                         | 2008 | 25/2033             |
| Total operating          |       |                            |                        |   |                |                     | 1,376                   | 1,440.7     | 2,080                     |      |                     |
| UNDER CONSTRUCTION       |       |                            |                        |   |                |                     |                         |             |                           |      |                     |
| CHPP (Solar)             | VSPP  | Chanthaburi                | Solar                  | Solar   | 100%           | 5                   | 5                       |             |                           | 2016 |                     |
| CUP-4                    | SPP   | Rayong                     | Gas-fired Cogeneration | Cogeneration                                  | 100%           | 45                  | 45                      | 70          |                           | 2018 | -                   |
| ISP1                     | Solar | Japan                      | Solar                  | Solar   | 99%            | 20.8                | 20.6                    | -           |                           | 2017 | 20/2037             |
| IRPC-CP Phase 2          | SPP   | Rayong                     | Natural gas            | Cogeneration                                  | 51%            | 240                 | 122<br>(Phase 1: 99 MW) | 66.3        |                           | 2017 | 25-27/2044          |
| NL1PC                    | Hydro | Lao PDR                    | Hydro                  | Run-of-river                                  | 40%            | 65                  | 26                      | -           |                           | 2018 | 27/2044             |
| BIC-2                    | SPP   | Ayutthaya                  | Natural gas            | Cogeneration                                  | 25%            | 117                 | 29.25                   | 5           |                           | 2017 | 25/2042             |
| XPCL                     | IPP   | Lao PDR                    | Hydro                  | Run-of-river                                  | 25%            | 1,285               | 321                     | -           |                           | 2019 | 31/2050             |
| Total under construction |       |                            |                        |   |                |                     | 546                     | 141.3       |                           |      |                     |
| Total capacity           |       |                            |                        |   |                |                     | 1,922                   | 1,582       | 2,080                     |      |                     |



## Sriracha Power Plant

Chonburi Province (40 Rai leasehold land)



|                     |   |
|---------------------|---|
| <b>Type</b>         | Combined cycle  |
| <b>Capacity</b>     | <ul style="list-style-type: none"> <li>Electricity: 700 MW</li> <li>Industrial water: 80 Cu.m/h</li> </ul>                          |
| <b>Customer</b>     | <ul style="list-style-type: none"> <li>Electricity: EGAT 700 MW</li> <li>Industrial water: Thaioil Power 50 Cu.m/h</li> </ul>       |
| <b>Supplier</b>     | <ul style="list-style-type: none"> <li>Natural Gas – PTT</li> <li>Raw Water – EASTW</li> <li>Power Back up – EGAT and TP</li> </ul> |
| <b>Construction</b> | 2005 - 2010   |
| <b>COD</b>          | 2006  |
| <b>Contract</b>     | <ul style="list-style-type: none"> <li>25 Years</li> <li>End: 2025</li> </ul>   |

### Shareholding



# Current Operating Asset (SPP): Rayong – Central Utility Plant 1-3 (CUP1-3)



**Rayong Power Plant**  
Rayong Province

CUP -1



CUP -2



CUP -3



|                 |  |
|-----------------|--|
| <b>Type</b>     | Cogeneration   |
| <b>Capacity</b> | <p>CUP-1</p> <ul style="list-style-type: none"> <li>Electricity: 226 MW</li> <li>Steam: 890 T/h</li> <li>Industrial water: 720 Cu.m/h</li> </ul> <p>CUP-2</p> <ul style="list-style-type: none"> <li>Cu.m/H</li> <li>Industrial water: 510 Cu.m/h</li> </ul> <p>CUP-3</p> <ul style="list-style-type: none"> <li>Steam: 280 T/h</li> <li>Industrial water: 770 Cu.m/h</li> </ul> |
| <b>Customer</b> | <ul style="list-style-type: none"> <li>PTT Group</li> <li>Other IU Customers</li> <li>EGAT</li> </ul>  |
| <b>COD</b>      | 2006-2009  |
| <b>Contract</b> | <ul style="list-style-type: none"> <li>CUP-1: 10-15 years ++</li> <li>CUP-2: 15 years ++</li> <li>CUP-3: 15 years ++</li> </ul>  |

**Shareholding**





**Combined Heat and Power Producing Co., Ltd.**  
Bangkok Province

|                 |   |
|-----------------|---|
| <b>Type</b>     | Combined heat and power with district cooling (VSPP)  |
| <b>Capacity</b> | <ul style="list-style-type: none"> <li>Electricity: 5 MW</li> <li>Chilled water: 12,000 RT</li> </ul> |
| <b>Customer</b> | <ul style="list-style-type: none"> <li>DAD 8,700 RT</li> </ul>  |
| <b>COD</b>      | <ul style="list-style-type: none"> <li>2008</li> <li>Electric Chiller Jan 1, 2009</li> </ul>          |
| <b>Contract</b> | <ul style="list-style-type: none"> <li>30 Years</li> <li>End: 2038</li> </ul>                         |



Shareholding

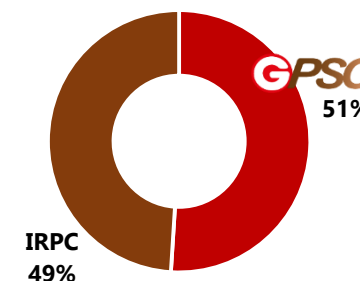


**IRPC Clean Power Company Limited (IRPC-CP Phase 1)**  
Rayong Province (118 Rai)

|                  |  |
|------------------|--|
| <b>Type</b>      | Cogeneration (SPP)   |
| <b>Capacity*</b> | <ul style="list-style-type: none"> <li>Electricity: 240 MW</li> <li>Steam: 180-300 T/h</li> </ul>  |
| <b>Customer*</b> | <ul style="list-style-type: none"> <li>Electricity: EGAT 2x90 MW (25 years), IRPC 60 MW (27 years)</li> <li>Steam: IRPC 180-300 T/h</li> </ul> |
| <b>COD</b>       | 2015   |
| <b>Contract</b>  | <ul style="list-style-type: none"> <li>25 Years</li> <li>End: 2040</li> </ul>  |



Shareholding



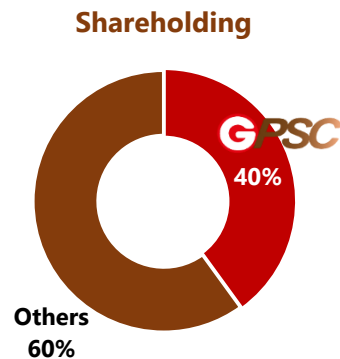


# GSPSC Current Operating Asset:



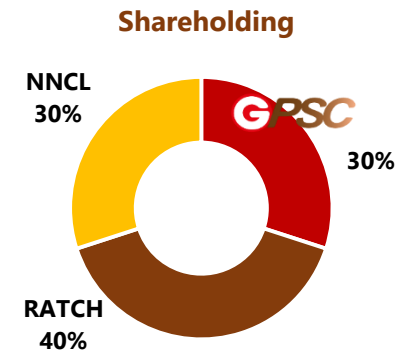
**Thai Solar Renewable Company Limited**  
Kanchanaburi and Suphanburi Province

|                 |   |
|-----------------|---|
| <b>Type</b>     | Solar   |
| <b>Capacity</b> | <ul style="list-style-type: none"> <li>Electricity: 80 MW</li> </ul>          |
| <b>Customer</b> | <ul style="list-style-type: none"> <li>PEA</li> </ul>                         |
| <b>COD</b>      | 2013-2014   |
| <b>Contract</b> | <ul style="list-style-type: none"> <li>10 Years</li> <li>End: 2023</li> </ul> |



**Nava Nakorn Electricity Generating Company Limited (NNEG)**  
Pathumthani Province

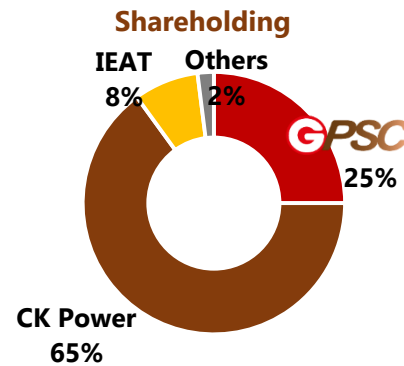
|                 |   |
|-----------------|---|
| <b>Type</b>     | SPP Cogeneration  |
| <b>Capacity</b> | <ul style="list-style-type: none"> <li>Electricity: 125 MW</li> <li>Steam: 30 T/h</li> </ul>                        |
| <b>Customer</b> | <ul style="list-style-type: none"> <li>Electricity: EGAT 90 MW (25 years), IUs 35 MW</li> <li>Steam: IUs</li> </ul> |
| <b>COD</b>      | June, 2016  |
| <b>Contract</b> | <ul style="list-style-type: none"> <li>25 Years</li> <li>End: 2041</li> </ul>                                       |





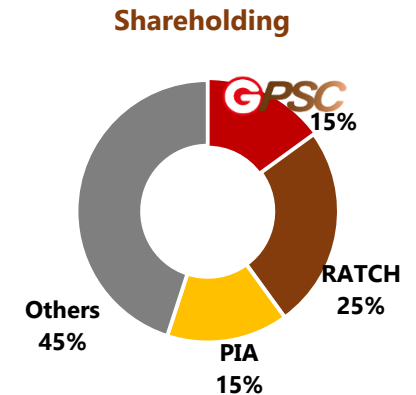
**Bangpa-in Cogeneration Company Limited**  
Ayutthaya Province

|                 |  |
|-----------------|--|
| <b>Type</b>     | Cogeneration (SPP)   |
| <b>Capacity</b> | <ul style="list-style-type: none"> <li>Electricity: 117 MW</li> <li>Steam: 5 T/h</li> </ul>                |
| <b>Customer</b> | <ul style="list-style-type: none"> <li>Electricity: EGAT 90 MW, IUs 27 MW</li> <li>Steam: 5 T/h</li> </ul> |
| <b>COD</b>      | 28 Jun 2013  |
| <b>Contract</b> | <ul style="list-style-type: none"> <li>25 Years</li> <li>End: 2038</li> </ul>                              |



**Ratchaburi Power Company Limited**  
Ratchaburi Province

|                 |   |
|-----------------|---|
| <b>Type</b>     | Combined Cycle (IPP)  |
| <b>Capacity</b> | <ul style="list-style-type: none"> <li>Electricity: 1,400 MW</li> </ul>       |
| <b>Customer</b> | <ul style="list-style-type: none"> <li>EGAT</li> </ul>                        |
| <b>COD</b>      | Mar 2008  |
| <b>Contract</b> | <ul style="list-style-type: none"> <li>25 Years</li> <li>End: 2033</li> </ul> |



| 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) | $\frac{\text{Shareholder's equity for the company}}{\text{Average shareholder's equity for the company}}$  |

# 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<br>TOU Rate 4.2*                     |
| Steam       | Steam Base Cost<br>x<br>(Gas index + CPI index) |

**Base Tariff**

+

**Ft**

+

**adder**

**Feed in Tariff**

\*<https://www.pea.co.th/Documents/Rate2015.pdf>  
Reference rate with conditions

# THANK YOU

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

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