



**THE INNOVATIVE POWER  
FLAGSHIP OF PTT GROUP**



GLOBAL POWER SYNERGY PUBLIC  
COMPANY LIMITED

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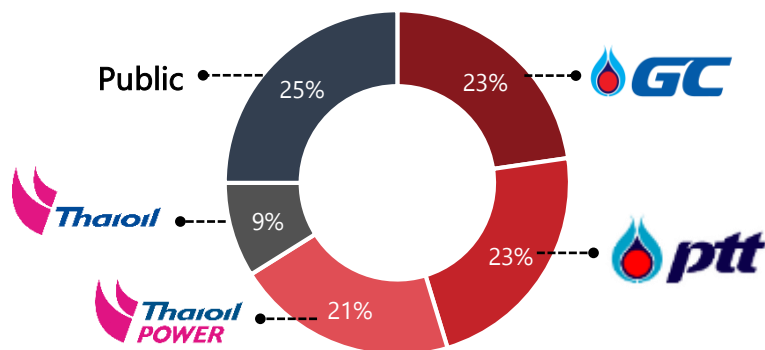
# Q1/2019 OPPORTUNITY DAY

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May 28<sup>th</sup>, 2019

# GPSC Innovative Power Company at a Glance

## Shareholding Structure



Thai Oil Power is 74% held by Thai Oil and 26% by PTT

## Company Information

|                                    |  |
|------------------------------------|--|
| Head Office                        | 555/2 Energy Complex Building B,<br>5th Floor, Vibhadi-Rangsit Road,<br>Chatuchak, Bangkok, Thailand |
| Business Type                      | Energy & Utilities   |
| Registered Capital<br>(Fully Paid) | THB 14,983 million   |
| Market Cap<br>(As of 17 May 2019)  | THB 85,777.72 million  |

## In 2019, Total Equity Capacity<sup>1</sup>

⚡ Electricity 5,026 MWe

☁ Steam 2,876 T/H



⚡ Electricity 4,463 MW  
☁ Steam 2,876 T/H  
💧 Chilled Water 15,400 RT  
🏭 Industrial Water 7,372 Cu.m./H



⚡ Electricity 114 MW



⚡ Electricity 449 MW



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

Note: 1. Equity capacity includes 100% stake in GLOW, GRP and ERU.  
2. Equity capacity includes ERU.

# GPSC Customers' Profile



## 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 fuel price



55% Industrial Users



43% EGAT



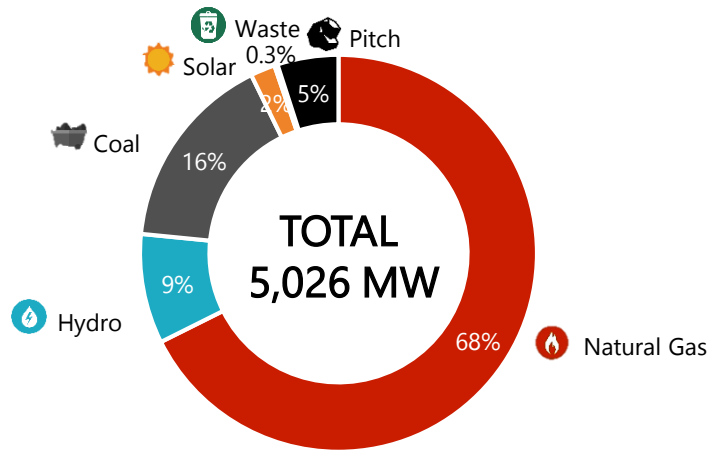
2% Others

\*Q1/2019 Revenue by Customers

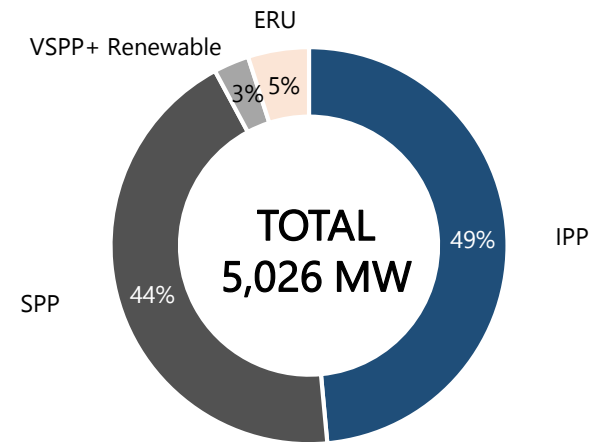


# GPSC's Business Portfolio by Fuel and Plant Type

Equity Capacity by fuel types



Equity Capacity by Plant Type



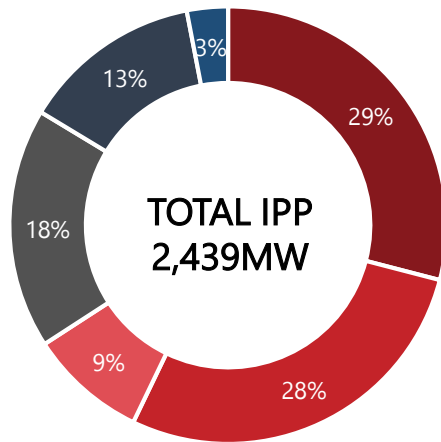
| Energy Type  | Installed MW   |             |              | Equity MW      |             |              |
|--------------|----------------|-------------|--------------|----------------|-------------|--------------|
|              | Total capacity | %           | In operation | Total capacity | %           | In operation |
| Natural gas  | 5,047          | 63.00%      | 4,927        | 3,399          | 67.63%      | 3,321        |
| Hydro        | 1,502          | 18.75%      | 152          | 449            | 8.93%       | 102          |
| Coal         | 1,045          | 13.04%      | 1,045        | 814            | 16.20%      | 814          |
| Solar        | 149            | 1.86%       | 109          | 101            | 2.01%       | 61           |
| Waste        | 18             | 0.22%       | -            | 13             | 0.26%       | -            |
| Pitch        | 250            | 3.12%       | -            | 250            | 4.97%       | -            |
| <b>Total</b> | <b>8,011</b>   | <b>100%</b> | <b>6,233</b> | <b>5,026</b>   | <b>100%</b> | <b>4,298</b> |

| Energy Type      | Installed MW   |             |              | Equity MW      |             |              |
|------------------|----------------|-------------|--------------|----------------|-------------|--------------|
|                  | Total capacity | %           | In operation | Total capacity | %           | In operation |
| IPP              | 4,910          | 61.29%      | 3,625        | 2,439          | 48.53%      | 2,118        |
| SPP              | 2,614          | 32.63%      | 2,494        | 2,192          | 43.61%      | 2,114        |
| VSPP + Renewable | 237            | 2.96%       | 114          | 145            | 2.88%       | 66           |
| ERU              | 250            | 3.12%       | 0            | 250            | 4.97%       | 0            |
| <b>Total</b>     | <b>8,011</b>   | <b>100%</b> | <b>6,233</b> | <b>5,026</b>   | <b>100%</b> | <b>4,298</b> |

Note: Base on 100% in GLOW

# GPSC's Business Portfolio by Plant Type

## IPP (49%)

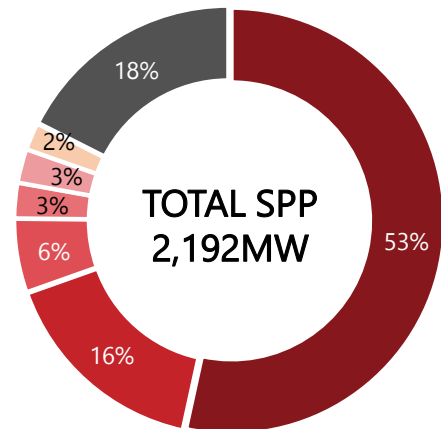


|                          |       |  |
|--------------------------|-------|--|
| <b>Natural gas</b>       |       |  |
| Sriracha Power Plant     | 700MW |  |
| GLOW IPP                 | 677MW |  |
| Ratchaburi Power ( RPCL) | 210MW |  |

|             |       |  |
|-------------|-------|--|
| <b>Coal</b> |       |  |
| GHECO-ONE   | 429MW |  |

|                       |       |  |
|-----------------------|-------|--|
| <b>Hydro</b>          |       |  |
| Xayaburi Power (XPCL) | 321MW |  |
| Houay Ho              | 102MW |  |

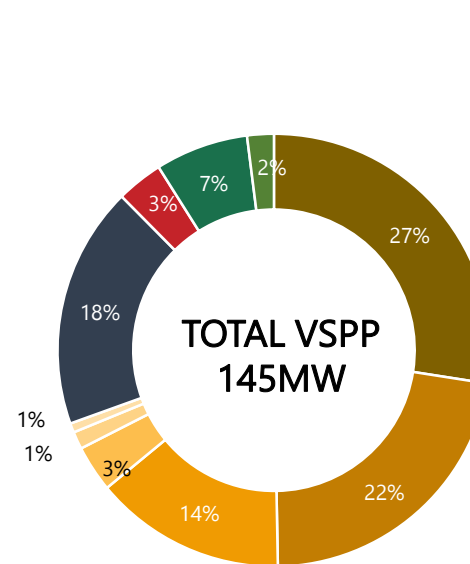
## SPP (43%)



|  |         |  |
|--|---------|--|
| <b>Natural gas</b>                     |         |  |
| Glow Co-Generation                     | 1,171MW |  |
| Rayong CUP 1-3                         | 354MW   |  |
| IRPC-CP (Phase 1-2)                    | 122MW   |  |
| Bangpa-in Cogeneration BIC (Phase 1-2) | 59MW    |  |
| NNEG                                   | 56MW    |  |
| Rayong CUP 4                           | 45MW    |  |

|                    |       |  |
|--------------------|-------|--|
| <b>Coal</b>        |       |  |
| Glow Co-Generation | 385MW |  |

## VSP and Renewable (3%)



|  |        |  |
|--|--------|--|
| <b>Solar</b>                                   |        |  |
| Solar Project                                  | 39.5MW |  |
| Thai Solar Renewable TSR (SSE1)                | 32MW   |  |
| Ichinoseki Solar Power (ISP1)                  | 21MW   |  |
| Combined Heat and Power Producing (CHPP Solar) | 5MW    |  |
| Glow Energy Solar PV Rooftop                   | 2MW    |  |
| Glow Energy Solar Plant                        | 1MW    |  |

|                         |      |  |
|-------------------------|------|--|
| <b>Hydro</b>            |      |  |
| Nam Lik 1 Power (NL1PC) | 26MW |  |

|                    |     |  |
|--------------------|-----|--|
| <b>Natural gas</b> |     |  |
| CHPP               | 5MW |  |

|                             |     |  |
|-----------------------------|-----|--|
| <b>Waste</b>                |     |  |
| Rayong WTE                  | 10W |  |
| Chonburi Clean Energy (CCE) | 3MW |  |

## ERU (5%)



|              |       |  |
|--------------|-------|--|
| <b>Pitch</b> |       |  |
| Thaioil      | 250MW |  |

# 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

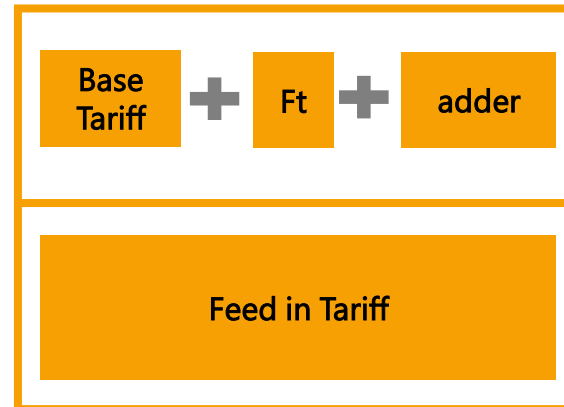
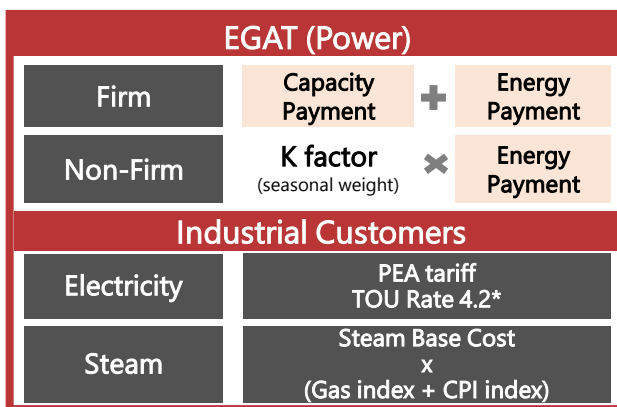
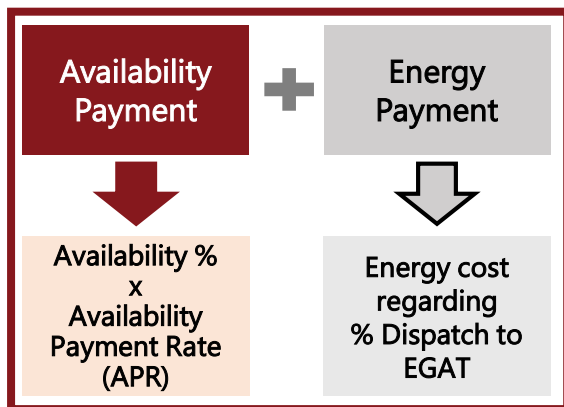
Non-Firm : Contract Term ≤ 5 Years

- 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



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



## GPSC Growth and Strategic Direction



Updates on GLOW Acquisition



Investment in Affiliates

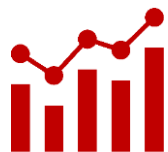


Financial Performance



# Q1 2019 KEY HIGHLIGHTS

'GROWING PROFIT WITH SUSTAINABILITY AND CONTROL'



## SIGNIFICANT GROWTH

- ❑ GPSC completed the acquisition of GLOW 69.11% on March 14, 2019, and submitted the Tender Offer for Securities for the 30.89% remaining shares of GLOW on March 22, 2019
- ❑ Integration with GLOW will consist of 3 phases, with next six months focused on planning and capturing quick wins
- ❑ Coordinated with PTT Group on ESS and new S-curve projects, aiming to be a system integrator



## PROFIT



**118%** increase in EBITDA QoQ due to contribution of GLOW and better operation of Sriracha Power Plant



**27%** of gross profit margin in Q1/2019 due to better performance with better cost management of Sriracha Power Plant



**12%** of normalized net profit margin in Q1/2019 due to better performance of Sriracha



## SUSTAINABILITY

- ❑ **THB 0.80 per share** dividends for 2H/2018 which was paid on April 18, 2019
- ❑ **Awards** from
  - Best Power Company 2019 and Best IR Company (Energy Sector) from International Business Magazine
  - CFO of the year from the Asset Triple A awards
  - OEMS Improvement (Gold Award) and Best Practice Sharing from PTT Group Operational Excellence Award 2019



## CONTROL



Nam Lik1's construction is 100% completed



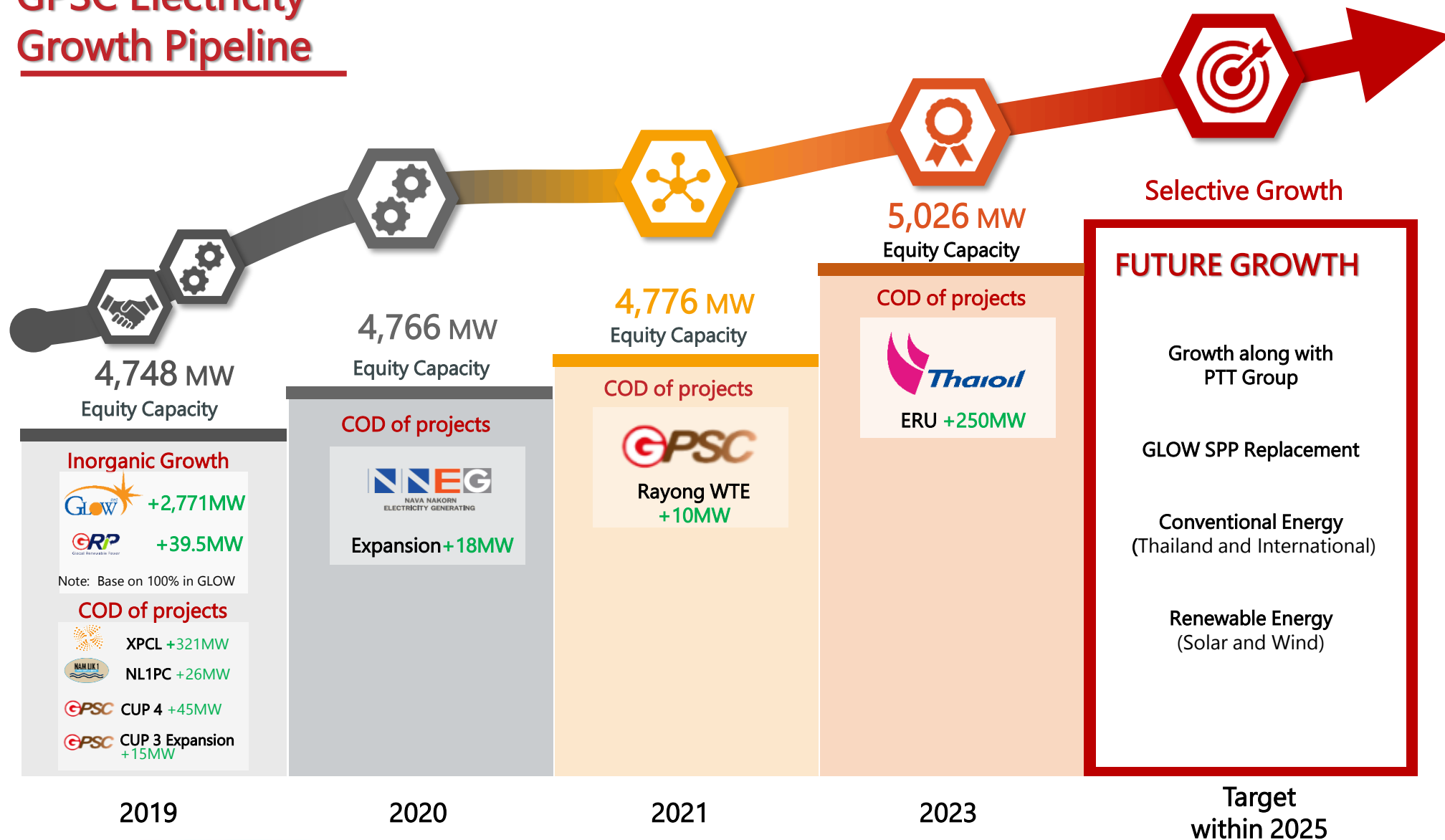
Xayaburi and CUP4 which are under construction expected to COD within 2019



NNEG expansion phase expected to COD in 2020



# GPSC Electricity Growth Pipeline



# Strategic Direction and Growth Strategy 3 Pillars

## SYNERGY & INTEGRATION

-  Synergy Capture
-  Operation Excellence & Asset Optimization
-  Corporate & Business Infrastructure

## SELECTIVE GROWTH

-  Growth along with PTT Group
-  Domestic and International
-  Renewable

## S-CURVE

-  Battery Business
-  Energy Storage System Integrator
-  Energy Management Solution Provider



GPSC Growth and Strategic Direction



Updates on GLOW Acquisition

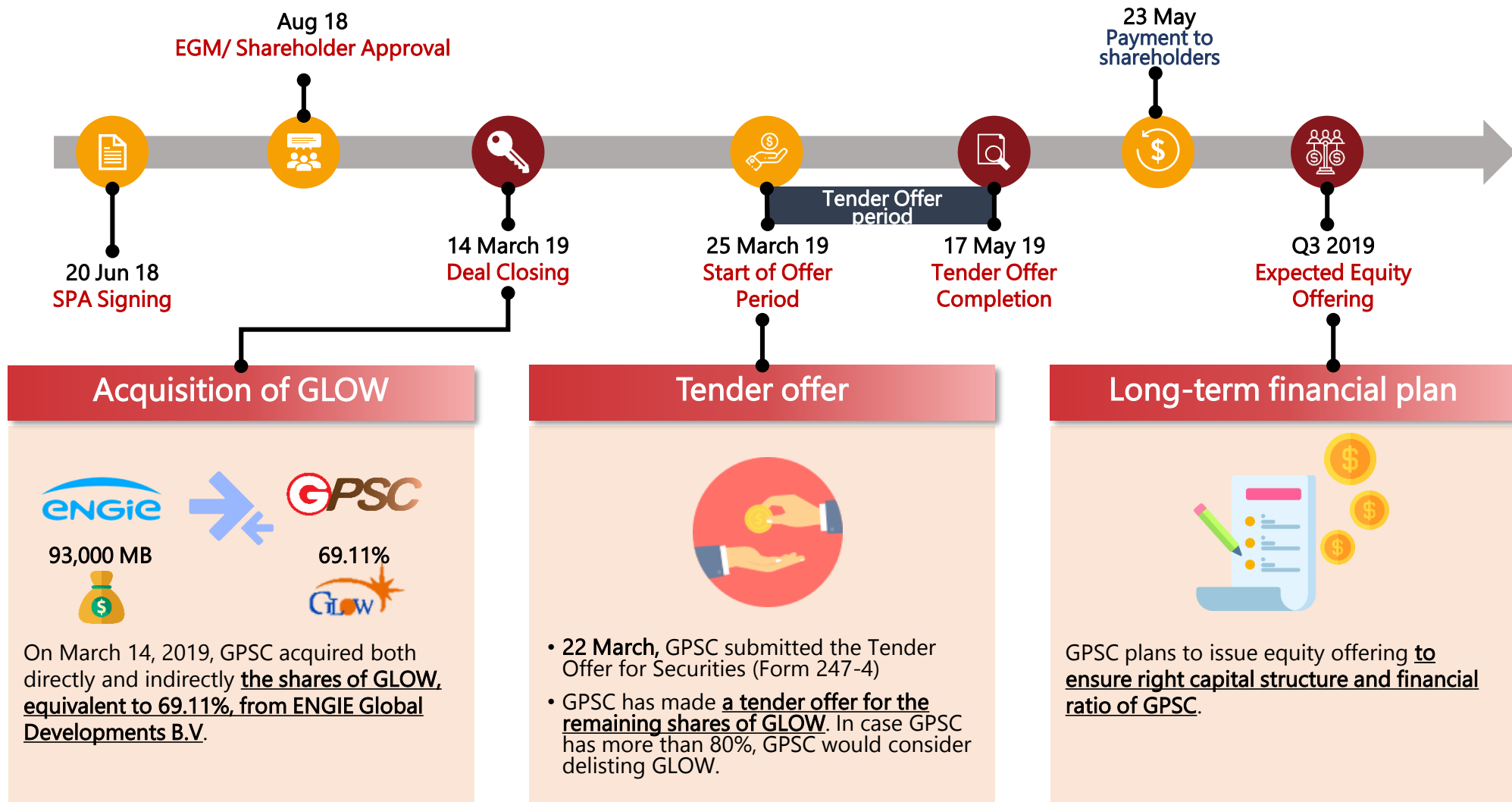


Investment in Affiliates



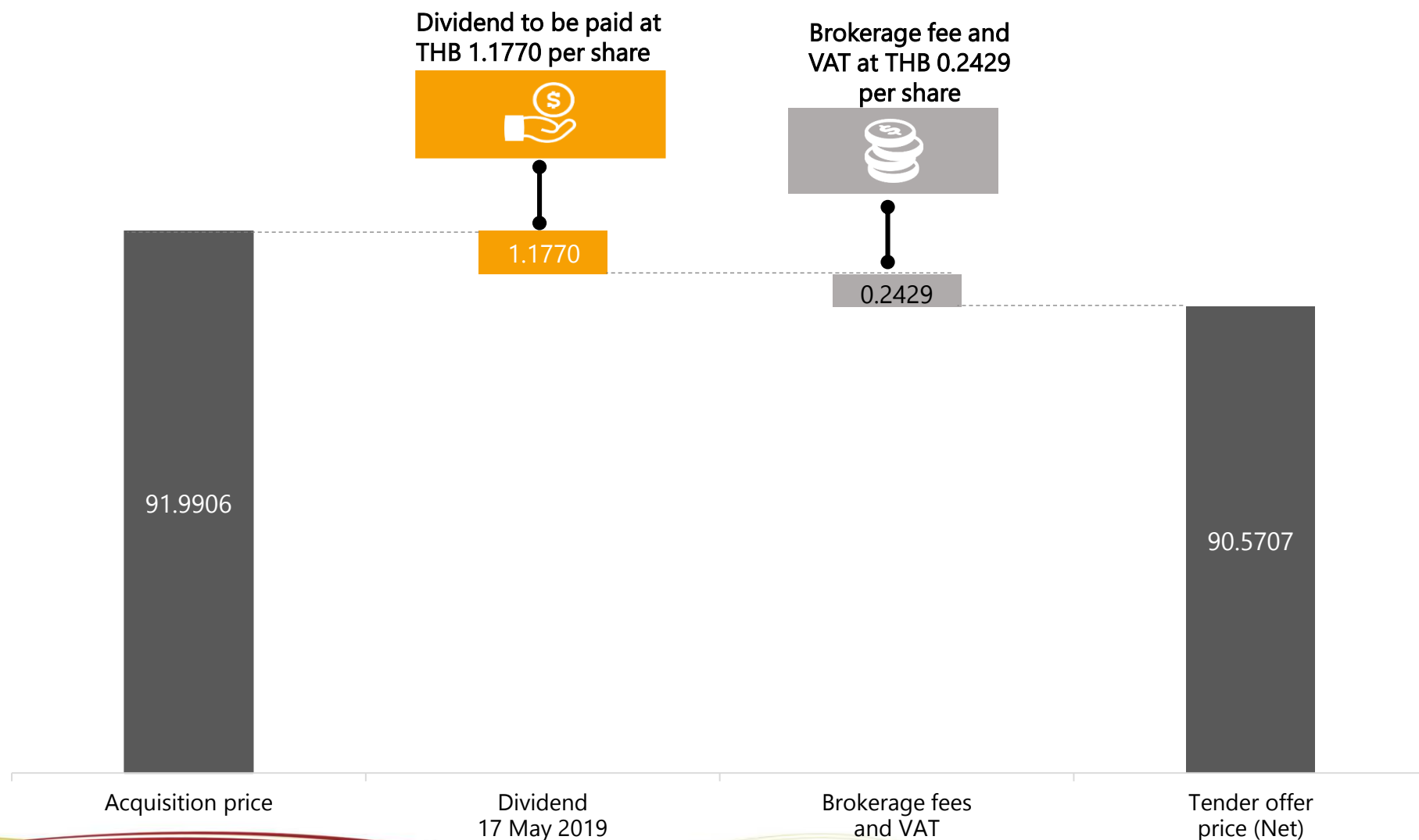
Financial Performance

# Acquisition Transaction Timeline and Long-term Finance Plan

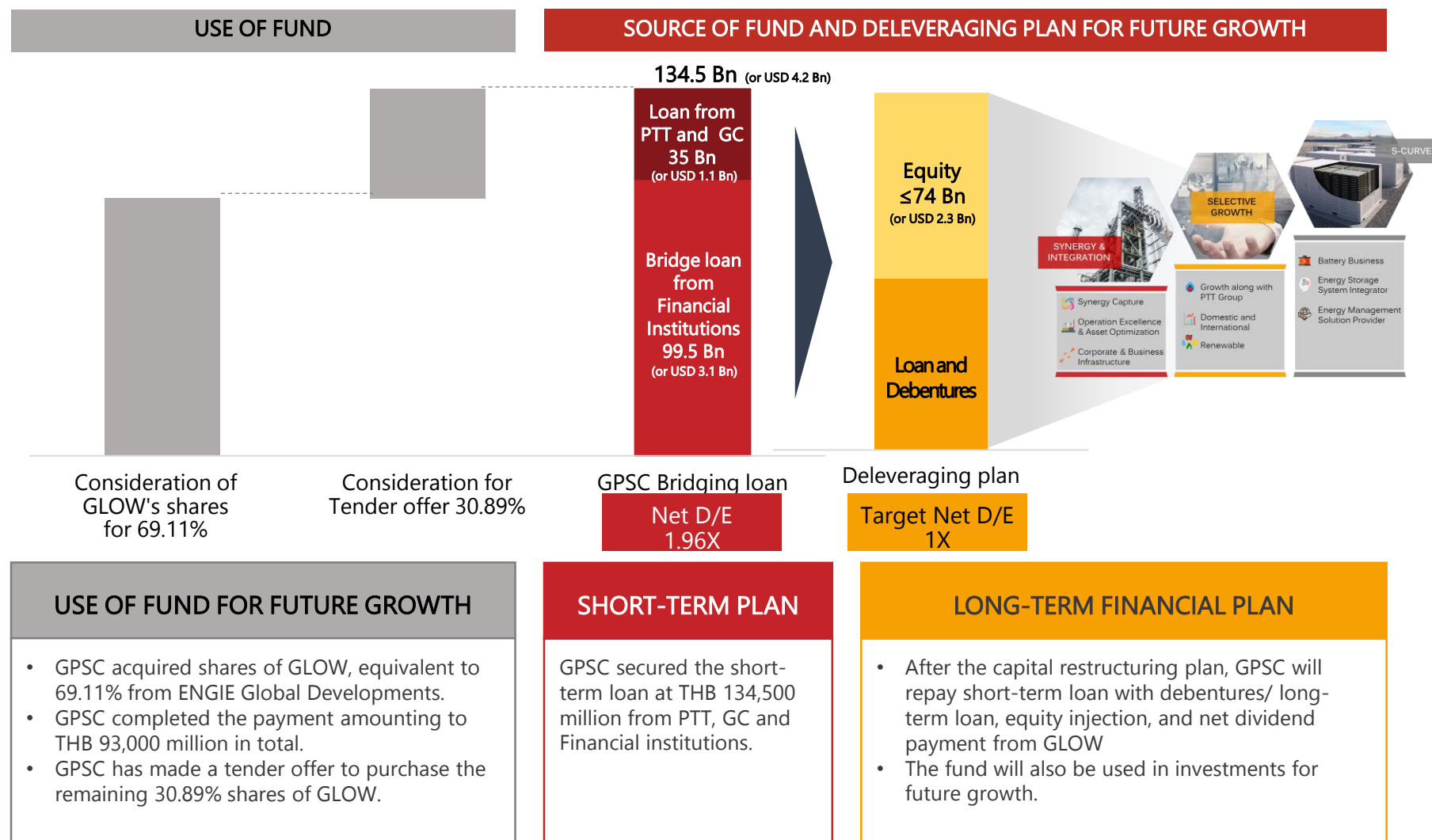




# Purchase Price and Tender Offer Price of GLOW



# Use and Source of Fund with Deleveraging Plan



Note: Use FX = 31.975 THB/USD ; the w.a. selling rate announced by the BOT on 22 May 2019



GPSC Growth and Strategic Direction



Updates on GLOW Acquisition



**Investment in Affiliates**

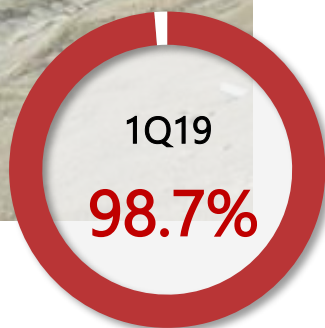


Financial Performance

# Xayaburi Power Company Limited (XPCL)



SCOD: Q4/2019



% Progress

## PROJECT SUMMARY

TYPE



Run-of-River  
Hydropower  
Plant

ELECTRICITY (MW)

**1,285**

LOCATION

Lao PDR

CUSTOMER



• EGAT  
(1,220 MW)



• Electricite Du  
Laos (EDL)  
(60 MW)

GPSC HOLDING

**25%**  
Of total share

PROJECT UPDATE

- The main construction tasks, such as power house, intermediate block and fish ladder were mostly completed.
- The commissioning test of each unit has been in progress in order to sell electricity during the Unit Operation Period (UOP).



# Nam Lik 1 Power Company Limited (NL1PC)



SCOD: 2019

% Progress

1Q19

100%

## PROJECT SUMMARY

TYPE



Run-of-River  
Hydropower  
Plant

ELECTRICITY (MW)

64.7

LOCATION

Northern of Vientiane,  
Lao PDR

CUSTOMER



• Electricite Du Laos (EDL)  
(63.8 MW for 30 years from signing  
date)

GPSC HOLDING

40%

Of total share

PROJECT UPDATE

- Overall construction and commissioning test was completed.

# CENTRAL UTILITY PLANT 4 : PSC

## CUP-4 (THAILAND)



SCOD: Q3/2019

% Progress

1Q19

87.8%

### PROJECT SUMMARY

TYPE



Gas-fired  
Cogeneration



ELECTRICITY (MW)

45

STEAM (T/h)

70

LOCATION

Asia Industrial  
Estate, Rayong

CUSTOMER



Industrial users in Asia  
Industrial Estate and  
neighboring industrial  
estate



GPSC HOLDING

100%

Of total share

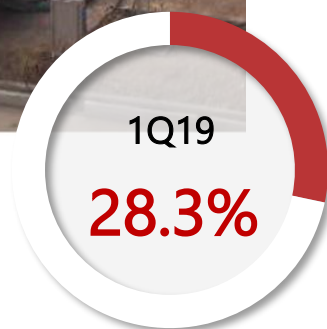
PROJECT UPDATE

- Most of installations and erections have been completed, and prepared for unit test and commissioning
- Power and steam pipe distribution inter-connection achieved over 80%, and next activity will be integration test and commissioning.






# Nava Nakorn Electricity Generation (NNEG) Expansion Project



% Progress



## PROJECT SUMMARY

| TYPE  | ELECTRICITY (MW)  |  | STEAM (T/h)   |
|---|---|--|---|
|  Gas-fired Cogeneration | Expansion   | 60   | 10  |
|                         | Total   | 185  | 40  |
| LOCATION  | CUSTOMER  |  |   |
| Nava Nakorn Industrial Promotion Zone, Pathumthani  |  Industrial User |  EGAT (SPP Firm 90 MW for 25 years) |  |
| GPSC HOLDING  | PROJECT UPDATE  |  |   |

30%  
Of total share

- Piling work was completed
- Main tasks such as engineering, foundation and procurement work for machines and equipment were executed as planned.



GPSC Growth and Strategic Direction



Updates on GLOW Acquisition



Investment in Affiliates



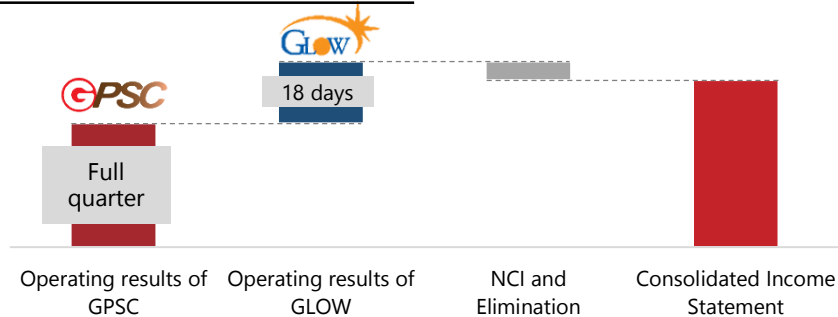
Financial Performance



# Accounting Impact of Q1/2019 Consolidated Financial Statements

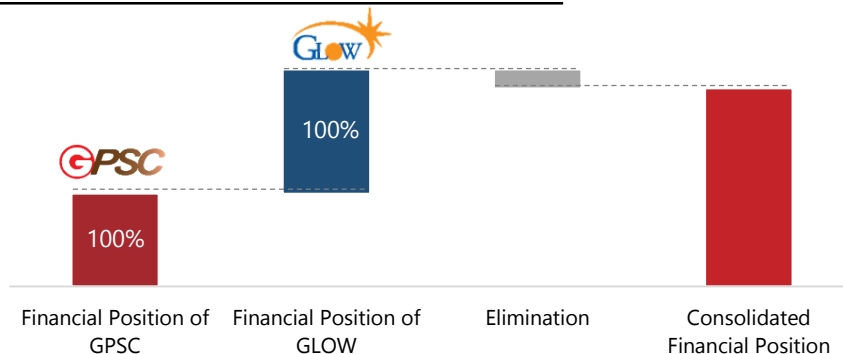
## Accounting impacts on Q1/2019 financial statements

### Q1/2019 Consolidated Statement of Income



The company has consolidated GLOW's operating results for 18 days after the acquisition into the consolidated statement of income

### Q1/2019 Consolidated Statement of Financial Position



The company has consolidated GLOW's assets, liabilities and equity for entire amount into the consolidated statement of financial position

## Key financial highlights



**55%** increase in Revenue QoQ



**97%** increase in Gross profit QoQ



**118%** increase in EBITDA QoQ

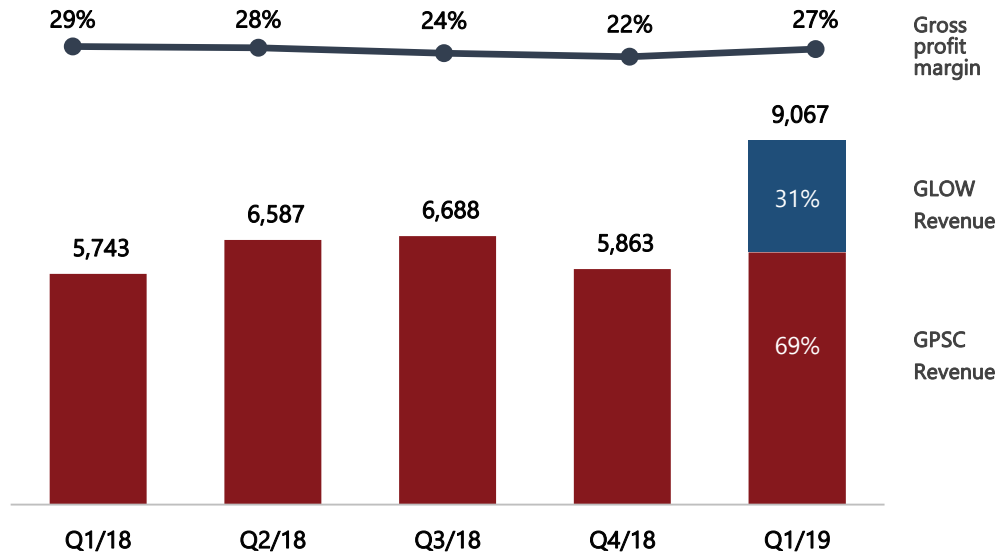


**94%** increase in Net profit QoQ

# Q1/2019 Financial Performance Summary (1/2)

## Revenue & Gross Profit Margin

(THB Million,%)



### Revenue

QoQ

▲ 55%

YoY

▲ 58%

- QoQ and YoY : Increased due to
  - 1) the contribution of GLOW
  - 2) higher EP of Sriracha
  - 3) higher electricity and steam sales of Rayong CUP and IRPC-CP
- QoQ : higher AP of Sriracha due to major overhaul in Q4/18

### Gross profit margin

QoQ

▲ 5%

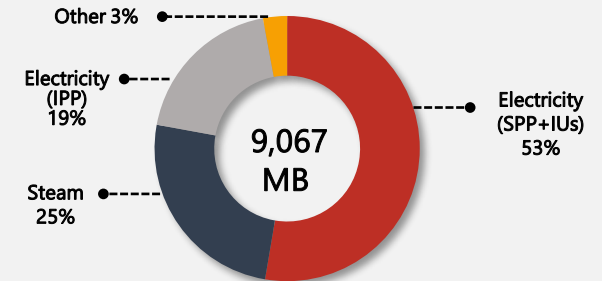
YoY

▼ 2%

- QoQ: Increased due to
  - 1) the contribution of GLOW
  - 2) better performance of IPP, while COGS of SPP also increased but lesser extent than revenue
- YoY: Decreased mainly from natural gas and coal price hike

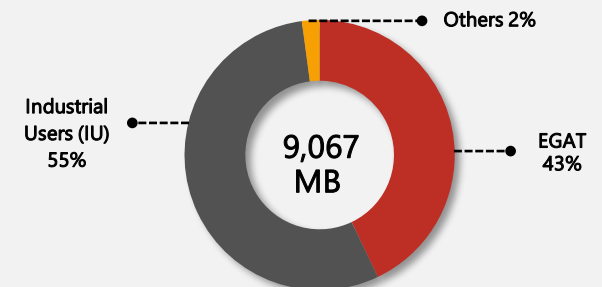
## Q1/19 Revenue by product

(THB Million)



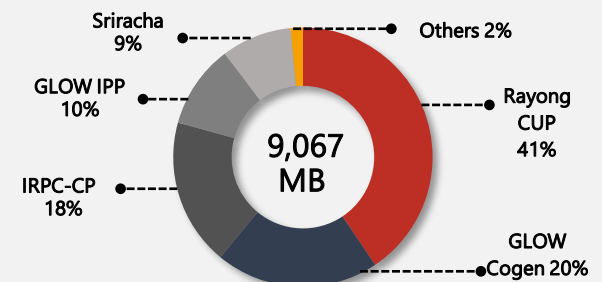
## Q1/19 Revenue by customer

(THB Million)



## Q1/19 Revenue by plant

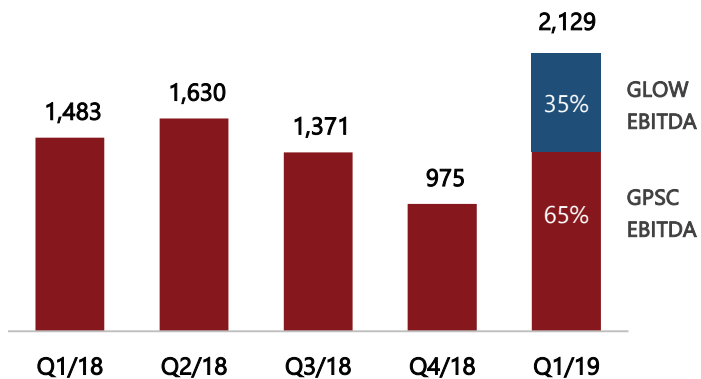
(THB Million)



# Q1/2019 Financial Performance Summary (2/2)

## EBITDA

(THB Million)



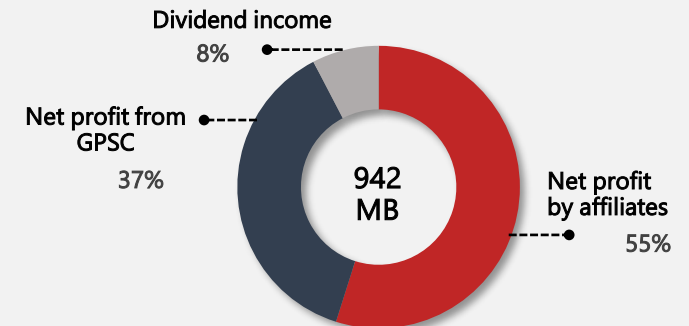
QoQ  
▲ 118%

YoY  
▲ 43%

- QoQ and YoY: Increased mainly due to 1) the contribution of GLOW 2) the improved operating results of Sriracha

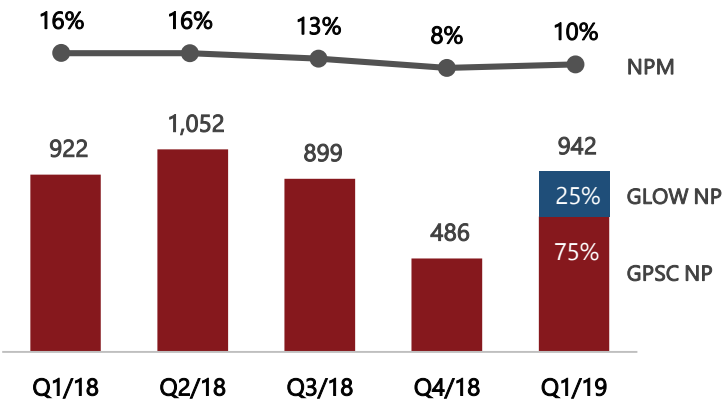
## Q1/19 Net Profit by source

(THB Million)



## Net Profit and Net Profit Margin

(THB Million,%)



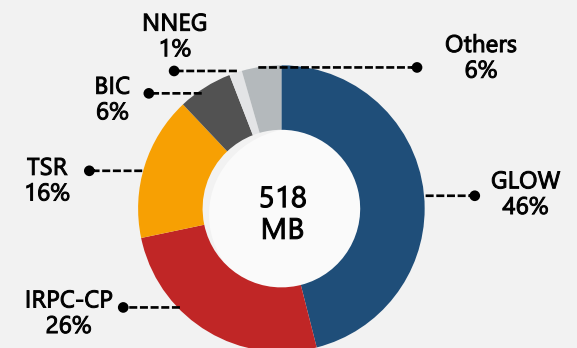
QoQ  
▲ 94%

YoY  
▲ 2%

- QoQ and YoY: Increased due to 1) the contribution of GLOW 2) the improved operating results of Sriracha 3) dividend income from RPCL

## Q1/19 Net Profit by Affiliates

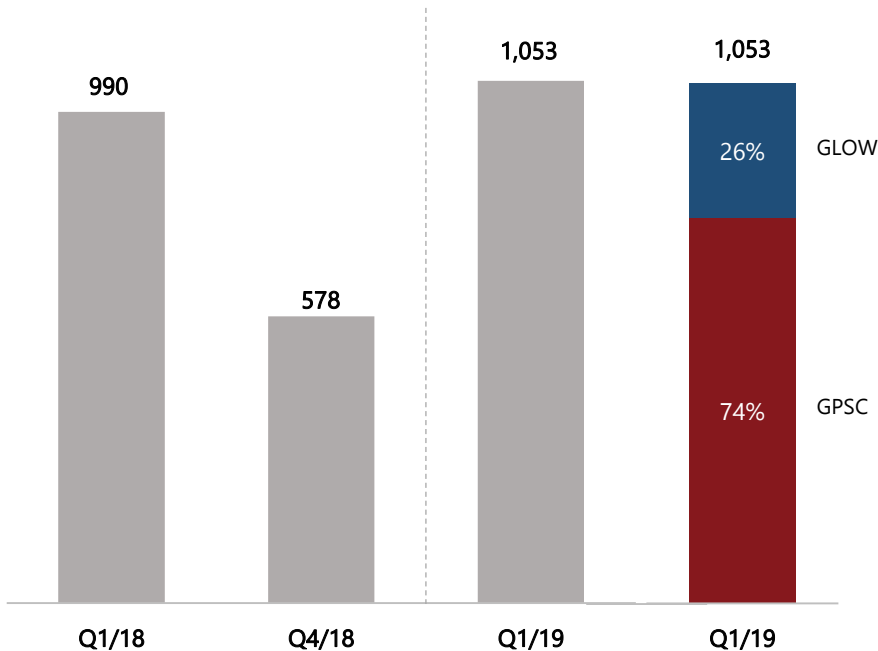
(THB Million)



# Normalized Net Profit (NNP) increased both QoQ and YoY due to Better Performance of GPSC's IPP

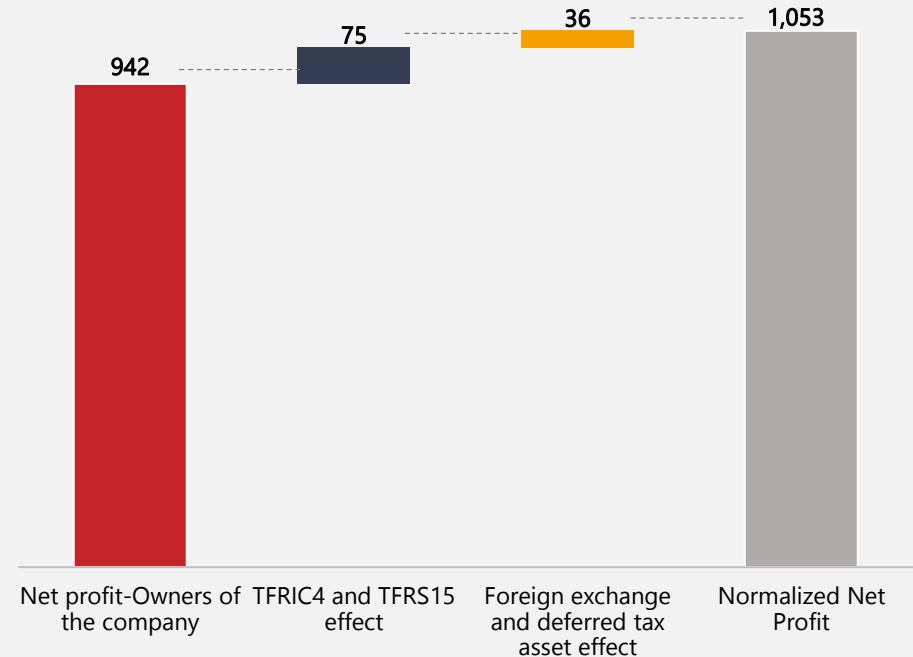
Normalized Net Profit (NNP)

(THB Million)



Normalized Net Profit (NNP) of Q1/2019

(THB Million)



QoQ

▲ 82%

- QoQ: The effect to the increase in the NNP was Baht 19 million due to the effect from TFRIC 4 and TFRS 15, whereas the foreign exchange and deferred tax asset effect decreased.

YoY

▲ 6%

- YoY: The effect to NNP escalated from the TFRIC 4 and TFRS 15 equaled to Baht 43 million

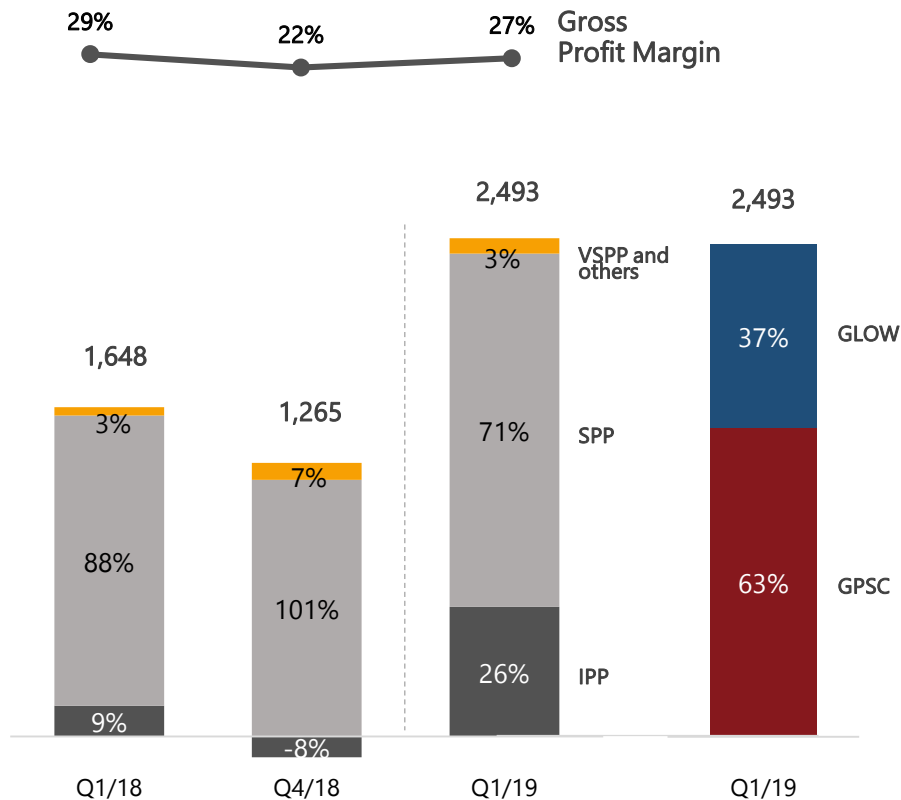
- Normalized net profit (NNP)** is net profit adjusted to remove the effects of seasonality and unusual revenue or expenses, including TFRIC4 and TFRS 15 effect, foreign exchange and deferred tax asset effect.
- Normalized net profit (NNP)** clearly reflects the company's true earnings from its normal operations



# Gross Profit and Gross Profit Margin has increased significantly from contribution of GLOW and IPP's Revenue

## Gross profit and Gross profit margin by type of plant

(THB Million,%)



## Total Gross profit

QoQ

▲ 97%

YoY

▲ 51%

- QoQ: Increased due to 1) the contribution of GLOW 2) the better performance of IPP

- YoY: Increased mainly from 1) the contribution of GLOW 2) the improved performance of VSPP

## IPP Gross profit

QoQ

▲ 723%

YoY

▲ 321%

- QoQ: Increased due to 1) the contribution of GLOW 2) the increase in AP 3) no major overhaul in Q1/2019

- YoY: Increased due to 1) the contribution of GLOW 2) maintenance cost decreased as service agreement expired so the company planned on its own maintenance

## SPP Gross profit

QoQ

▲ 38%

YoY

▲ 22%

- QoQ: Increased due to 1) the contribution of GLOW 2) the increase in electricity and steam average selling price from CUP and IRPC-CP, while the maintenance cost decreased

- YoY: Increased due to 1) the contribution of GLOW

## VSPP and Others Gross profit

QoQ

▼ 11%

YoY

▲ 81%

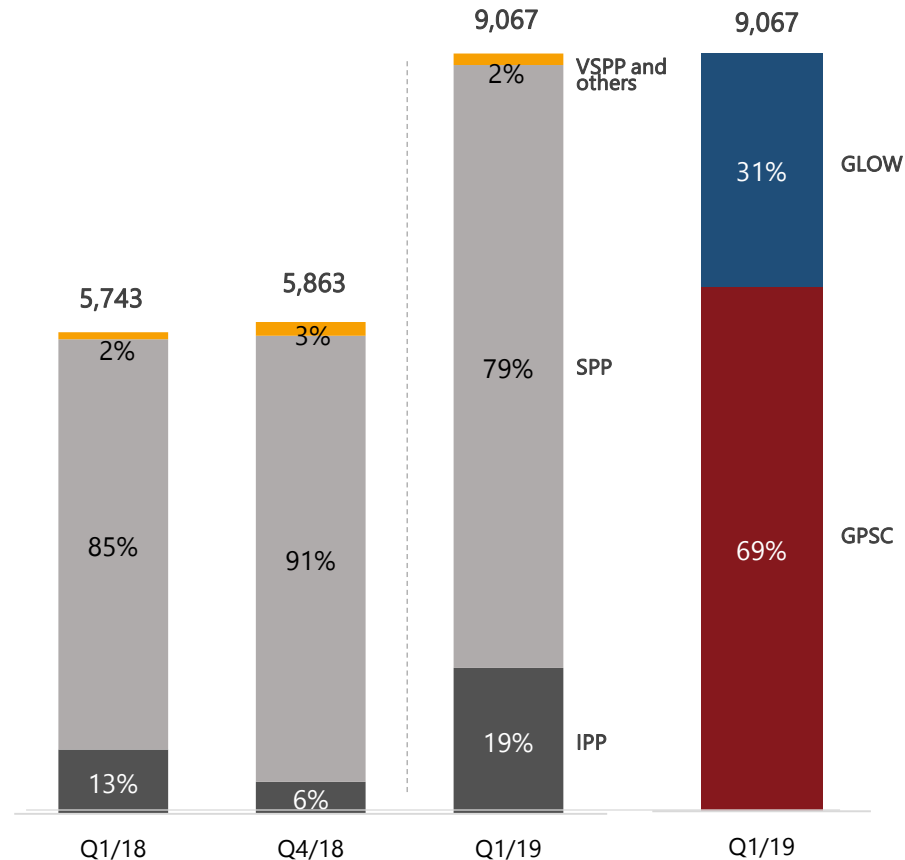
- QoQ: Decreased due to 1) the decrease in EPC service income of CHPP. Even though, cost of raw materials of CHPP dropped, but at a lesser extent than the revenue.

- YoY: Increased due to 1) the increase in EPC service income of CHPP 2) the increase in revenue from ISP1

# Total Revenue has increased due to The Contribution of GLOW and The Better Performance of IPP and SPP

## Revenue by type of plant

(THB Million)



## Total Revenue

QoQ

▲ 55%

- QoQ: Increased mainly due to 1) the contribution of GLOW and 2) the increase in revenues of IPP and SPP

YoY

▲ 58%

- YoY: Increased mainly from 1) contribution of GLOW and 2) higher revenues of IPP, SPP and VSPP

## IPP Revenue

QoQ

▲ 358%

- QoQ Increased mainly from 1) the contribution of GLOW and 2) the increase in revenue from AP and Weight factor of Sriracha

YoY

▲ 127%

- YoY: Increased mainly from 1) the contribution of GLOW and 2) the increase in revenue from EP of Sriracha followed higher natural gas price

## SPP Revenue

QoQ

▲ 35%

- QoQ: Increased due to 1) the contribution of GLOW 2) the increase in electricity and steam selling price of IRPC-CP and Rayong CUP

YoY

▲ 47%

- YoY: Increased due to 1) the contribution of GLOW 2) the increase in sales volume of IRPC-CP and 2) the rise of average electricity and steam selling price

## VSPP and Others Revenue

QoQ

▼ 16%

- QoQ: Decreased due to 1) the decrease in EPC service income of CHPP

YoY

▲ 60%

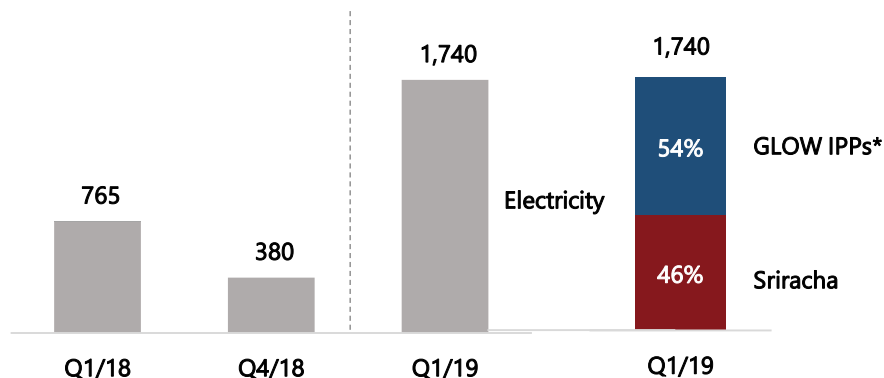
- YoY: Increased due to 1) the increase in EPC service income of CHPP and 2) the increase in revenue from selling electricity of ISP1



# IPP Revenue: Increased By 358% QoQ and 127% YoY due to Better Performance of Sriracha and No Major Overhaul

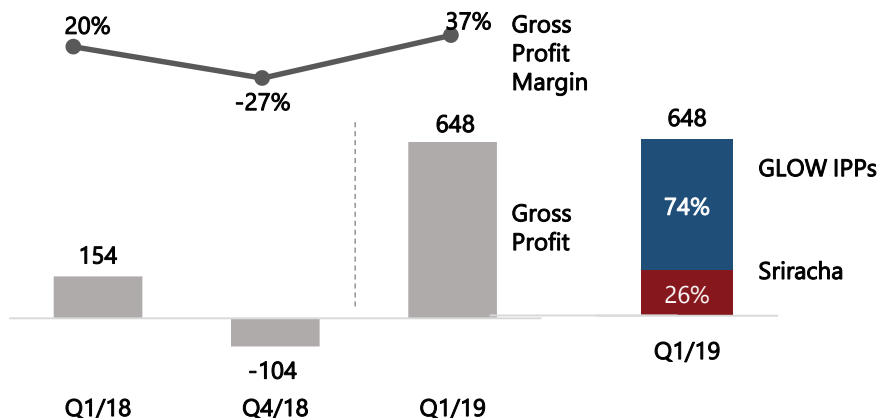
## Revenue

(THB Million)



## Gross Profit & Gross Profit Margin

(THB Million)



## IPP Power Plants



Sriracha



GIPP



GHECO-ONE



HHPC

\*GLOW IPPs consists of GIPP, GHECO-ONE and HHPC

## Total Revenue

QoQ

▲358%

- QoQ: Increased due to 1) 945 MB from the contribution of GLOW and 2) the improvement of Sriracha as a result of having no major overhaul in Q1/2019

YoY

▲127%

- YoY: Increased due to 1) 945 MB from the contribution of GLOW and 2) the increase in EP of Sriracha corresponding to higher selling price

## Gross profit

QoQ

▲723%

- QoQ: Increased due to 1) 481 MB from the contribution of GLOW and 2) the increase in gross profit of Sriracha as result of the rebound of AP from having no major overhaul in Q1/2019

YoY

▲321%

- YoY: Increased due to 1) 481 MB from the contribution of GLOW and 2) maintenance cost decreased as service agreement expired so the company planned on its own maintenance



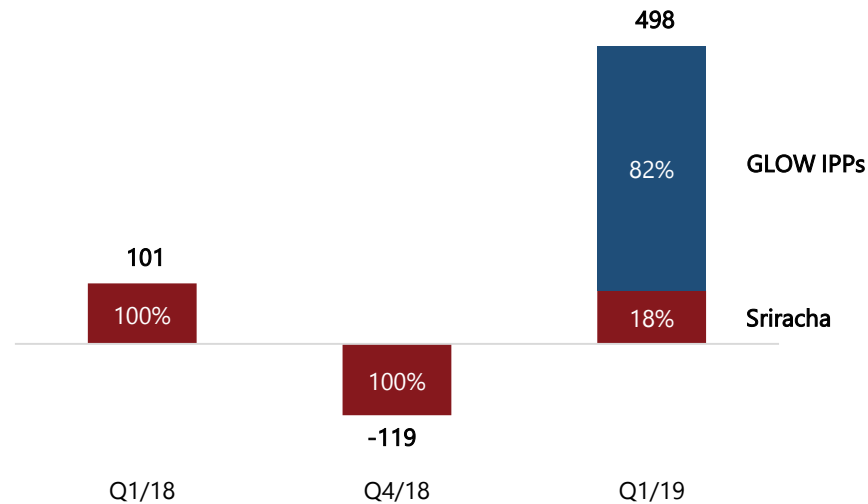
# Availability Payment: Increased by 519% QoQ and 393% YoY

## Availability Payment

(THB Million)

## Availability Rate

(%)

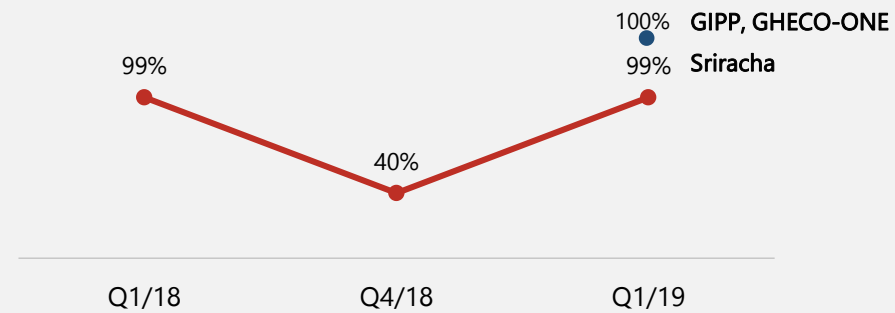


**QoQ**  
▲ 519%

- **QoQ:** Increased due to 1) 409 MB from the contribution of GLOW and 2) the increase in revenue of Sriracha as a result of having no major overhaul in Q1/2019

**YoY**  
▲ 393%

- **YoY:** Increased due to 1) 409 MB from the contribution of GLOW whereas revenue of Sriracha decreased due to lower AP profile following the stage of power plant's useful life



**AR-Sriracha**

- **QoQ:** Rebounded since there was a major overhaul in Q4/18 for 53 days
- **YoY:** Remained unchanged

**AR-GIPP**

- AR of GIPP (18-day after acquisition) remained at 100%

**AR-GHECO ONE**

- AR of GHECO ONE (18-day after acquisition) remained at 100%





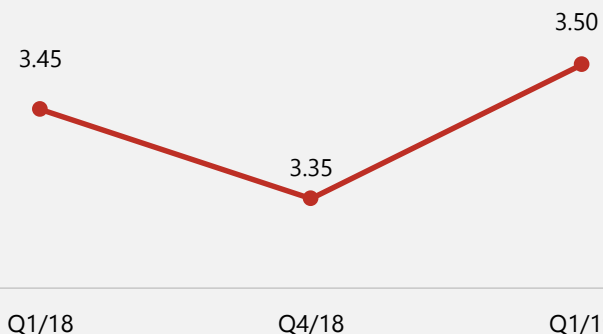
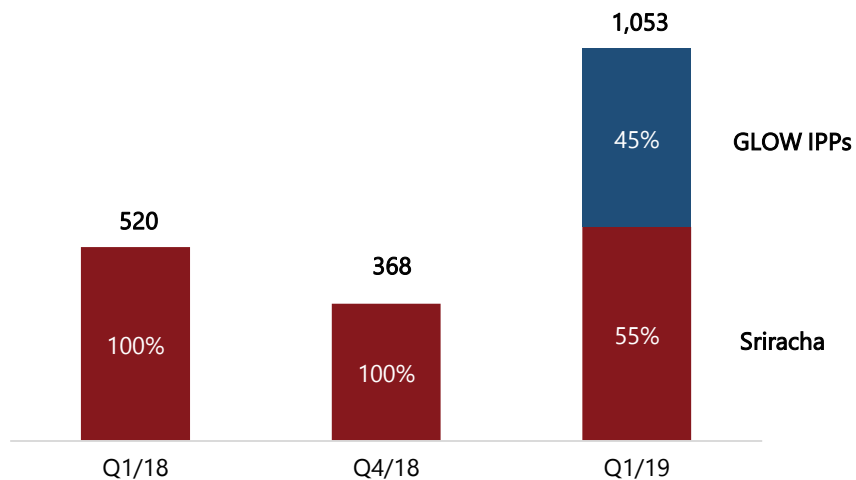
# Energy Payment: Increased 186% QoQ and 103% YoY

## Energy Payment

(THB Million)

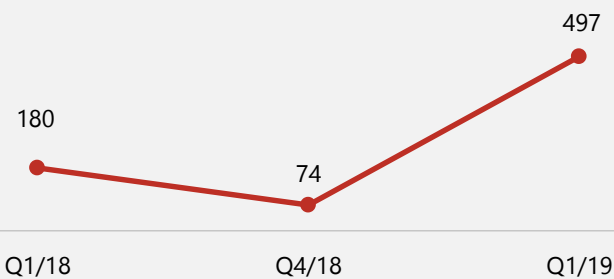
## Average Selling Price

(Baht/KWh)



## Sales Volume

(GWh)



**QoQ**  
▲ 186%

- **QoQ:** Increased due to 1) 479 MB from the contribution of GLOW and 2) the increase in EP revenue of Sriracha as a result of no major overhaul in Q1/19 and 3) the increase in dispatch volume following EGAT's instruction.

**YoY**  
▲ 103%

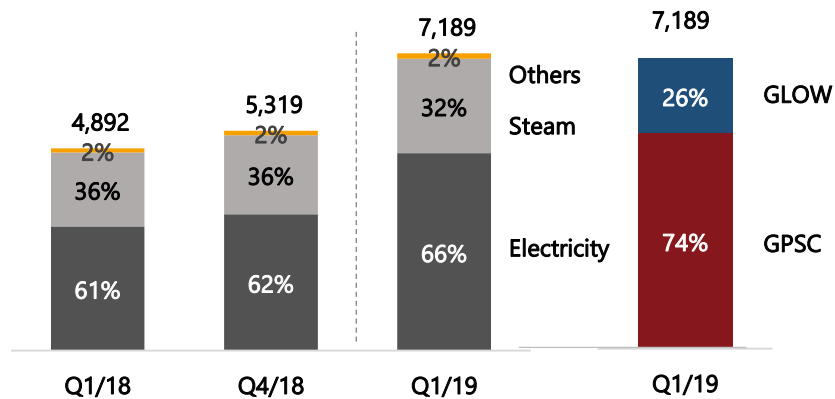
- **YoY:** Increased due to 1) 479 MB from the contribution of GLOW whereas 2) revenue of Sriracha slightly increased following EGAT's instruction.



# SPP Revenue: Increased 35% QoQ and 47% YoY due to Power and Steam Sales of IRPC-CP

## SPP Revenues

(THB Million)



## GPSC SPP Powerplants



CUP-1



CUP-2



CUP-3



IRPC-CP



GLOW Energy Phase 1,2,4,5



GLOW SPP 2-3



GLOW SPP 11 Phase 1-3



GLOW CFB3

## Total Revenue

QoQ

▲ 35%

YoY

▲ 47%

- QoQ and YoY: Increased due to 1) 1,846 MB from the contribution of GLOW and 2) the increase in power and steam sales of IRPC-CP as a result of higher power and steam selling price.

## Gross profit

QoQ

▲ 38%

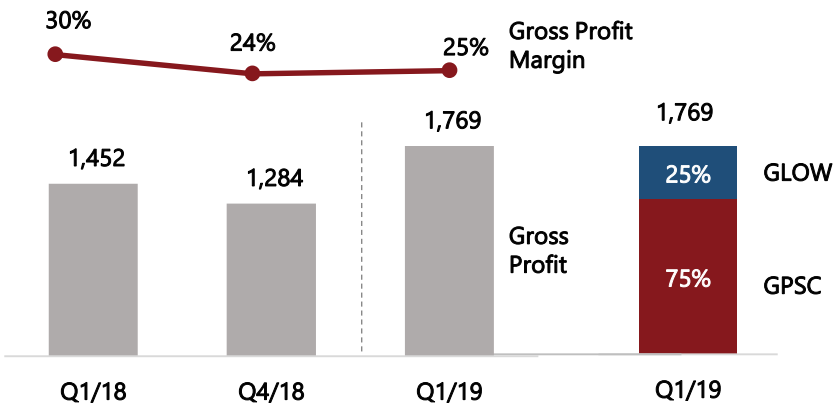
YoY

▲ 22%

- QoQ: Increased due to 1) 445 MB from the contribution of GLOW and 2) IRPC-CP's sales from higher electricity and steam selling price with no major overhaul in Q1/2019
- YoY: Increased due to 1) 445 MB from the contribution of GLOW whereas, gross profit of CUP 1-3 and IRPC-CP decreased because of the lower steam sales volume and the increase in charges of long-term maintenance service agreement of IRPC-CP.

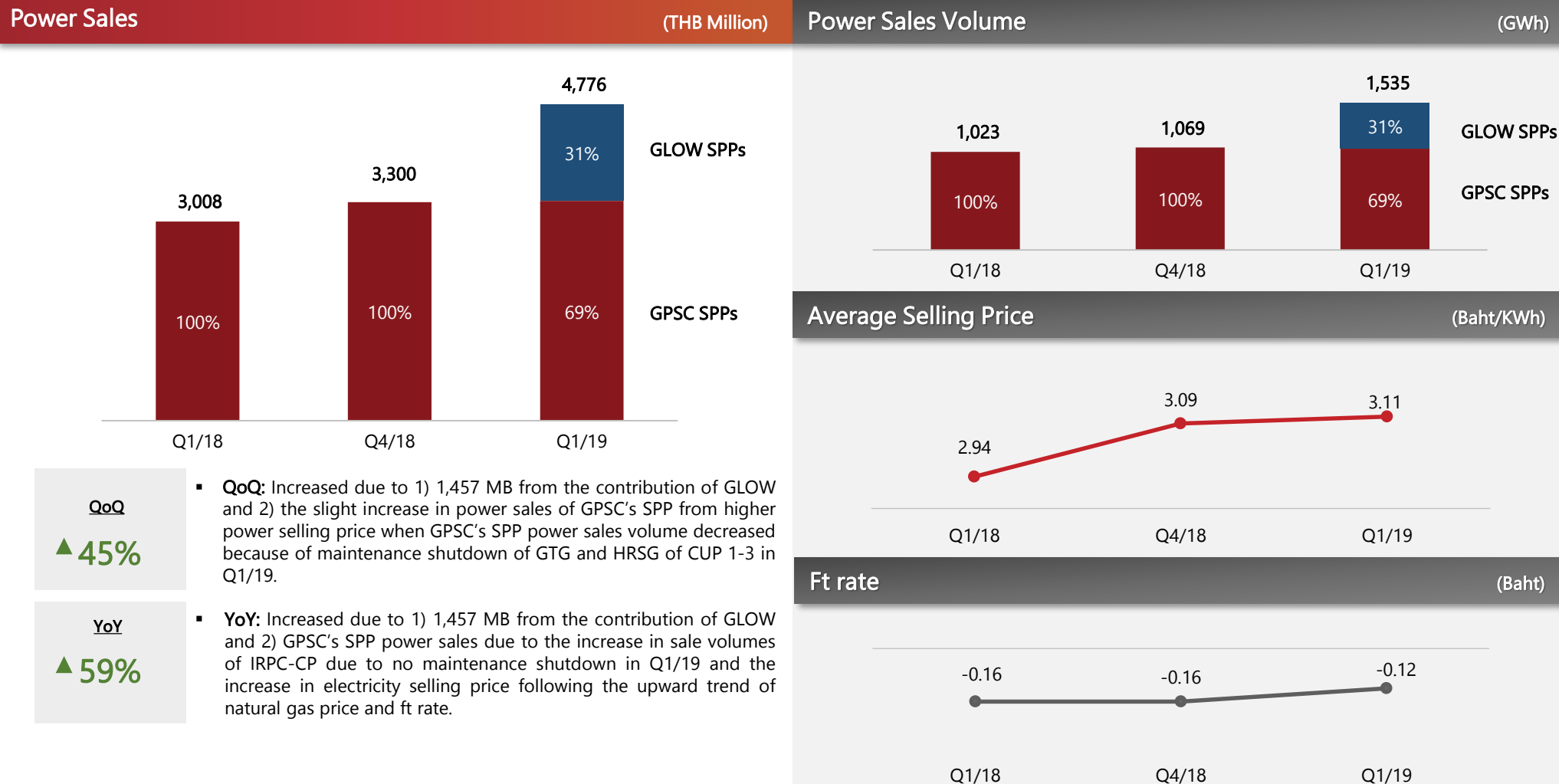
## Gross Profit & Gross Profit Margin

(THB Million)





# SPP Power Sales: Increased 45% QoQ and 59% YoY





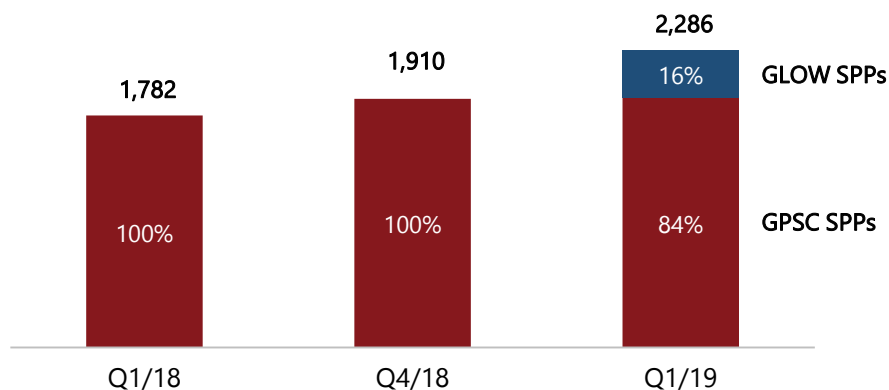
# SPP Steam Sales: Increased 20% QoQ and 28% YoY

## Steam Sales

(THB Million)

## Steam Sales Volume

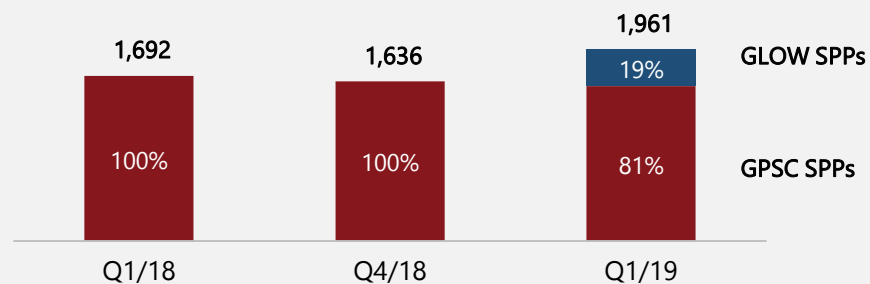
('000 tons)



QoQ  
▲ 20%

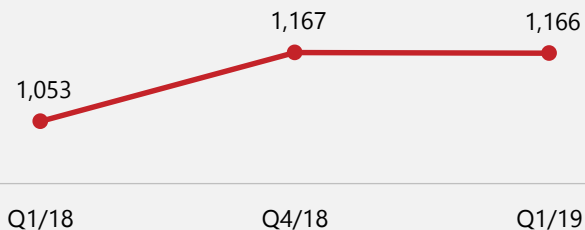
YoY  
▲ 28%

- **QoQ and YoY:** Increased due to 1) 366 MB from the contribution of GLOW and 2) the slight increase in steam sales of GPSC's SPP due to higher selling price when steam sales volume dropped from maintenance shutdown of CUP's major customers and lower steam supply from Auxiliary Boiler of IRPC-CP



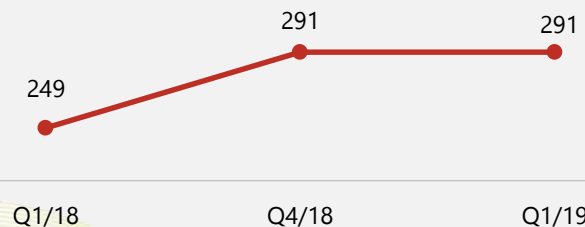
## Average Selling Price

(THB/Ton)



## Average Natural Gas Price

(THB/MMBTU)

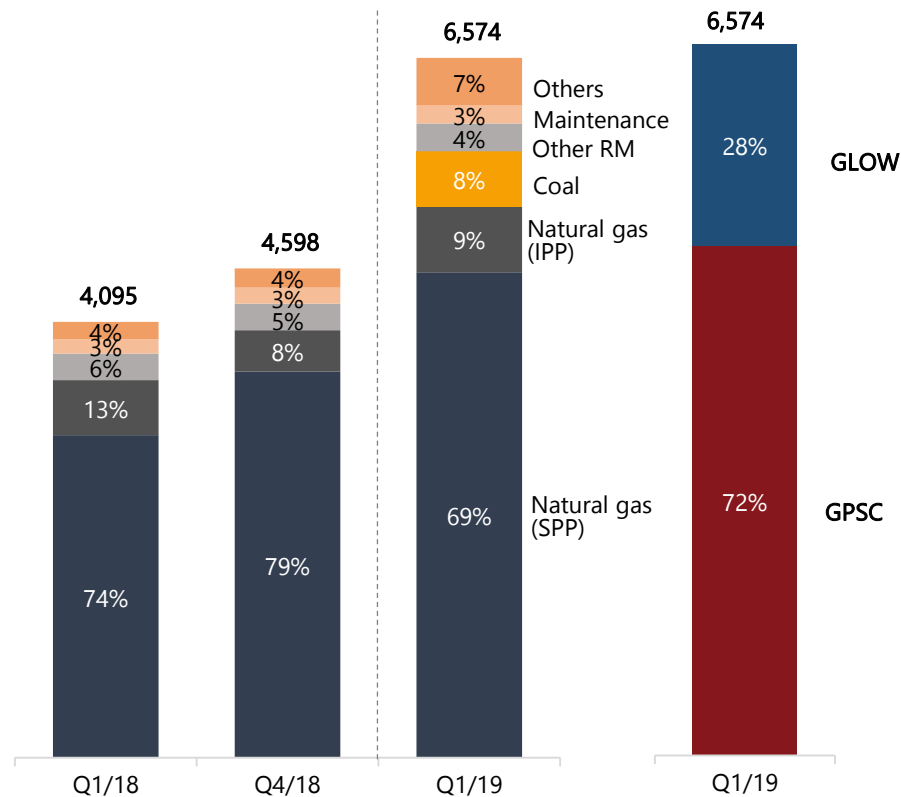




# Total Cost Of Sales and Services: Increased in Line with Revenues

## Total Costs of sales and services\*

(THB Million)



Note: exclude depreciation and amortization

## Total Costs

QoQ  
▲ 43%  
YoY  
▲ 61%

- QoQ and YoY: Total costs increased mainly from the consolidation of GLOW's power plant of that contributed THB 1,865 million of total increase as well as the increase in price of natural gas for SPP

## Natural Gas

QoQ  
▲ 29%  
YoY  
▲ 46%

- QoQ : Natural gas costs increased mainly due to the contribution of GLOW that has many gas SPP and the increase in gas consumption at Sriracha as there was no major overhaul in Q1/19
- YoY: Natural gas costs increased mainly due to the contribution of GLOW that has many gas SPPs

## Coal and Other Raw Materials

QoQ  
▲ 209%  
YoY  
▲ 213%

- QoQ and YoY: Costs of coal increased mainly due to the contribution of GLOW that has coal as a fuel source whereas other raw material costs remained unchanged

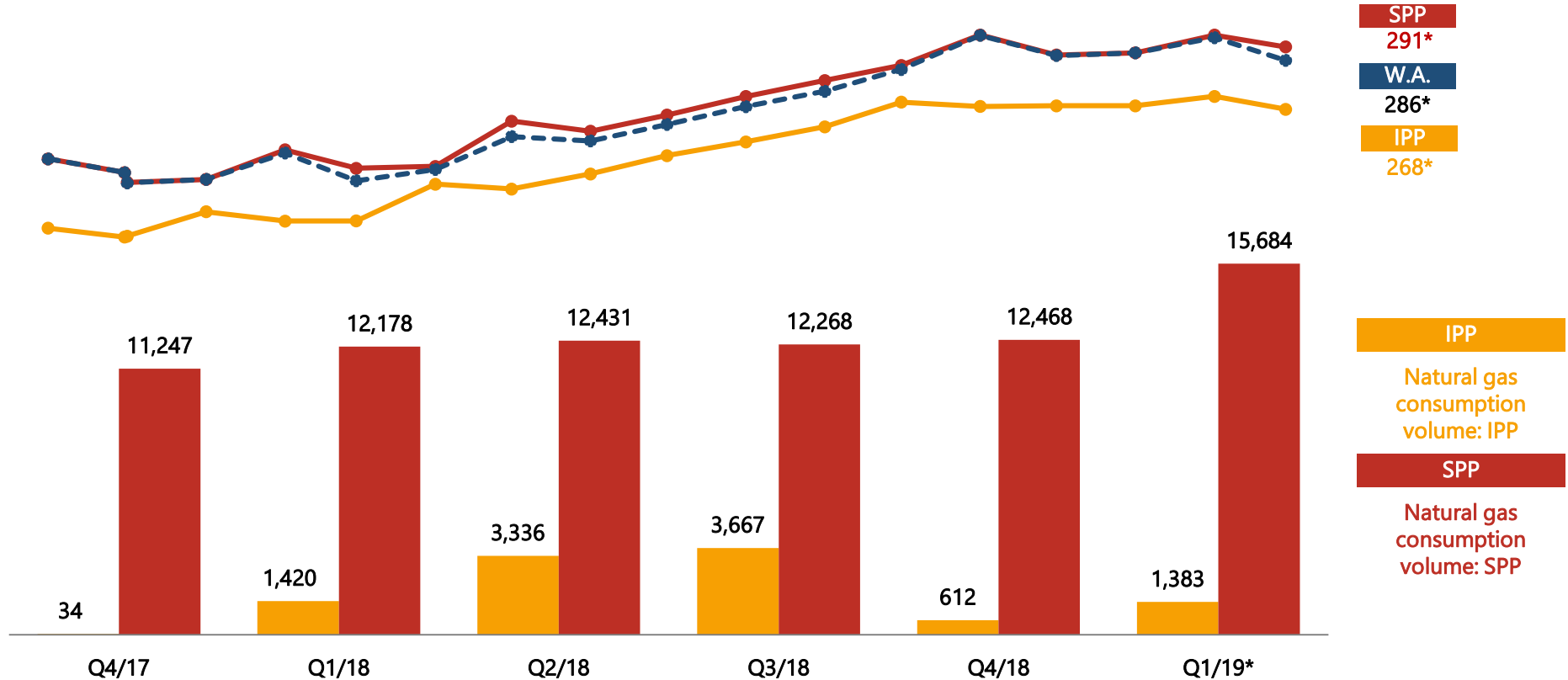
## Maintenance cost and Others

QoQ  
▲ 87%  
YoY  
▲ 107%

- QoQ and YoY: Maintenance costs and other costs increased due to the contribution of GLOW that takes account for THB 618 million of increase QoQ and YoY

# Natural Gas Consumption vs Price Trend

Quarterly natural gas consumption ('000 MMBTU)  
& Monthly natural gas price (THB/MMBTU)

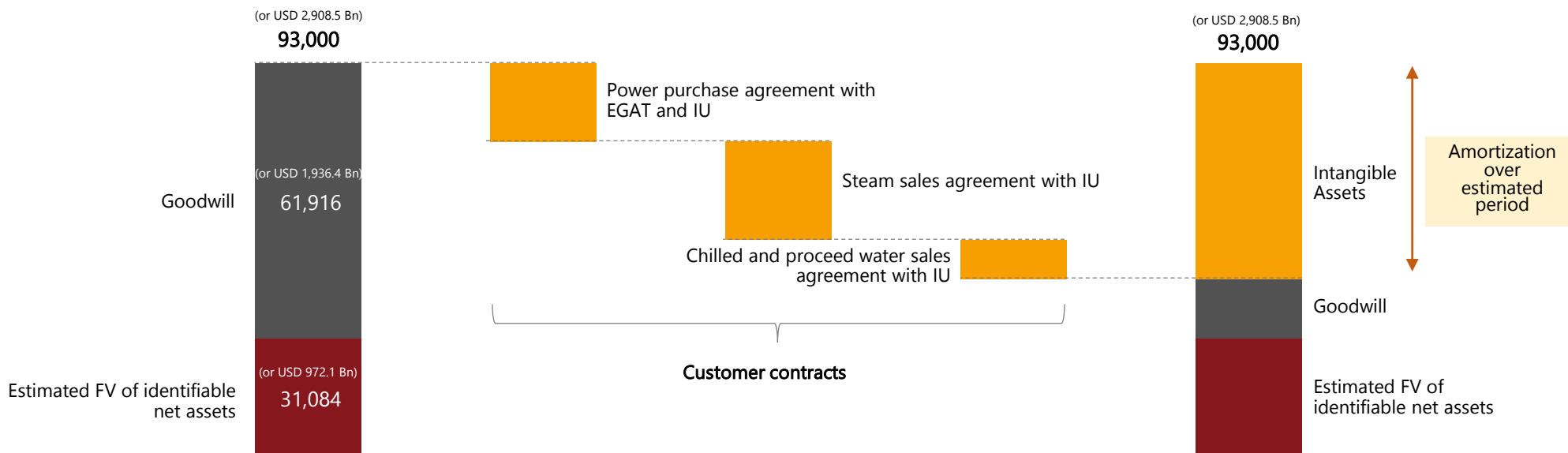


Remark: Latest price as of 31 March 2019  
 Note: \*Excluded GLOW

# Purchase Price Allocation (PPA)

## Purchase Price Allocation (PPA)

(THB Million)



1

Purchase Consideration  
(Q1/2019)

2

Fair Value Assessment

3

Purchase Consideration  
(Within 12 months)

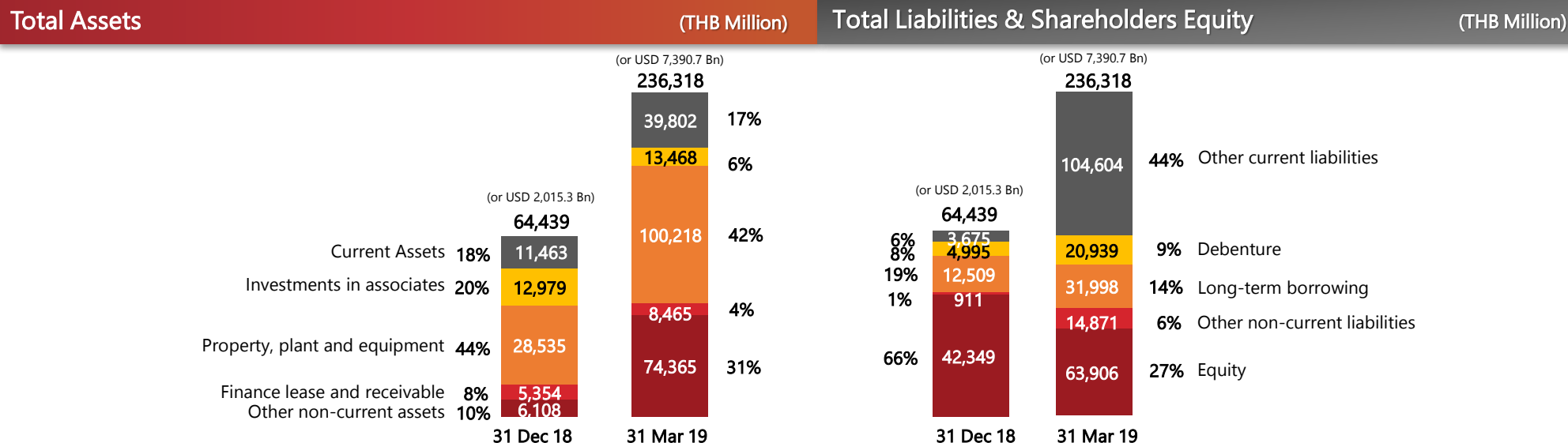
- For the period ended 31 March 2019, the company has booked identifiable net assets of 31,084 MB and rest of purchase consideration of 61,916 MB is booked as Goodwill.

- The company is under the process of determining fair value of the remaining acquired intangible assets and reviewing purchase price allocation (PPA) which is expected to be completed within 12 months.

- After the process of appraising fair value, remaining identifiable intangible asset will be booked at the determined fair value and the remaining amount will be recorded as Goodwill.
- Intangible assets will be amortized over the estimated periods and the remaining goodwill will be subjected to impairment test annually.

Note: Use FX = 31.975 THB/USD ;  
the w.a. selling rate announced by the BOT on 22 May 2019

# Financial Position of GPSC and Subsidiaries



## Assets

▲ 267%

Total assets increased mainly from:

- **Current assets** increased by THB 28,339 million or 247%
- **Property, Plant, and Equipment** increased by THB 71,683 million
- **Others non-current assets** increased by THB 68,257 million due to an increase in goodwill from acquiring GLOW. GPSC is under the process of determining fair value of the acquired net assets and reviewing PPA, therefore, the estimated goodwill may be subject to further adjustments

## Liabilities

▲ 680%

Total liabilities increased mainly from:

- **Current liabilities** rose by THB 100,929 million from short-term loan from financial institutions and shareholders at THB 93,000 million for acquisition of GLOW
- **Long-term borrowing and debentures** increased by THB 35,433 million
- **Other non-current liabilities** rose by THB 13,960 million due to consolidating financial statements with GLOW
- **Interest-bearing debt** amounted to THB 146,160 million, which comprised of THB 99,080 million of current portion or 68% and non-current amounting to THB 47,080 million or 32%

## Equity

▲ 51%

Total Equity increased mainly from:

- Equity of the company and its subsidiaries increased by THB 21,557 million due to the increase in non-controlling interest from GLOW acquisition

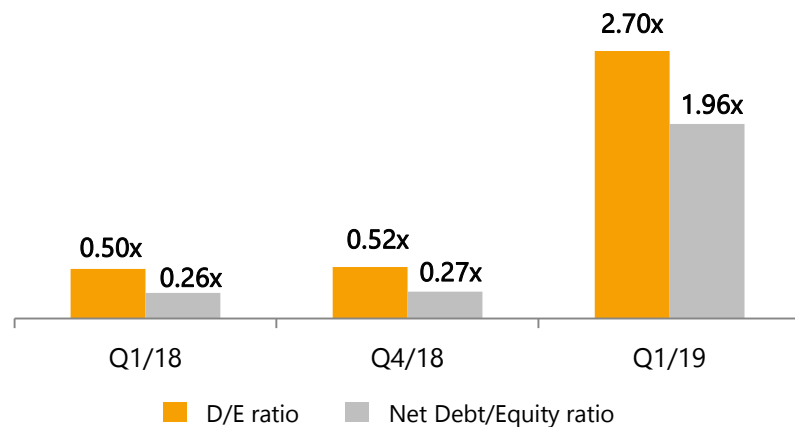
Note: Use FX = 31.975 THB/USD ;  
the w.a. selling rate announced by the BOT on 22 May 2019



# Key Financial Ratio

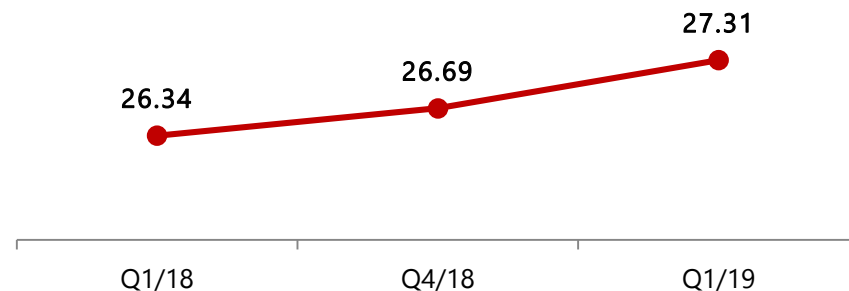
Total D/E and Net Debt/ Equity ratio

(Times)



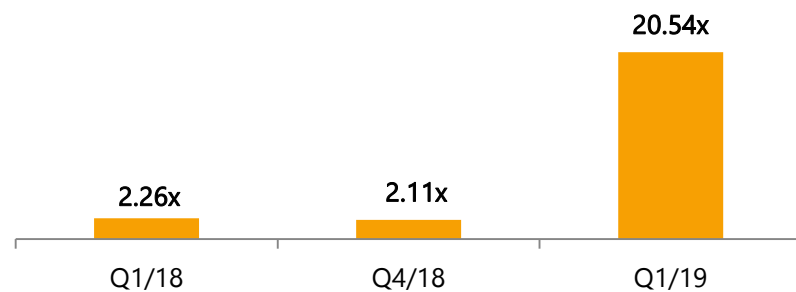
Book value per share (BVPS)

(Baht/share)



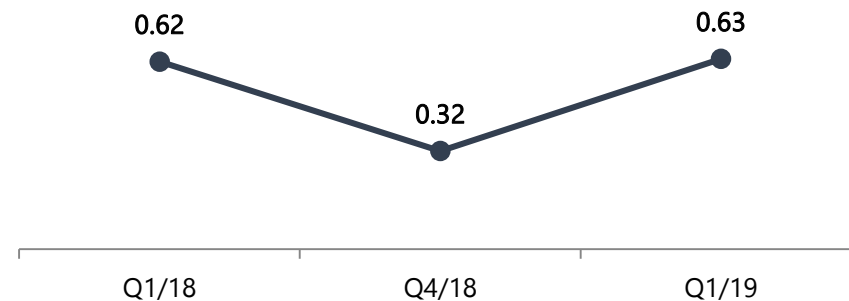
Net Debt to EBITDA

(Times)



Earning per share (EPS)

(Baht/share)



\*Note: EBITDA for the last 12 months

# THANK YOU

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# Power Plants Portfolio of GPSC

| Name                   | Type | Total capacity (MW) | Equity Power capacity (MW) | Equity Operating Power capacity (MW) | Steam (T/H) | Industrial water (Cu.m/H) | Direct shareholding (%) | COD  | Tenor        |
|------------------------|------|---------------------|----------------------------|--------------------------------------|-------------|---------------------------|-------------------------|------|--------------|
| <b>IN OPERATION</b>    |      |                     |                            |                                      |             |                           |                         |      |              |
| <b>IPP</b>             |      |                     |                            |                                      |             |                           |                         |      |              |
| Huay Ho                | IPP  | 152                 | 102                        | 102                                  | -           | -                         | GLOW (67%)              | 1999 | 30           |
| Sriracha               | IPP  | 700                 | 700                        | 700                                  | -           | 80                        | GPSC (100%)             | 2000 | 25/2025      |
| Glow IPP               | IPP  | 713                 | 677                        | 677                                  | -           | -                         | GLOW (95%)              | 2003 | 25           |
| RPCL                   | IPP  | 1,400               | 210                        | 210                                  | -           | -                         | GPSC (15%)              | 2008 | 25/2033      |
| GHECO-One              | IPP  | 660                 | 429                        | 429                                  | -           | -                         | GLOW (65%)              | 2012 | 25           |
| XPCL                   | IPP  | 1,285               | 321                        | -                                    | -           | -                         | GPSC (25%)              | 2019 | 29/2048      |
| <b>Total IPP</b>       |      | <b>4,910</b>        | <b>2,439</b>               | <b>2,118</b>                         | <b>-</b>    | <b>80</b>                 |                         |      |              |
| <b>SPP</b>             |      |                     |                            |                                      |             |                           |                         |      |              |
| Glow Energy Phase 1    | SPP  | -                   | -                          | -                                    | 250         | 1,340                     | GLOW (100%)             | 1994 | -            |
| Glow Energy Phase 2    | SPP  | 281                 | 281                        | 281                                  | 300         | 1,180                     | GLOW (100%)             | 1996 | 3            |
| Glow Energy Phase 4    | SPP  | 77                  | 77                         | 77                                   | 137         | 2,050                     | GLOW (100%)             | 2005 | 25           |
| Glow Energy Phase 5    | SPP  | 328                 | 328                        | 328                                  | 160         | -                         | GLOW (100%)             | 2011 | -            |
| Glow SPP 2/ GLOW SPP 3 | SPP  | 513                 | 513                        | 513                                  | 190         | 150                       | GLOW (100%)             | 1999 | 25           |
| Glow SPP 11 Phase 1    | SPP  | 120                 | 120                        | 120                                  | -           | 360                       | GLOW (100%)             | 2000 | 25           |
| Glow SPP 11 Phase 3    | SPP  | 42                  | 42                         | 42                                   | -           | -                         | GLOW (100%)             | 2006 | -            |
| Glow SPP 11 Phase 2    | SPP  | 110                 | 110                        | 110                                  | -           | 212                       | GLOW (100%)             | 2012 | 25           |
| CUP-1                  | SPP  | 226                 | 226                        | 226                                  | 890         | 720                       | GPSC (100%)             | 2006 | 10-15/2021++ |
| CUP-2                  | SPP  | 113                 | 113                        | 113                                  | 170         | 510                       | GPSC (100%)             | 2008 | 15/2022++    |
| CUP-3                  | SPP  | -                   | -                          | -                                    | 280         | 770                       | GPSC (100%)             | 2009 | 15/2023++    |
| Glow Energy CFB 3      | SPP  | 85                  | 85                         | 85                                   | 79          | -                         | GLOW (100%)             | 2010 | -            |
| BIC-1                  | SPP  | 117                 | 29.25                      | 29.25                                | 5           | -                         | GPSC (25%)              | 2013 | 25/2038      |
| BIC-2                  | SPP  | 117                 | 29.25                      | 29.25                                | 5           | -                         | GPSC (25%)              | 2017 | 25/2042      |
| IRPC-CP Phase 1        | SPP  | 45                  | 23                         | 23                                   | 86.7        | -                         | GPSC (51%)              | 2015 | 25/2040      |
| IRPC-CP Phase 2        | SPP  | 195                 | 99.4                       | 99.4                                 | 66.3        | -                         | GPSC (51%)              | 2017 | 25-27/2044   |

# Power Plants Portfolio of GPSC

| Name                         | Type  | Total capacity (MW) | Equity Power capacity (MW) | Equity Operating Power capacity (MW) | Steam (T/H)  | Industrial water (Cu.m/H) | Direct shareholding (%) | COD     | Tenor     |
|------------------------------|-------|---------------------|----------------------------|--------------------------------------|--------------|---------------------------|-------------------------|---------|-----------|
| <b>IN OPERATION</b>          |       |                     |                            |                                      |              |                           |                         |         |           |
| NNEG                         | SPP   | 125                 | 38                         | 38                                   | 9            | -                         | GPSC (30%)              | 2016    | 25/2041   |
| NNEG Expansion               | SPP   | 60                  | 18                         | -                                    | 3            | -                         | GPSC (30%)              | 2020    | 25/2041   |
| Rayong Expansion (CUP-3)     | SPP   | 15                  | 15                         | -                                    | -            | -                         | GPSC (100%)             | 2019    | n/a       |
| Rayong Expansion (CUP-4)     | SPP   | 45                  | 45                         | -                                    | 70           | -                         | GPSC (100%)             | 2019    | -         |
| <b>Total SPP</b>             |       | <b>2,614</b>        | <b>2,192</b>               | <b>2,114</b>                         | <b>2,701</b> | <b>7,292</b>              |                         |         |           |
| <b>VSPP and others</b>       |       |                     |                            |                                      |              |                           |                         |         |           |
| CHPP                         | VSPP  | 5                   | 5                          | 5                                    | -            | -                         | GPSC (100%)             | 2008    | 30/2038   |
| CHPP (Solar)                 | VSPP  | 5                   | 5                          | 5                                    | -            | -                         | GPSC (100%)             | 2016    | 2041      |
| Glow Energy Solar Plant      | VSPP  | 1.55                | 1.55                       | 1.55                                 | -            | -                         | GLOW (100%)             | 2012    | 20-25     |
| TSR (SSE1)                   | VSPP  | 80                  | 32                         | 32                                   | -            | -                         | GPSC (40%)              | 2013    | 25/2038   |
| Glow Energy Solar PV Rooftop | VSPP  | 0.87                | 0.87                       | 0.87                                 | -            | -                         | GLOW (100%)             | 2019    | 15        |
| Glow Energy Solar PV Rooftop | VSPP  | 1                   | 1                          | 1                                    | -            | -                         | GLOW (100%)             | 2019    | 15        |
| ISP1                         | Solar | 20.8                | 20.59                      | 20.59                                | -            | -                         | GPSC (99%)              | 2017    | 20/2037   |
| Solar Project                | VSPP  | 39.5                | 39.5                       | 39.5                                 | -            | -                         | GPSC (100%)             | 2014-15 | 2039/2040 |
| NL1PC                        | Hydro | 65                  | 26                         | -                                    | -            | -                         | GPSC (40%)              | 2019    | 27/2044   |
| Chonburi Clean Energy (CCE)  | VSPP  | 8.6                 | 2.87                       | -                                    | -            | -                         | GLOW (33%)              | 2019    | 20        |
| Rayong WTE                   | VSPP  | 9.8                 | 9.8                        | -                                    | -            | -                         | GPSC (100%)             | 2021    | 18/2039   |
| <b>Total VSPP and others</b> |       | <b>238</b>          | <b>145</b>                 | <b>106</b>                           | <b>-</b>     | <b>-</b>                  |                         |         |           |
| <b>ERU</b>                   |       |                     |                            |                                      |              |                           |                         |         |           |
| ERU                          | Cogen | 250                 | 250                        | -                                    | 175          | -                         | GPSC (100%)             | 2023    | 25/2048   |
| <b>Total ERU</b>             |       | <b>250</b>          | <b>250</b>                 | <b>-</b>                             | <b>175</b>   | <b>-</b>                  |                         |         |           |
| <b>Total capacity</b>        |       | <b>8,012</b>        | <b>5,026</b>               | <b>4,338</b>                         | <b>2,876</b> | <b>7,372</b>              |                         |         |           |



# 2019 Maintenance schedule: Sriracha and Rayong plants

| Site  | Description      | Duration                 | 2019              |     |                 |                |                    |                 |                 |     |                     |                   |                    |     |
|-------|------------------|--------------------------|-------------------|-----|-----------------|----------------|--------------------|-----------------|-----------------|-----|---------------------|-------------------|--------------------|-----|
|       |                  |                          | Q1                |     |                 | Q2             |                    |                 | Q3              |     |                     | Q4                |                    |     |
|       |                  |                          | Jan               | Feb | Mar             | Apr            | May                | Jun             | Jul             | Aug | Sep                 | Oct               | Nov                | Dec |
| CUP-1 | GTG11/HRSG-11    | 8 Days                   | 1 <b>1Y</b> 8     |     |                 |                |                    |                 |                 |     |                     |                   |                    |     |
|       | GTG16/HRSG16     | 8 Days                   | 9 <b>1Y</b> 16    |     |                 |                |                    |                 |                 |     |                     |                   |                    |     |
|       | GTG14/HRSG14     | 14 Days                  | 17 <b>HGPI</b> 30 |     |                 |                |                    |                 |                 |     |                     |                   |                    |     |
|       | Aux. Boiler.11   | 14 Days                  |                   |     | 15 <b>3Y</b> 28 |                |                    |                 |                 |     |                     |                   |                    |     |
|       | GTG12/HRSG12     | 11 Days                  |                   |     |                 | 7 <b>1Y</b> 17 |                    |                 |                 |     |                     |                   |                    |     |
|       | GTG11/ HRSG11    | 24 Days                  |                   |     |                 |                | 15/5 <b>MI</b> 7/6 |                 |                 |     |                     |                   |                    |     |
|       | GTG13/HRSG13     | 11 Days                  |                   |     |                 |                |                    |                 | 12 <b>1Y</b> 22 |     |                     |                   |                    |     |
|       | GTG15/HRSG15     | 14 Days                  |                   |     |                 |                |                    |                 |                 |     |                     | 16 <b>HGPI</b> 29 |                    |     |
| CUP-2 | GTG21/HRSG21     | 11 Days                  |                   |     | 9 <b>1Y</b> 19  |                |                    |                 |                 |     |                     |                   |                    |     |
|       | GTG22/HRSG22     | 11 Days                  |                   |     |                 |                |                    | 12 <b>1Y</b> 22 |                 |     |                     |                   |                    |     |
|       | Aux. Boiler.21   | 14 Days                  |                   |     |                 |                |                    | 1 <b>3Y</b> 14  |                 |     |                     |                   |                    |     |
|       | Steam Turbine.21 | -                        |                   |     |                 |                |                    |                 |                 |     |                     |                   |                    |     |
| CUP-3 | Aux. Boiler.31   | 11 Days                  |                   |     |                 |                |                    |                 | 4 <b>1Y</b> 14  |     |                     |                   |                    |     |
|       | Aux. Boiler.33   | 11 Days                  |                   |     |                 |                |                    |                 |                 |     |                     | 14 <b>1Y</b> 24   |                    |     |
|       | Aux. Boiler.32   | 11 Days                  |                   |     |                 |                |                    |                 |                 |     | 26/9 <b>1Y</b> 6/10 |                   |                    |     |
|       | Steam Turbine.31 | -                        |                   |     |                 |                |                    |                 |                 |     |                     |                   |                    |     |
| SRC   | GT11/HRSG#1      |                          |                   |     |                 |                |                    |                 |                 |     |                     |                   | 17 <b>CI</b> 25    |     |
|       | GT12/HRSG#2      | 200 hours<br>(8.33 days) |                   |     |                 |                |                    |                 |                 |     |                     |                   | 17 <b>CI</b> 25    |     |
|       | Steam Turbine.10 |                          |                   |     |                 |                |                    |                 |                 |     |                     |                   | 17 <b>Minor</b> 25 |     |

## 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  
RCIE Rotor and Casting Inspection Evaluation 49 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

# 2019 Maintenance schedule: IRPC-CP

| Plant   | Unit                  | 2019      |           |           |           |
|---------|-----------------------|-----------|-----------|-----------|-----------|
|         |                       | Q1<br>(A) | Q2<br>(F) | Q3<br>(F) | Q4<br>(F) |
| IRPC-CP | <b><u>Block 1</u></b> |           |           |           |           |
|         | CTG 21                | 4:58 hr.  | 1         | 1         | 1         |
|         | HRSR 21               | 4:58 hr.  | 1         | 1         | 1         |
|         | CTG 22                | 0:59 hr.  | 1         | 1         | 1         |
|         | HRSR 22               | 0:59 hr.  | 1         | 1         | 1         |
|         | STG 23                | 0:59 hr.  |           |           |           |
|         | <b><u>Block 2</u></b> |           |           |           |           |
|         | CTG 31                | 0:44 hr.  | 1         | 1         | 1         |
|         | HRSR 31               | 0:44 hr.  | 1         | 1         | 1         |
|         | CTG 32                | 12:23 hr. | 1         | 6         | 1         |
|         | HRSR 32               | 12:23 hr. | 1         | 6         | 1         |
|         | STG 33                |           |           | 3         |           |
|         | Aux. Boiler           |           | 7         |           |           |

## Notes

YI Yearly Inspection

YI Yearly Inspection Aux Boiler

1 = 1 Day (24 hours)

3 = 3 Days (72 hours)

6 = 6 Days (144 hours)

7 = 7 Days (168 hours)

5 days

15 days

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