



GLOBAL POWER SYNERGY PUBLIC
COMPANY LIMITED

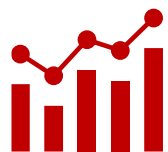
Q3/2019 ANALYST MEETING

November 18th, 2019

**THE INNOVATIVE POWER
FLAGSHIP OF PTT GROUP**

Q3 2019 KEY HIGHLIGHTS

'GROWING PROFIT WITH SUSTAINABILITY AND CONTROL'



SIGNIFICANT GROWTH

- GPSC have finished the **Rights Offering process of Baht 74,000 million** to repay the bridge loan on 9 Oct 2019
- GPSC has successfully offered the **debentures of THB 35,000 million** on 8 Nov 2019
- GPSC completed the **acquisition of GLOW** and completed **Mandatory Tender Offer from Glow** which resulting in a **total of 95.25% of GLOW's shares**
- TRIS Rating assigns **"AA-"** with **"stable"** outlook to GPSC reflects the company's strong credit profile



PROFIT



269% increase in EBITDA YoY due to contribution from GLOW



28% of gross profit margin in Q3/2019 due to the reduction in Weight Factor in the third quarter and low demand for electricity from EGAT



Value added from synergy

THB 1.6 bn ramp up with full EBITDA contribution by 2024



SUSTAINABILITY

- Interim Dividend THB 0.50 per share**
dividends for 1H/2019 was paid on 12 Sep 2019
- Awards** from
 - Role model of low-carbon industrial factory** from 'Thailand Greenhouse Gas Management Organization (TGO)'
 - CSR-DIW Continuous Award** from 'the Department of Industrial Works'
 - The Certification of Green Meetings** from 'Thailand Business Council for Sustainable (TBCSD)'



CONTROL



Nam Lik 1 was COD since 1 Jul 2019



CUP 4 was COD since 12 Sep 2019



Xayaburi was COD since 29 Oct 2019



CCE was COD since Nov 2019



NNEG expansion phase expected to COD in 2020



WTE is expected to COD in 2021

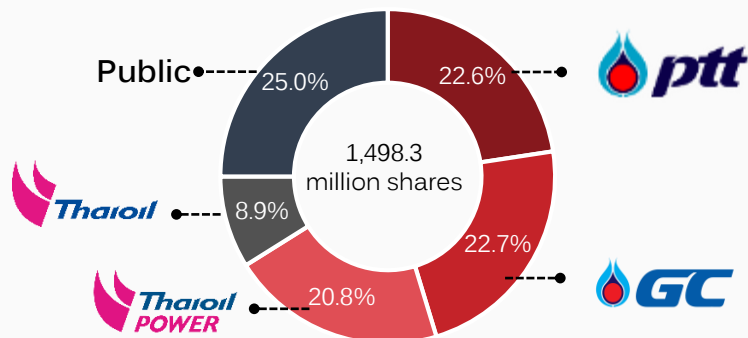


ERU which jointly operate with Thaioil is expected to COD in 2023

GPSC Innovative Power Company at a Glance

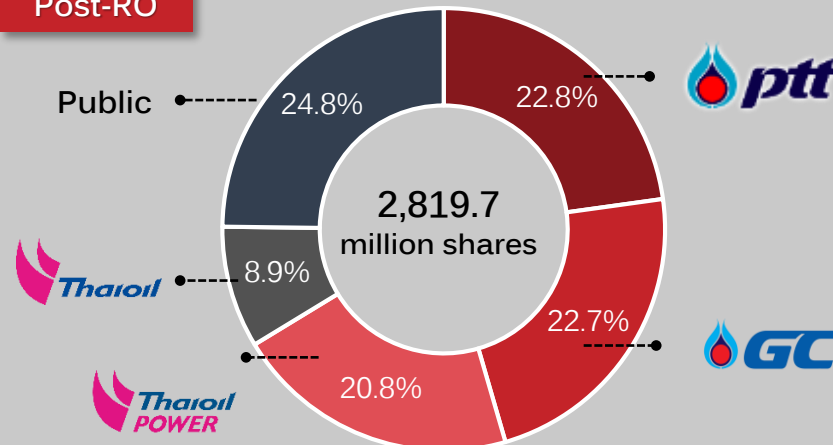
Shareholding Structure

Pre-RO



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

Post-RO



Company Information

Head Office	555/2 Energy Complex Building B, 5th Floor, Vibhvardi-Rangsit Road, Chatuchak, Bangkok, Thailand
Business Type	Energy & Utilities
Registered Capital (Paid-up)	THB 28,197 million
Market Cap (As of 13 Nov 2019)	THB 236,152.33 million

TRIS
RATING
FitchRatings

AA-

A+(tha)

STANDARD
& **POOR'S**

BBB-

In 2019, Total Equity Capacity¹

⚡ Electricity 5,026 MWe

☁ Steam 2,876 T/H

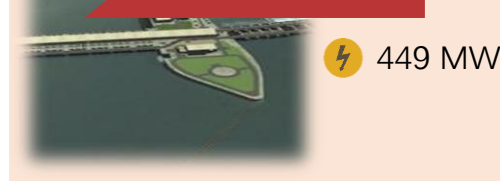
COMBINED CYCLE / COGENERATION / THERMAL²



RENEWABLE ENERGY



HYDROELECTRIC



OTHER BUSINESSES



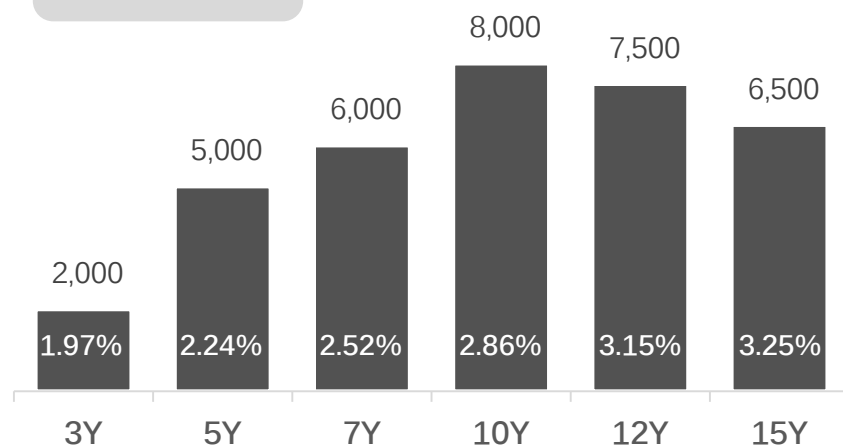
Note: 1) Equity capacity includes 100% stake in GLOW, GRP and ERU

2) Equity capacity includes ERU

Successful THB 35 Billion Debenture Issuance

Unit: THB million

Avg. Tenor
9.7 Years



Key Highlights



Offered THB 35,000 Million



Largest ever Thai Baht debenture issuance by a private power generation company



Achieved the **tightest credit spreads** and **lowest coupon rates** compared to peers with similar credit ratings.

Strong Credit Ratings

The 3 leading local and international Rating Agencies have affirmed rating post the acquisition of GLOW



AA- (Stable)



Strong Support from PTT Group



Well-diversified Power Portfolio



Top Private Producer in Thailand



Predictable Cash Flow Backed by Long-Term PPAs



GPSC Growth and Strategic Direction



Update of projects

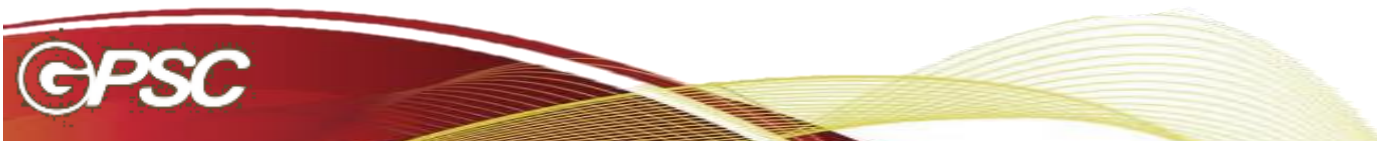
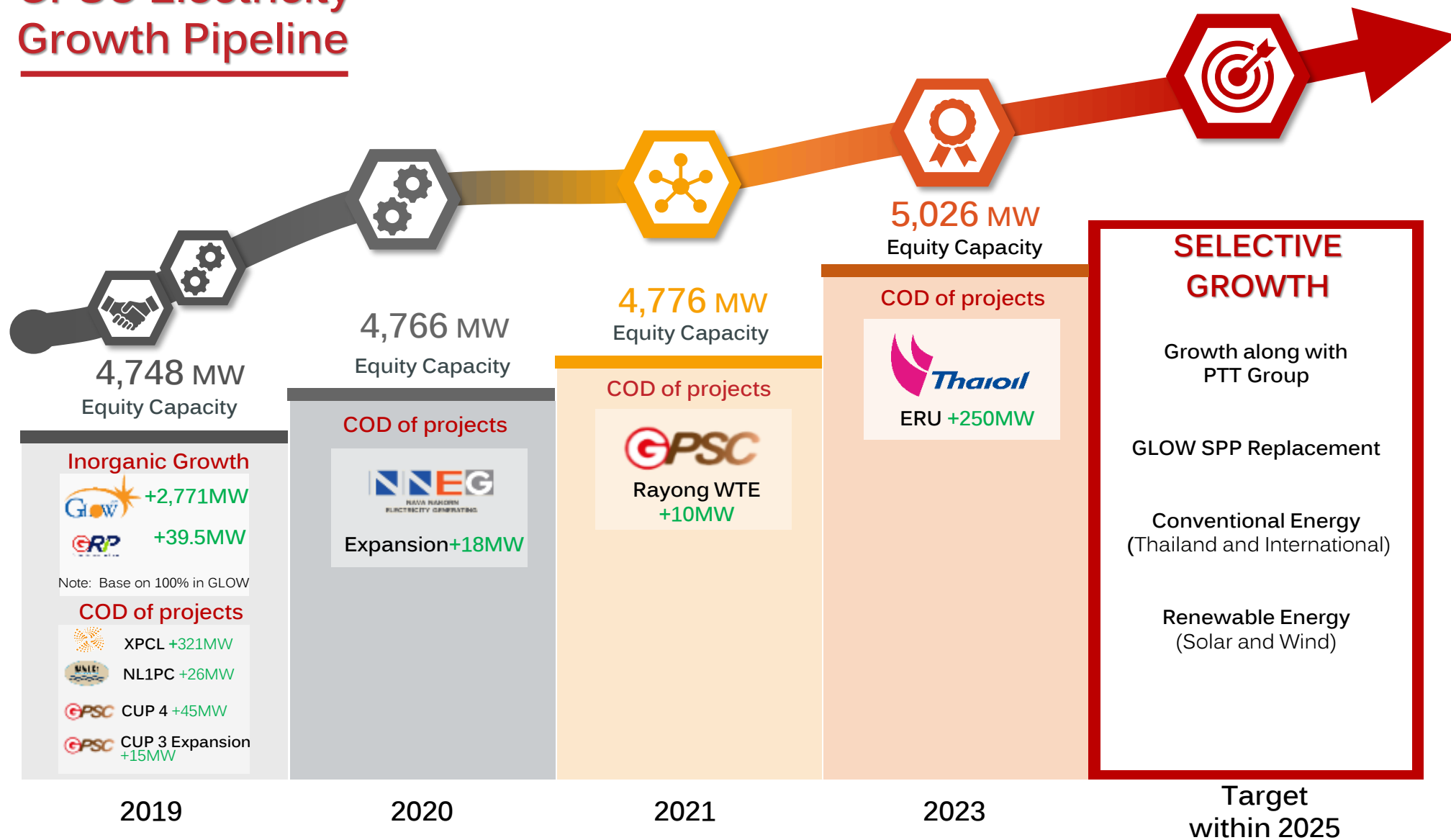


Financial Activities and Plans



Financial Performance

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

Strategic Direction and Growth Strategy Synergy & Integration



**SYNERGY &
INTEGRATION**

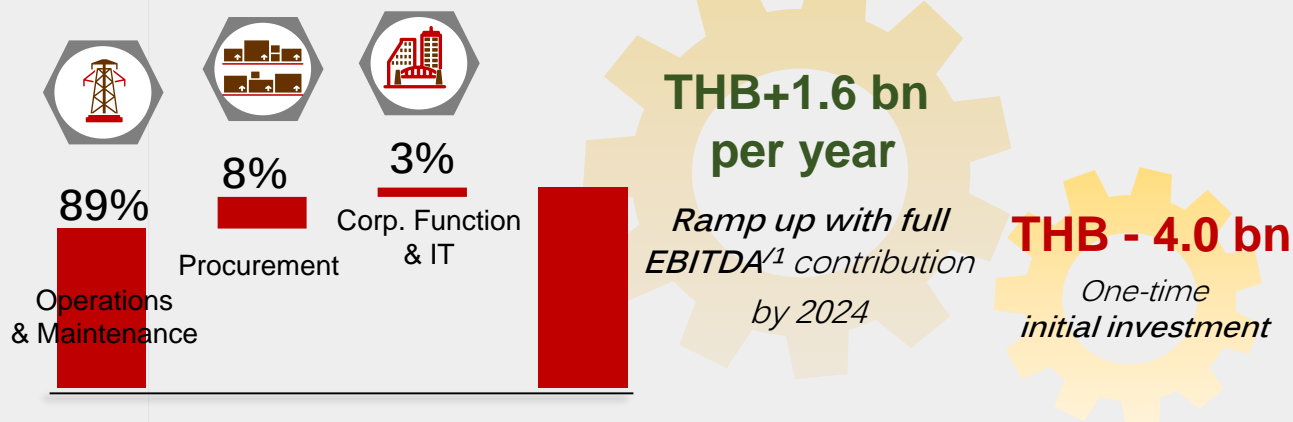
Synergy and Integration Implementation



Working as
one team to
deliver synergy




Recurring EBITDA synergy value based on current portfolio



Synergy Capture

 Operation Excellence
& Asset Optimization

 Corporate & Business
Infrastructure

2019 endorse selected initiatives to lock-in value



Immediate benefits from Power and Steam Integration

- Reduce standby time

First e-auction conducted to secure cheaper coal prices

Many contracts renegotiated and signed on spend baseline

Etc.

Strategic Direction and Growth Strategy

Selective Growth



Growth along
with PTT Group



Domestic and
International

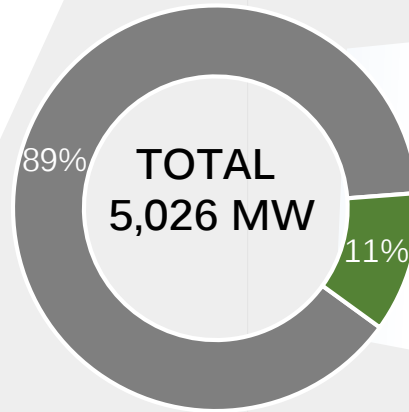


Renewable

Sustainability Strategy & Commitment

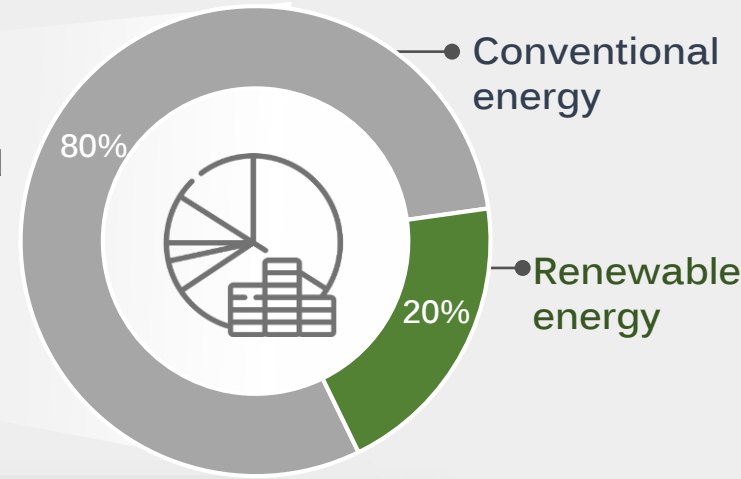


- To be listed in **DJSI by 2022**
- Increasing renewable energy up to **20% of GPSC's portfolio**



Committed Equity Capacity
2019-2023

Way forward
to
Sustainable
growth



Target within 2030



Strategic Direction and Growth Strategy

S-curve



S-CURVE



Battery Business



Energy Storage System Integrator



Energy Management Solution Provider

GPSC has strengthen its knowledge and capabilities in providing ESS services



GPSC AS A SYSTEM INTEGRATOR



GPSC

SEEKING NEW MARKET AND CUSTOMERS THROUGH PILOT PROJECTS

2019



System Integrator/ Developer in Micro-grid/ESS



Manufacturer in Battery



Market and Technology Intelligence in Digital Energy



EXPLORE NEW S-CURVE BUSINESS FROM ESS

2019 Onwards



VISTEC

Smart Energy Management (Phase II: Q2/2020)

- ✓ 1.2 MW Renewable Energy (Solar Roof + Floating)
- ✓ 1.2 MWh ESS for backup & renewable optimization, and zero-Import Building
- ✓ P2P Trading using Block-chain



GPSC Energy Storage System Projects Information and Status:

Type	Customer	Capacity	Status
Residential	Chiang Mai U	10kW/17kWh	Complete
Industrial	GCL	625kW/625kWh with 2MWp solar	Complete
Industrial	GC	250kW/1.5MWh	Constructing
Smart City	VISTEC	1MW/1MWh	Constructing

Complete Constructing



GPSC Growth and Strategic Direction



Update of projects



Financial Activities and Plans



Financial Performance

Nam Lik 1 Power Company Limited (NL1PC)



COD: 1-Jul-2019



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 holds

40%

Of total share

PROJECT UPDATE

- Overall construction and commissioning test was completed.

Xayaburi Power Company Limited (XPCL)



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 holds

25%

Of total share

PROJECT UPDATE






- The main construction tasks, such as power house, intermediate block, fish ladder and 500 kV transmission line were mostly completed.
- The commissioning test of each unit has been in progress in order to sell electricity to EGAT during the Unit Operation Period (UOP).

CENTRAL UTILITY PLANT 4

: CUP4 (THAILAND)







PROJECT SUMMARY

TYPE	ELECTRICITY (MW)	STEAM (T/h)
 Gas-fired Cogeneration 	45	70
LOCATION	CUSTOMER	
Asia Industrial Estate, Rayong	 Industrial users in Asia Industrial Estate and neighboring industrial estate  	
GPSC holds	PROJECT UPDATE	
100% Of total share	<ul style="list-style-type: none"> • Main installations and erections have been completed, to prepare for the following unit test and commissioning. • The progress of the inter-connection of power and steam pipeline has been achieved over 90%. • Next activity will be integration test and commissioning. 	

Chonburi Clean Energy (CCE)



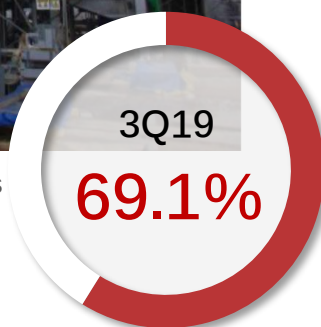
PROJECT SUMMARY

TYPE	ELECTRICITY (MW)	Industrial Waste (T/day)
 Waste	8.6	270
LOCATION	CUSTOMER	
WHA CIE	  • Provincial Electricity Authority (PEA) 	
GLOW holds	PROJECT UPDATE	
33% Of total share	• COD in November 2019	

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 holds	PROJECT UPDATE	
30% Of total share	<ul style="list-style-type: none"> Piling work was completed Main tasks such as engineering, foundation and procurement work for machines and equipment were executed as planned. 	

Rayong Waste to Energy (WTE)







% Progress

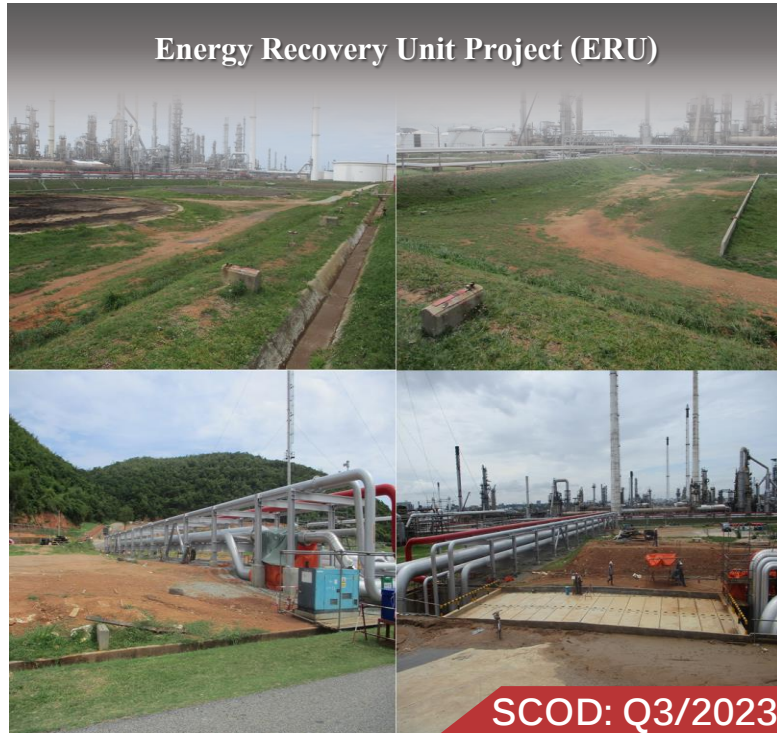
3Q19

4.85%

PROJECT SUMMARY

TYPE	ELECTRICITY (MW)	RDF (T/day)
  Waste	8	300
LOCATION	CUSTOMER	
Rayong	 Provincial Electricity Authority (PEA)	
GPSC holds	PROJECT UPDATE	
100% Of total share	<ul style="list-style-type: none">The RDF Project construction has been completed since 2018 while the RDF Power Plant Project construction began on April 2019.The project is expected to COD in Q2/2021.	

Energy Recovery Unit Project (ERU)



PROJECT SUMMARY

ERU Project is a thermal power plant project that produces electricity and steam by using Petroleum Pitch obtained from RHCU (CFP Project) to be sent back for use in the CFP project, located in Thai Oil Refinery

TYPE



Pitch

ELECTRICITY (MW)

250

STEAM (T/h)

175

And by products such as Sulfuric acid, Condensate Water

LOCATION

Thai Oil Refinery,
Sri Racha,
Chonburi

CUSTOMER



• **Thai Oil Public Company Limited**

With 25-year contracts of 200 MW and 175 T/h of Steam from Closing Date

GPSC holds

100%

Of total share in ERU co.

PROJECT UPDATE

- Engineering design work: P&ID Review
- Construction work: Site preparation work, demolishing old equipment and temporary fence
- Purchasing machinery and equipment: Bid Evaluation / PO / P & ID
- Project progress as planned

Project timeline

ERU Approval
(1-Apr-19)

SCOD
Q3'23



Milestone Payment

2019

2020

2021

2022

2023

2%

8%

4%

6%

80%

Initial Payment 20%
of Initial Purchase Price USD 138 mm

Final Purchase Price
< USD 757 mm



GPSC Growth and Strategic Direction



Update of projects

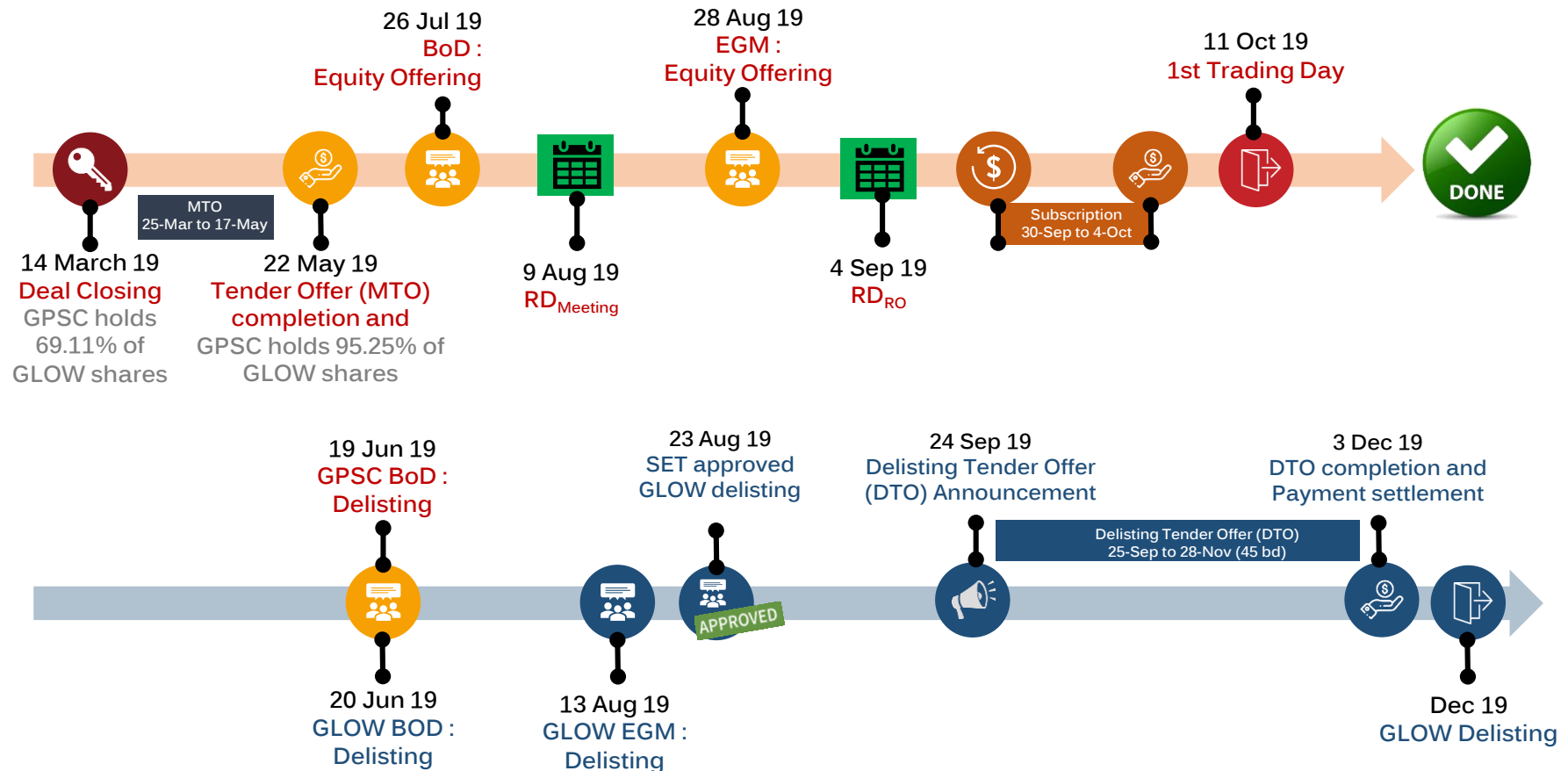


Financial Activities and Plans

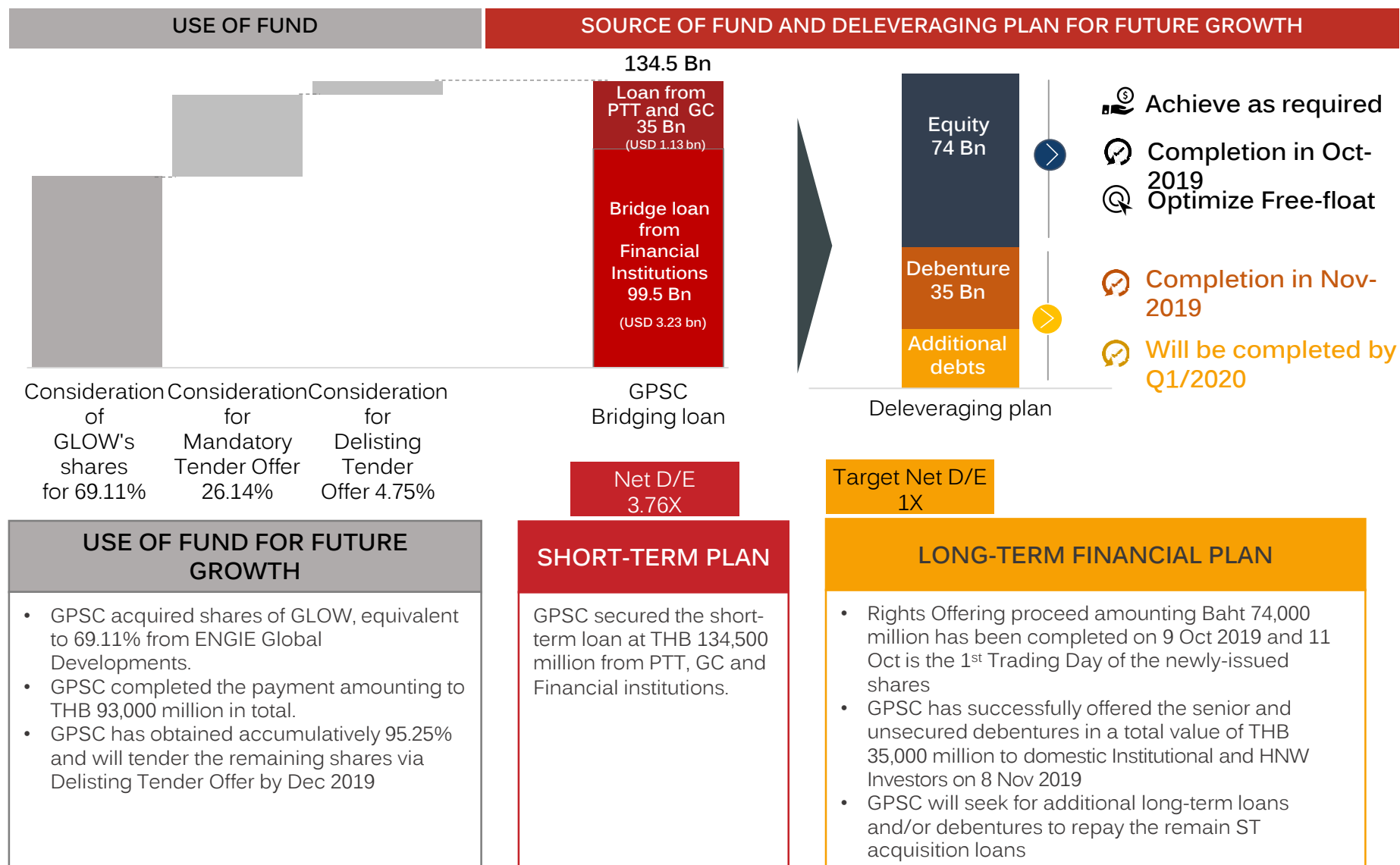


Financial Performance

Timeline : Equity Offering and GLOW Delisting



Use and Source of Fund with Deleveraging Plan



GPSC's Prudent Financial Policy



Net Debt to Equity $\leq 1.0x$



Net Debt to EBITDA $\leq 4.0x$



**Dividend Policy: Minimum dividend
at the rate of not less than 30 percent of the net
profit**

according to the financial statements of the Company
after the deduction of tax, reserved funds
as required by law (with additional conditions)





GPSC Growth and Strategic Direction



Update of projects



Financial Activities and Plans

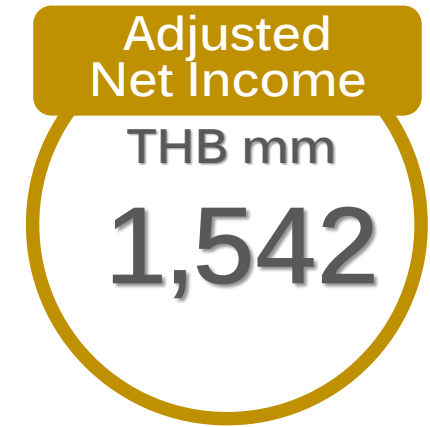
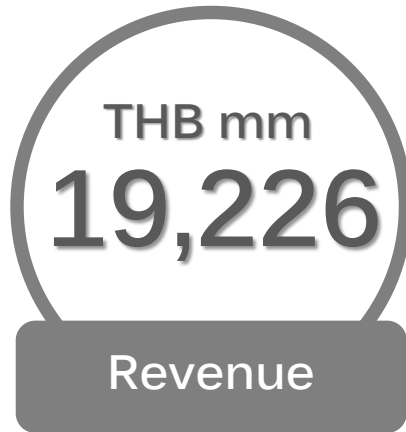


Financial Performance

Key Financial Highlights

Q3/2019

Key financial highlights



The stable performance is mainly due to:

- ✓ GPSC has completed MTO on 22-May-2019 and can recognize a net profit of 95.25% thereafter.
- ✓ Independent Power Producer's (IPP) performance decreased due to the seasonality trend of the third quarter of every year, resulting in lower selling price and sales volume.
- ✓ The finance expense increased resulting from the burden of interest expense from short-term loans paid for the tender offer process in May 2019.



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



52% Industrial Users



47% EGAT



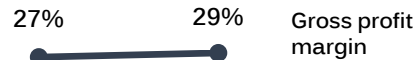
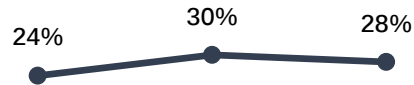
1% Others

Q3/2019 Revenue by Customers

Q3/2019 Financial Performance Summary (1/2)

Revenue & Gross Profit Margin

(THB Million,%)



48,283

19,990

19,226

18,940

Total Revenue

6,661

Q3/18

Q2/19

Q3/19

9M/18

9M/19

Gross profit margin

QoQ

▼ 9%

YoY

▲ 241%

9M

▲ 175%

QoQ: Decreased due to:

- 1) IPP performance decreased due to the seasonality trend of the 3rd quarter
- 2) Higher electricity and steam sales of GPSC's cogen. plants as well as the lower natural gas cost resulting higher gross profit of these plants

YoY and 9M: Increased due to the full quarter contribution of GLOW's performance

Revenue

QoQ

▼ 4%

YoY

▲ 189%

9M

▲ 155%

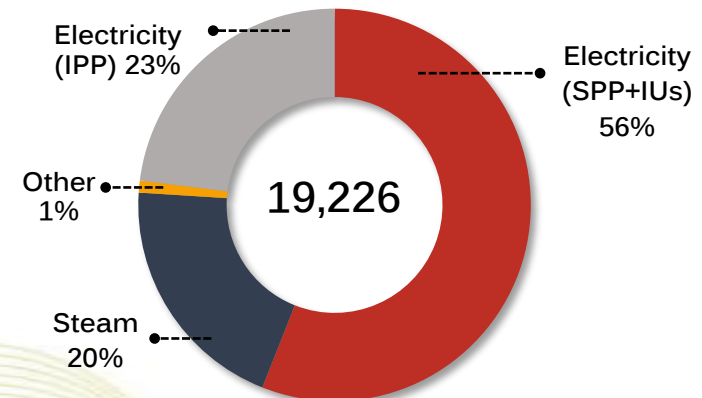
QoQ: Decreased due to:

- 1) Lower dispatch of Sriracha and Houay Ho and Lower AP of Gheco-1 effected by weight factor and the appreciation of THB against USD
- 2) Higher revenue from selling electricity and steam of GLOW's SPP plants

YoY and 9M: Increased due to the full quarter contribution of GLOW's performance

Q3/19 Revenue by product

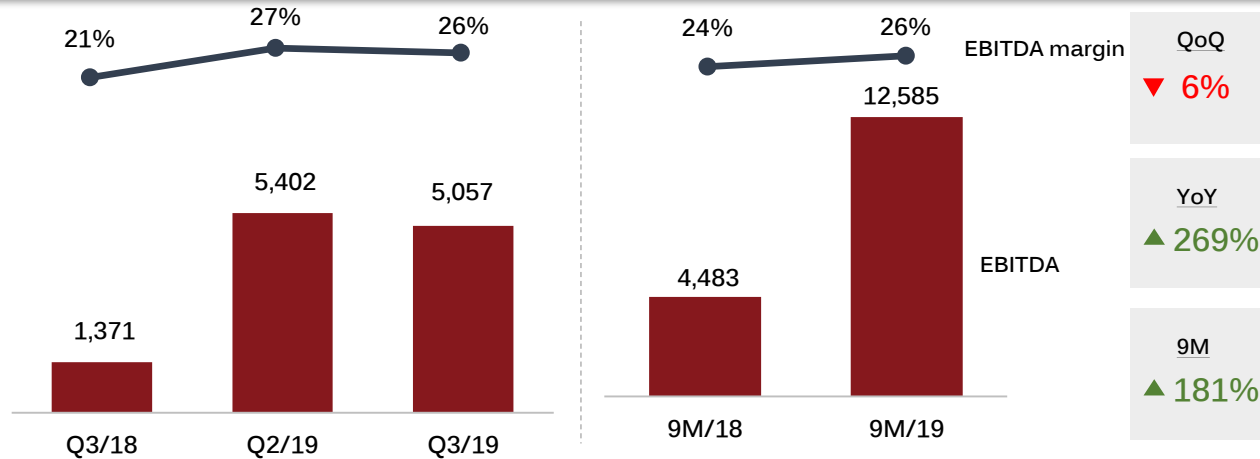
(THB Million, %)



Q3/2019 Financial Performance Summary (2/2)

EBITDA and EBITDA Margin

(THB Million, %)



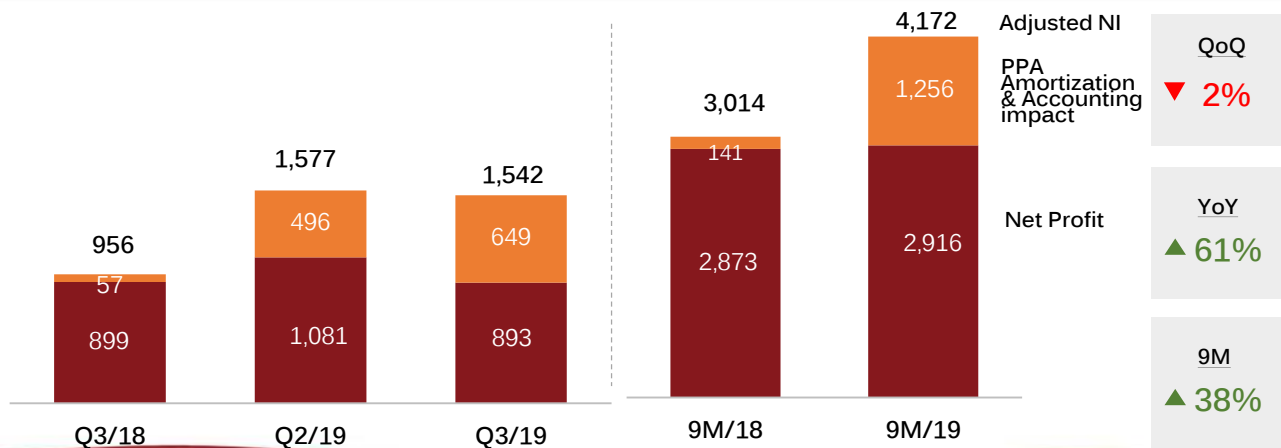
QoQ: Decreased due to:

- 1) IPP performance decreased due to the seasonality trend of the 3rd quarter
- 2) Higher electricity and steam sales of GPSC's cogen. plants as well as the lower natural gas cost resulting higher gross profit of these plants
- 3) VSPP has lower revenue from ISP1 and CHPP seasonally

- **YoY and 9M:** Increased due to the full quarter contribution of GLOW's performance

Net Profit and Adjusted Net Income

(THB Million)



QoQ: Decreased due to:

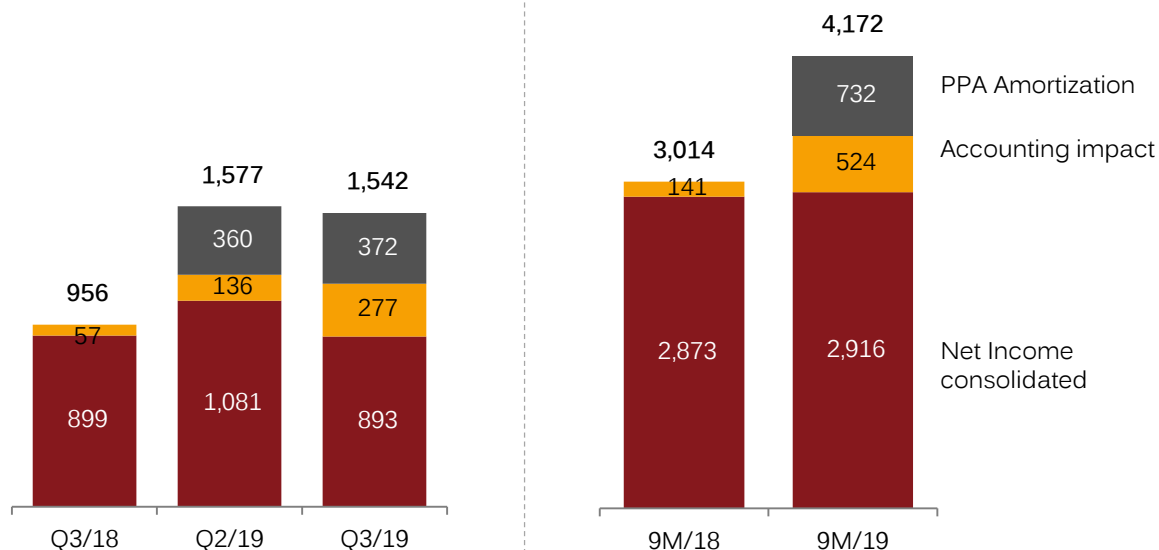
- 1) IPP performance decreased due to the seasonality trend of the 3rd quarter. Main reason from reduction of weight factor of Gheco-1, resulting in a decreased in AP and lower dispatch volume of Houay Ho as EGAT instruction.
- 2) Higher interest expense from the tender offer of GLOW's shares in May 2019 and increasing in Front End Fee Amortization from the adjustment of ST loan repayment plan from RO proceeds in October 2019

- **YoY and 9M:** Increased due to the full quarter contribution of GLOW's performance

Adjusted Net Income (To reflect company's true earnings)

Net Profit and Adjusted Net Income

(THB Million)



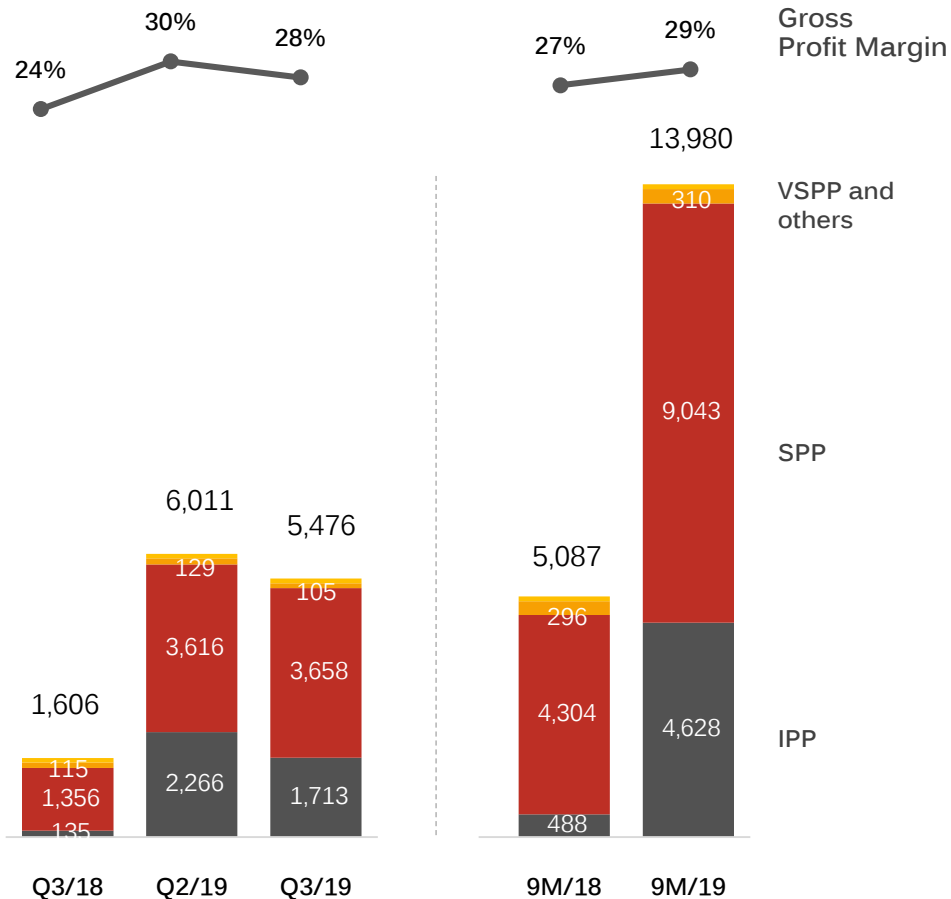
Adjusted Net Income, the net profit attribute to the company adjusted to *reflect the company's true earnings from its normal operations* which excludes:

- The fair value of intangible asset from the acquisition of GLOW (PPA Amortization)
- The effects of accounting standards including:
 - Revenue from contracts with customers (TFRS 15)
 - Determining whether an arrangement contains a lease (TFRIC 4)
 - Foreign exchange and deferred tax asset effect

Adjusted Net Income	Q3/18	Q2/19	Q3/19	Change +/(-) %		9M/18	9M/19	Change +/(-) %
(Unit: Million Baht)				QoQ	YoY			
Net Profit for the Company	899	1,081	893	(17%)	(1%)	2,873	2,916	1%
Add back: Amortization of assets acquired from the acquisition of GLOW	0	360	372	3%	n/a	0	732	n/a
Add back: Accounting impact	57	136	277	103%	386%	141	524	272%
- TFRIC 4 and TFRS 15 effect	48	278	327	18%	581%	128	679	430%
- Foreign exchange and deferred tax asset effect	9	(142)	(50)	65%	(656%)	13	(155)	(1,292%)
Adjusted Net Income	956	1,577	1,542	(2%)	61%	3,014	4,172	38%

Gross Profit and Gross Profit Margin has slightly decreased due to seasonality trend in third quarter

Gross profit and Gross profit margin by type of plant (THB Million, %)



Total Gross Profit

QoQ	▼ 9%	QoQ: Decreased mainly from the fall in GP from GLOW IPP power plants while GPSC IPP slightly increased
YoY	▲ 241%	YoY and 9M: Increased mainly due to
9M	▲ 175%	- The full quarter of gross profit recognition of GLOW IPP and SPP plant
		- Consistency in sales of electricity and steam of both GPSC and GLOW

IPP Gross profit

QoQ	▼ 24%	QoQ: Decreased due to AP of GHECO-One and EP of Houay-Ho following seasonality of the third quarter
YoY	▲ 1,169%	YoY and 9M: Increased mainly due to the full quarter of gross profit recognition from GLOW and the decrease in maintenance costs corresponding to expiration of LTSA of GPSC Sriracha Power Plant
9M	▲ 848%	

SPP Gross profit

QoQ	▲ 1%	QoQ: Increased mainly due to the increased in electricity sales corresponding to EGAT's dispatched instruction
YoY	▲ 170%	YoY and 9M: Increased mainly due to the full quarter of gross profit recognition from GLOW despite the slight increase in natural gas costs, maintenance costs and the fixed personnel costs
9M	▲ 110%	

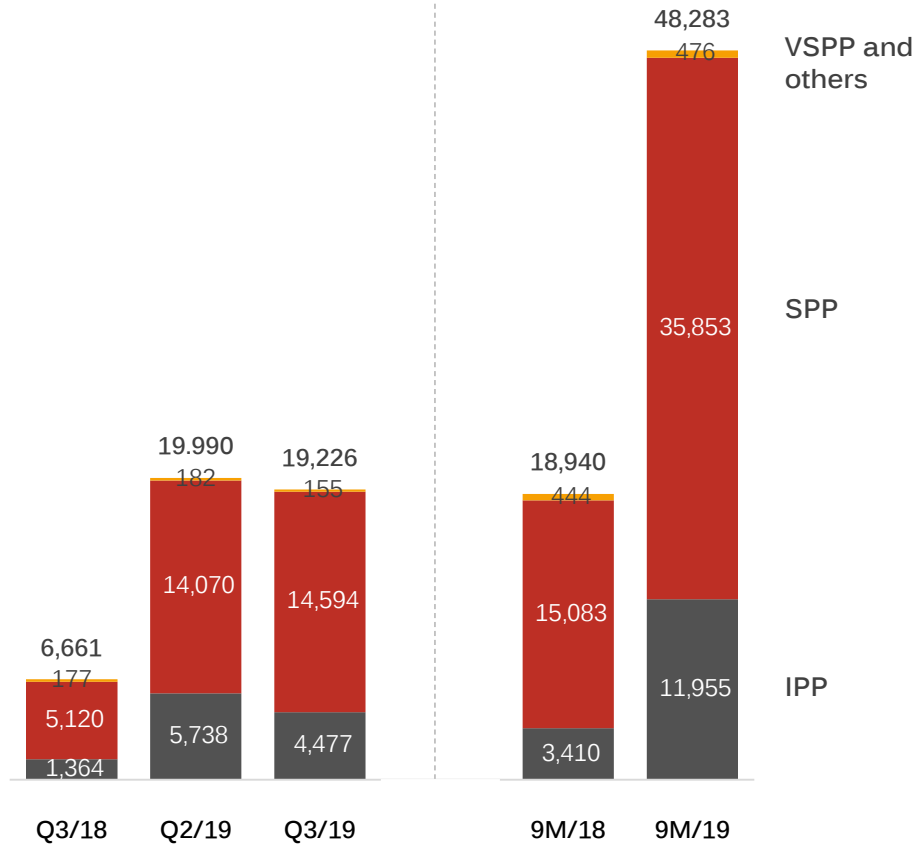
VSPP and Others Gross profit

QoQ	▼ 19%	QoQ and YoY: Decreased mainly due to lower electricity production as a result of a seasonality effect in Q3 and higher rainfall that affect solar power
YoY	▼ 9%	9M: Increased mainly due to revenue from selling electricity from Ichinoseki Solar Power 1 and chilled water from Combined Heat and Power Producing Company Limited
1H	▲ 5%	

Total revenue has slightly decreased due to seasonality effects

Revenue by type of plant

(THB Million)



Total Revenue

QoQ
▼ 4%

YoY
▲ 189%

9M
▲ 155%

- QoQ: Revenue decreased mainly due to fall in Energy Payment (EP) and Availability Payment (AP) of GLOW IPP plants and seasonality decrease in revenues from GPSC VSPP plants
- YoY and 9M: Revenue increased due to the full quarter contribution of GLOW's performance and an increase in electricity and steam sales from GPSC SPP Plants

IPP Revenue

QoQ
▼ 22%

YoY
▲ 228%

9M
▲ 251%

- QoQ: Revenue decreased mainly from
 - The fall in EP from Sriracha and Houay-Ho power plants corresponding to lower dispatch instruction by EGAT.
 - AP fall in weight factor from Gheco-1 and appreciation of THB against US Dollars
- YoY, 9M: Increased from the contribution of GLOW's performance as a result of full quarter recognition.

SPP Revenue

QoQ
▲ 4%

YoY
▲ 185%

9M
▲ 138%

- QoQ: mainly due to the increase in electricity and steam sales from GLOW SPP as well as increase in revenue from selling electricity from GPSC SPP power plant
- YoY, 9M: Revenue increased due to the full quarter of revenue recognition from GLOW SPP power plant as well as the increase in the electricity and steam sales of GPSC's SPP due to increase in sales volume

VSPP and Others Revenue

QoQ
▼ 14%

YoY
▼ 12%

9M
▲ 7%

- QoQ, YoY: Decreased mainly from
 - The selling electricity from Ichinoseki Solar Power 1 GK (ISP1) due to lower electricity production and sales volume from seasonality effect
 - The solar cell implementation service as well as higher rainfall and lower light intensity that effect solar power from CHPP
- 9M: Increased due to the better performance of electricity and chilled water sales

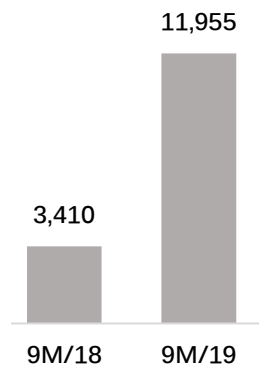
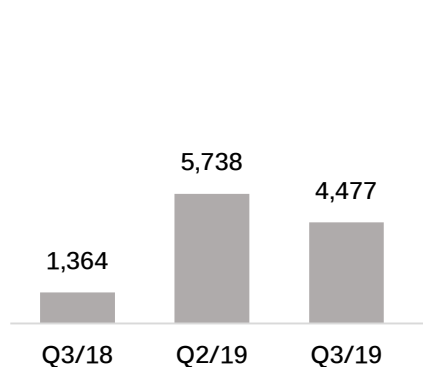


IPP Revenue: decreased by 22% QoQ due to seasonality effects, YoY and 9M increased from contribution from GLOW

Revenue

(THB Million)

IPP Power Plants



Sriracha



GIPP



GHECO-ONE



HHPC

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

Total Revenue

QoQ

▼ 22%

YoY

▲ 228%

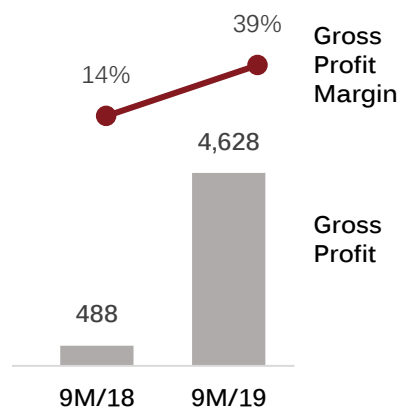
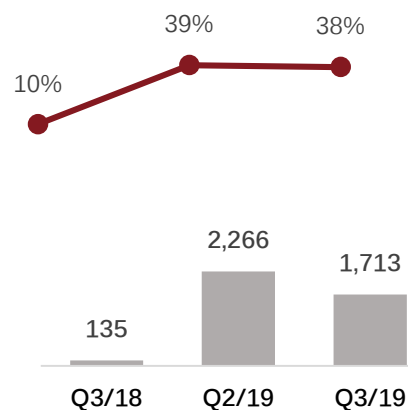
9M

▲ 251%

- **QoQ:** Decreased due to
 - The lower Energy Payment (EP) from Sriracha and Hoay-Ho Power Plant as a result of lower dispatch instruction by EGAT
 - Fall in weight factor from Gheco-1 together with strengthen THB against US Dollars
- **YoY, 9M:** Increased due to
 - The full quarter recognition of GLOW's performance
 - An increase in revenue from financial lease

Gross Profit & Gross Profit Margin

(THB Million, %)



Gross profit

QoQ

▼ 24%

YoY

▲ 1,169%

9M

▲ 848%

- **QoQ:** Decreased mainly from
 - Lower AP of Gheco-1 power plant following the drop in weight factor and the appreciation of THB against US Dollars
 - Lower dispatch volume instruction by EGAT due to lower power generation resulting in Houay Ho power plant while Sriracha power plant has slightly increase in gross profit
- **YoY, 9M:** Increased due to the full quarter of gross profit recognition from GLOW and an increase in revenue from financial lease



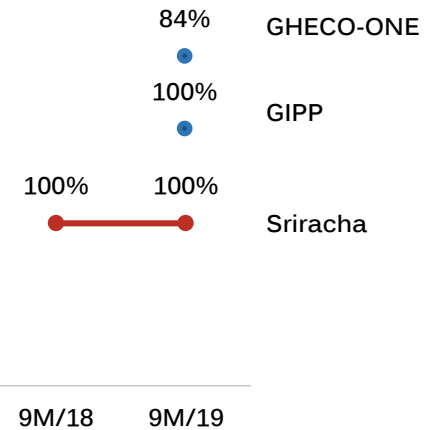
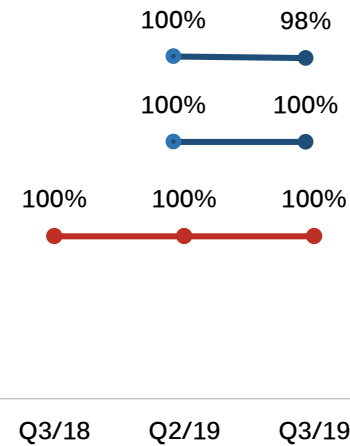
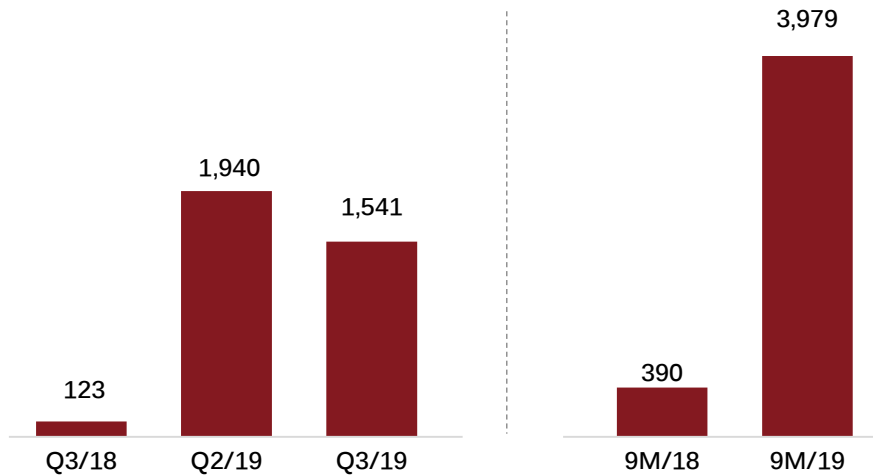
Availability Payment: Decreased by 21% QoQ

Availability Payment

(THB Million)

Availability Rate

(%)



QoQ

▼ 21%

YoY

▲ 1,153%

9M

▲ 920%

- QoQ: Availability Payment (AP) decreased due to GLOW's IPP plant from the fall in weight factor and appreciation of THB against USD from GHECO-One
- YoY, 9M: Availability Payment increased mainly due to the full recognition of GLOW performance

AR-Sriracha

- AR of Sriracha remained at 100%

AR-GIPP

- AR of GIPP remained at 100%

AR-GHECO ONE

- QoQ: AR of GHECO ONE slightly dropped due to plant outage



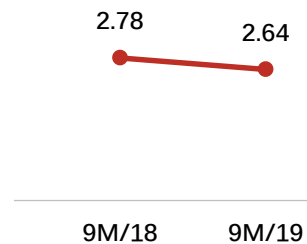
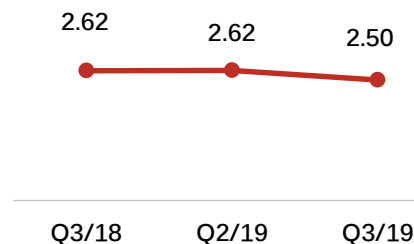
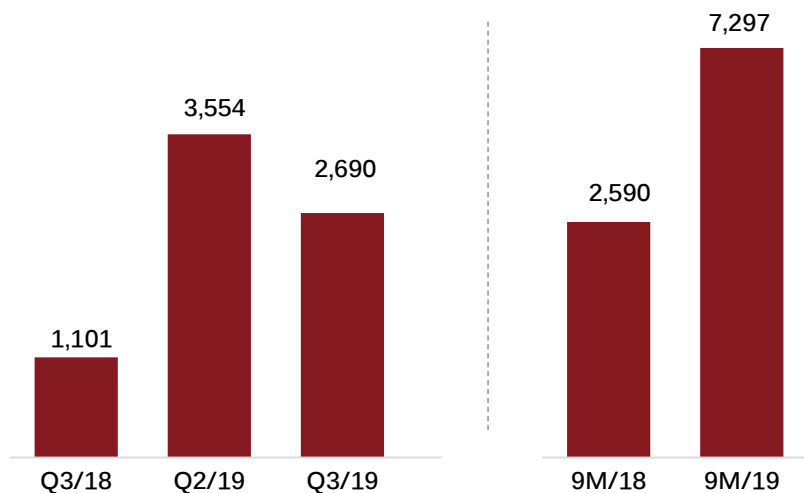
Energy Payment: Decreased 24% QoQ and Increased 144% YoY

Energy Payment

(THB Million)

Average Total Selling Price*

(THB/kWh)



Sales Volume

(GWh)

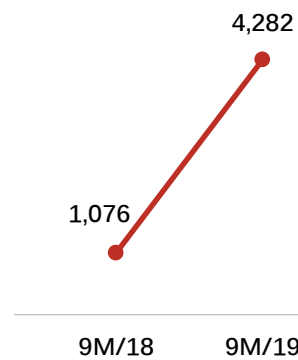
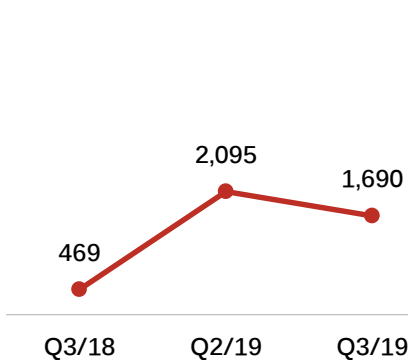
QoQ
▼ 24%

- QoQ: Decreased due to EP from Sriracha and Houay Ho Power Plant corresponding to lower dispatch instruction by EGAT following seasonality trend of third quarter.

YoY
▲ 144%

- YoY, 9M: Increased mainly due to the full recognition of GLOW performance

9M
▲ 182%



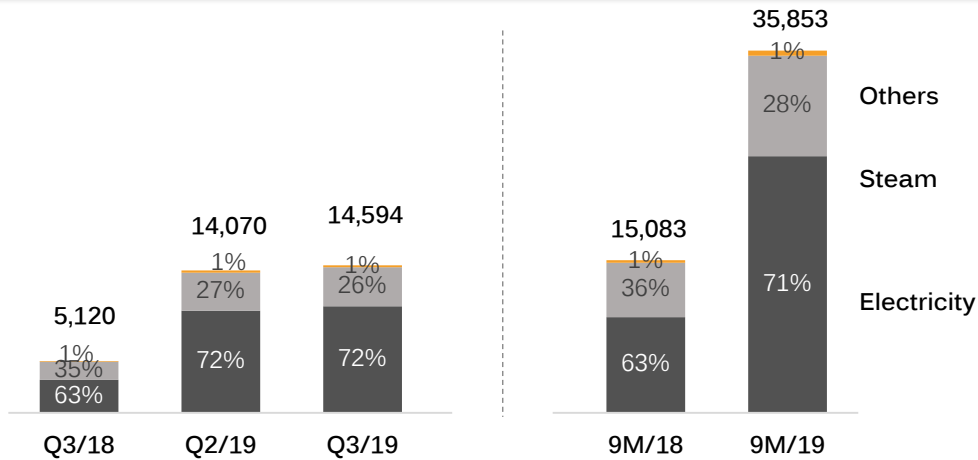
Note: *Average Total Selling Price is derived from the revenue of Availability Payment (AP) and Energy Payment (EP)



SPP Revenue: Increased 4% QoQ and 138% YoY due to higher sales volume and GLOW's contribution

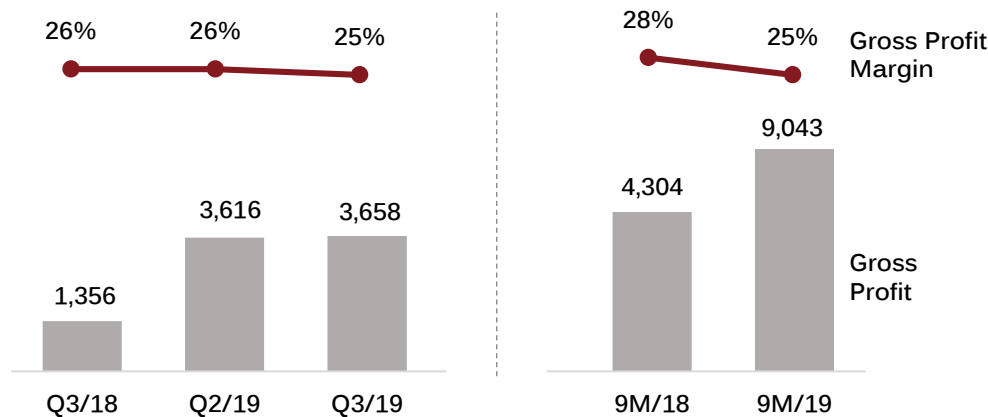
SPP Revenues

(THB Million, %)



Gross Profit & Gross Profit Margin

(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

▲ 4%

YoY

▲ 185%

9M

▲ 138%

- QoQ: Revenue increased mainly due to the increase in electricity and steam sales from GLOW SPP as well as increase in revenue from selling electricity from GPSC SPP power plant
- YoY and 9M: Revenue increased due to the full quarter of revenue recognition from GLOW SPP power plant as well as the increase in the electricity and steam sales of GPSC's SPP due to higher sales volume as a result of an increased in EGAT's dispatch instruction and maintenance shutdown during Q3/18

Gross profit

QoQ

▲ 1%

YoY

▲ 170%

9M

▲ 110%

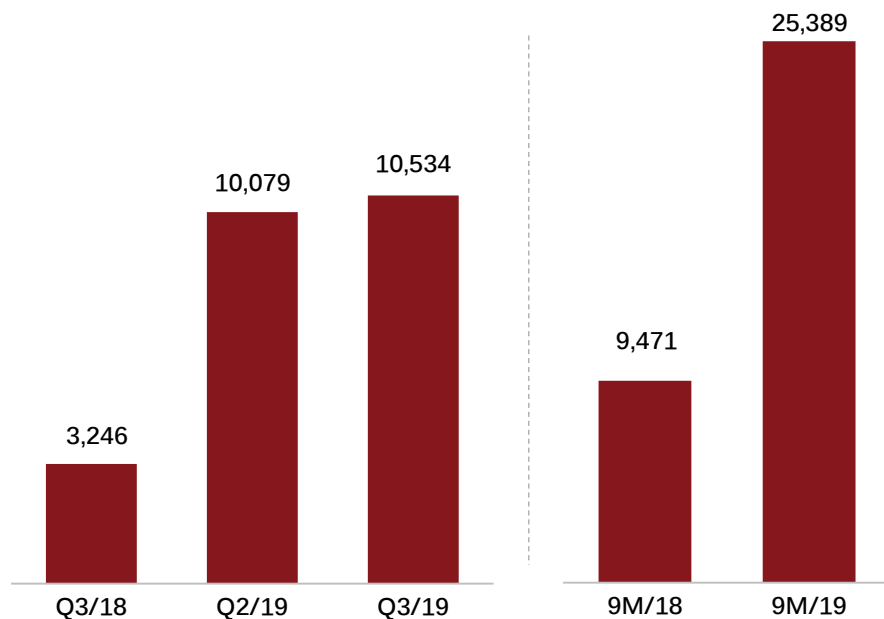
- QoQ: Increased due to the increase in electricity sales following to EGAT's dispatched instruction despite the decreased in average selling price from GLOW's SPP together with higher sales volume from CUP after maintenance shutdown during Q2/19
- YoY and 9M: Increased mainly due to the full recognition of GLOW's performance while natural gas cost increase following the higher volume of natural gas used



SPP Power Sales: Increased 5% QoQ and 225% YoY

Power Sales

(THB million)



QoQ

▲ 5%

YoY

▲ 225%

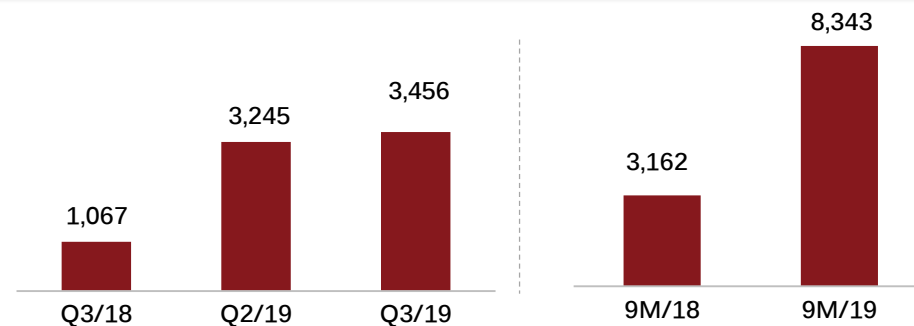
9M

▲ 168%

- QoQ: Power sales increased due to maintenance shutdown of major customers in Q2/2019
- YoY and 9M: Power sales increased mainly due to the full quarter recognition of GLOW's performance and the higher sales volume as a result of the increased in EGAT's dispatch instruction and customer's maintenance shutdown during Q3/18

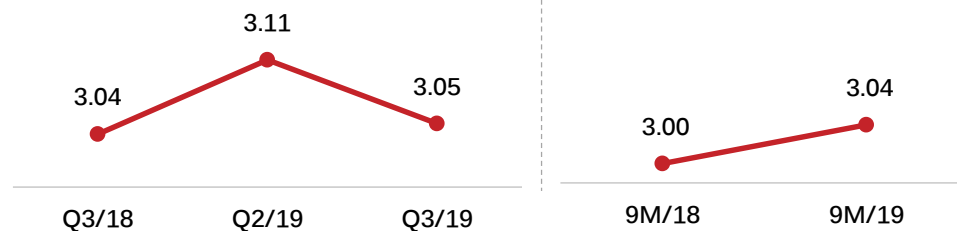
Power Sales Volume

(GWh)



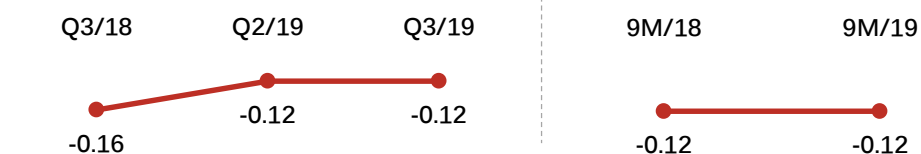
Average Selling Price

(THB/kWh)



Ft rate

(THB)





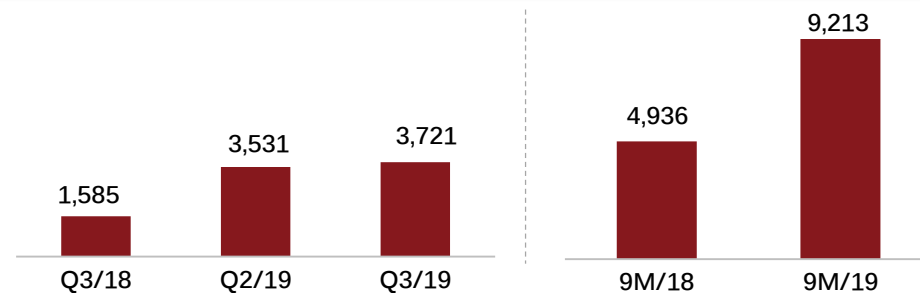
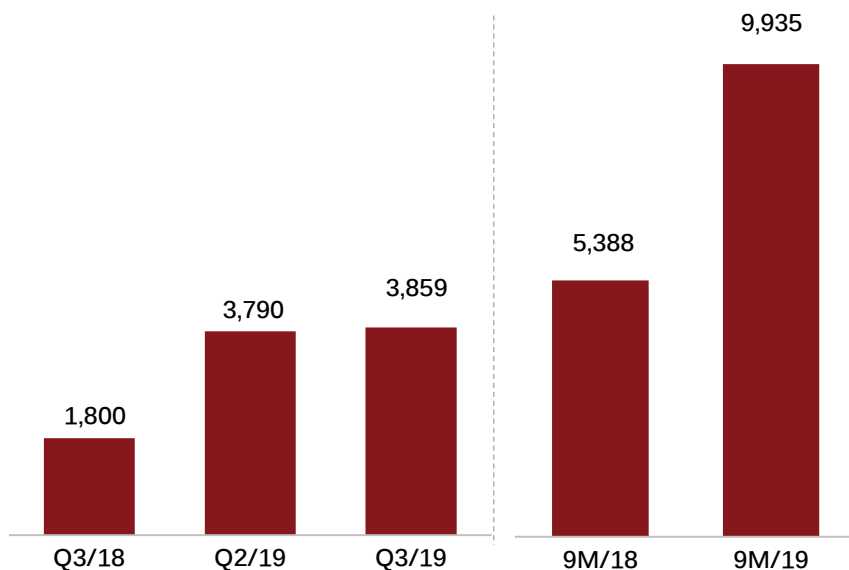
SPP Steam Sales: Increased 2% QoQ and 114% YoY

Steam Sales

(THB Million)

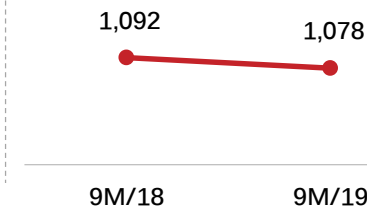
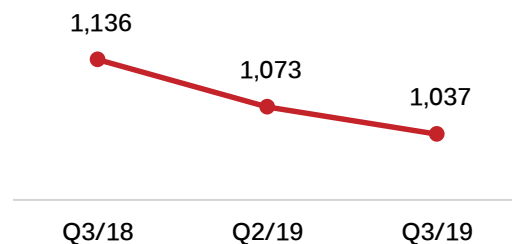
Steam Sales Volume

('000 tons)



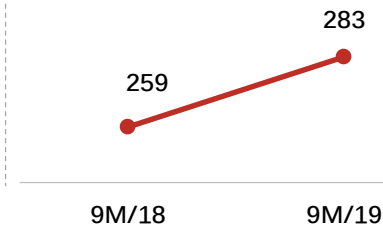
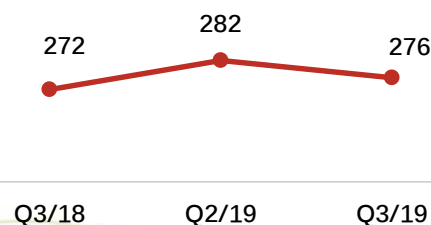
Average Steam Selling Price

(THB/Ton)



Average Natural Gas Price

(THB/MMBTU)



QoQ

▲ 2%

YoY

▲ 114%

9M

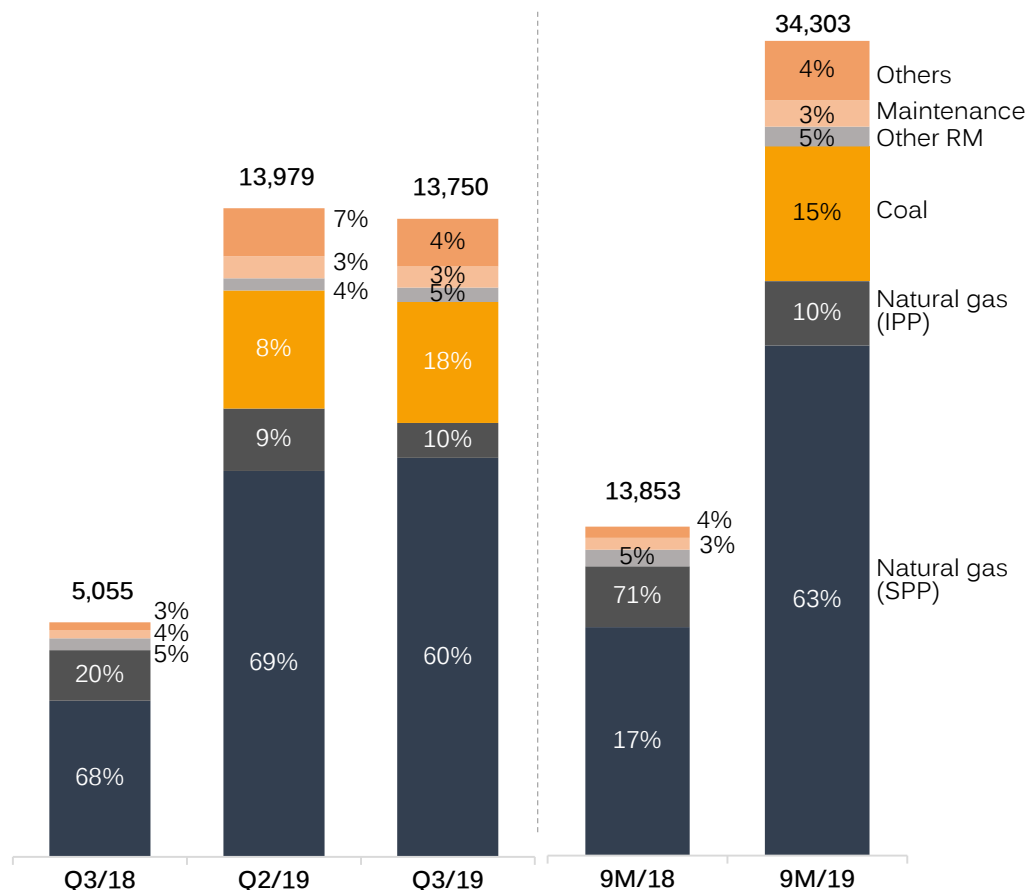
▲ 84%

- QoQ: Steam sales increased mainly due to increase in volume from GLOW's SPP plant
- YoY and 9M: Steam sales increased due to the full quarter recognition of GLOW's performance as well as higher volume of steam sales from Rayong Central Utility Plant (CUP) and IRPC-CP despite the fall in average selling price

Total Cost Of Sales and Services

Total Costs of sales and services*

(THB Million, %)



Total Costs

QoQ
▼ 2%
YoY
▲ 172%
9M
▲ 148%

- QoQ: Total costs decreased mainly due to the lower cost of natural gas from lower dispatch volume of Sriracha Power Plant and decrease coal cost following to Gheco-1 plant
- YoY and 9M : Total costs increased mainly from full quarter consolidation of GLOW's power plant corresponding to sales volume

Natural Gas

QoQ
▼ 3%
YoY
▲ 110%
9M
▲ 99%

- QoQ : Natural gas costs decreased mainly due to the lower dispatch instruction by EGAT from Sriracha Power Plant
- YoY and 9M: Natural gas costs increased mainly due to the contribution of GLOW that has many gas SPPs as well as the increase in the price of natural gas corresponding to the increase in sales volume

Coal and Other Raw Materials

QoQ
▲ 4%
YoY
▲ 110%
9M
▲ 825%

- QoQ and YoY: Costs of coal increased mainly due to the contribution of GLOW from Gheco-1 Power Plant that has coal as a fuel

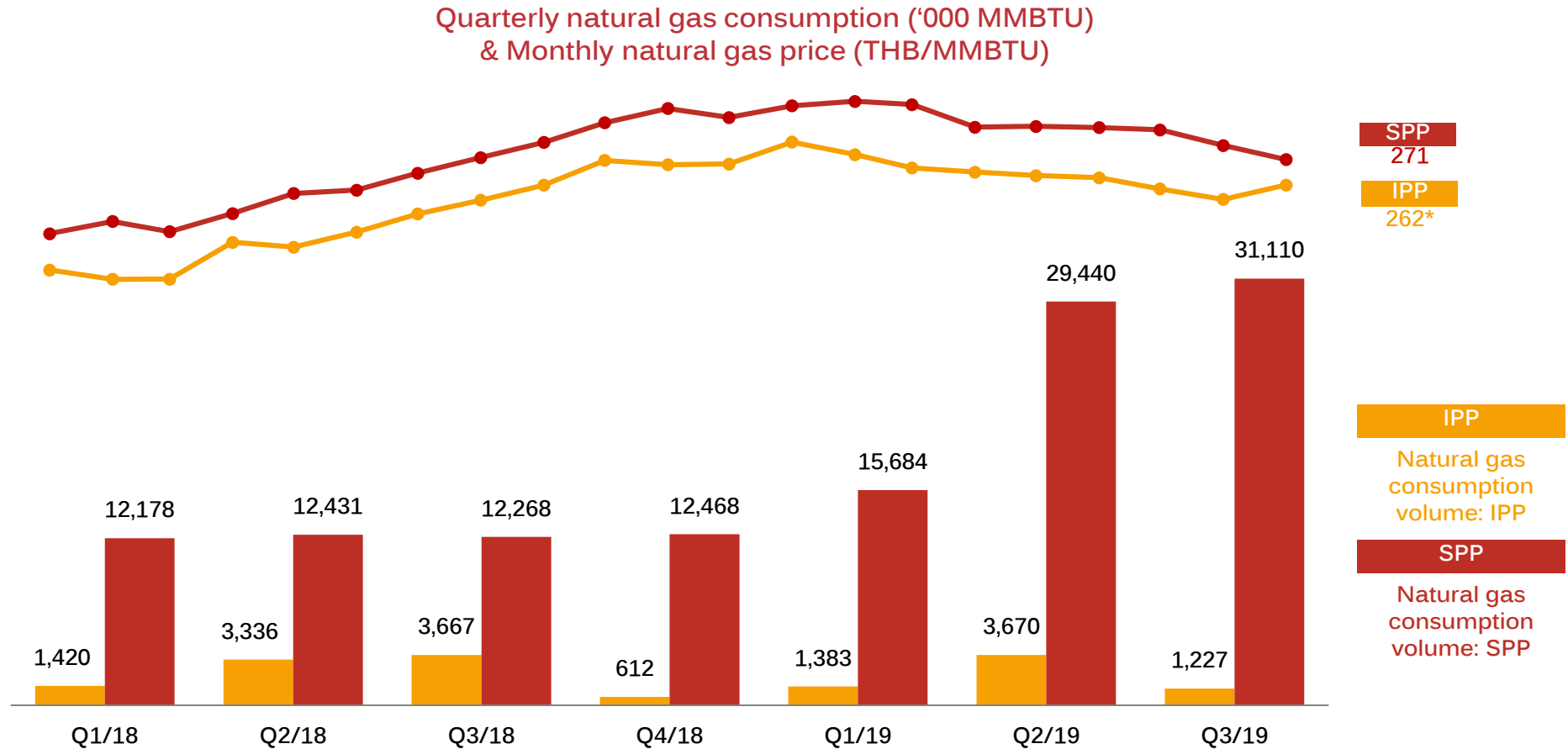
Maintenance cost and Others

QoQ
▲ 2%
YoY
▲ 330%
9M
▲ 273%

- QoQ and YoY: Maintenance costs and other costs increased due to the contribution of GLOW that as well as the increase in maintenance cost due to the Long Term Service Agreement (LTSA) from IRPC-CP plant

Note: exclude depreciation and amortization

Natural Gas Consumption vs Price Trend



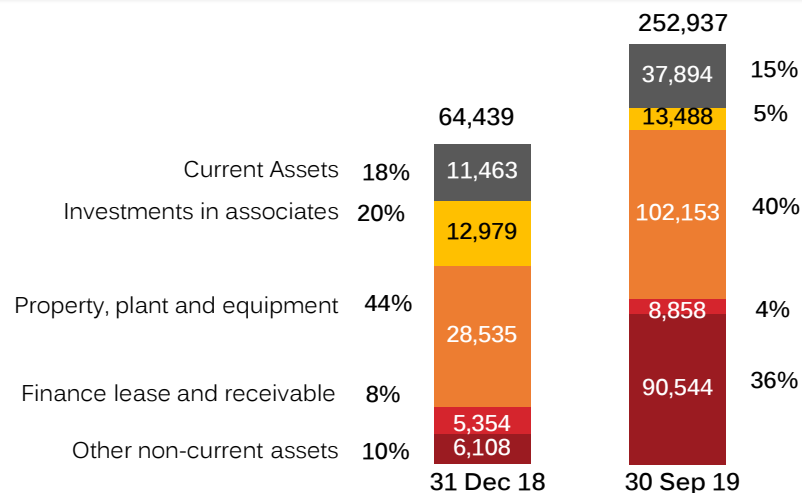
Remark: Latest price as of 30 Sep 2019

Note: *Excluded GLOW IPP

Financial Position of GPSC and Subsidiaries

Total Assets

(THB Million, %)



Assets

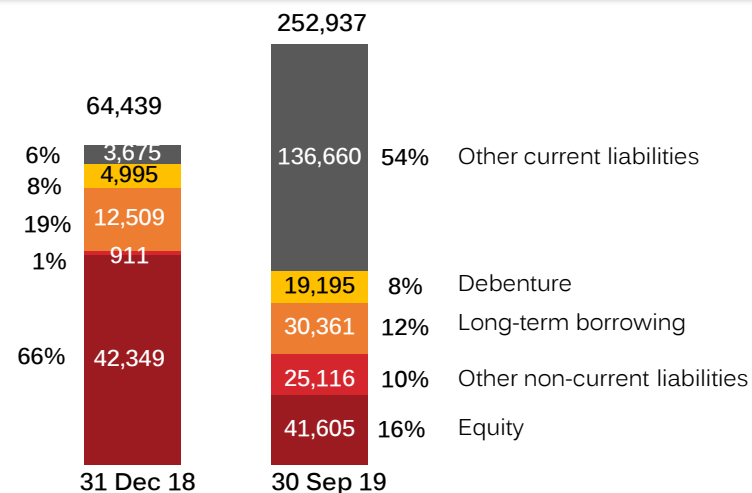
▲ 293%

Total assets increased mainly from:

- **Other non-current assets** increased by Baht 84,436 million mainly due to the increase of goodwill from the acquisition of GLOW and the intangible assets for the right in the Power Purchase Agreement from the acquisition of GLOW.
- **Property, plant and equipment** increased by Baht 73,618 million mainly due to the increase of book value in property, plant and equipment of GLOW and recording the fair value of property, plant and equipment from the purchase of GLOW.
- **Finance lease and receivable net:** increased by Baht 3,504 million in which GLOW IPP financial lease and receivable, and the recording the fair value of financial lease from the acquisition of GLOW.

Total Liabilities & Shareholders Equity

(THB Million, %)



Liabilities

▲ 857%

Total liabilities increased mainly from:

- **Current liabilities** increased mainly from an increase in short-term loan from financial institution for the acquisition of GLOW.
- **Other non-current liabilities** increased mainly due to the increase in GLOW's other non-current liabilities and deferred tax liabilities from recording the fair value of net asset from the acquisition of GLOW.
- **Long-term borrowing and debentures** increased from GLOW's long-term borrowing and debenture.

Equity

▼ 36%

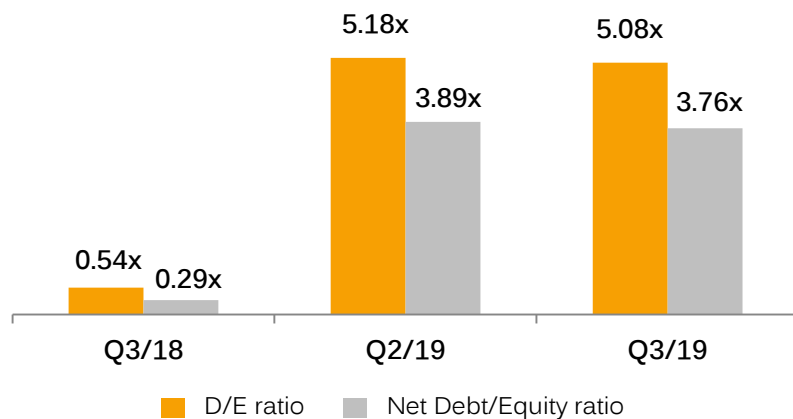
Total Equity decreased mainly from:

- The change in non-controlling interest and the difference from the change of investment proportion in subsidiaries resulted from the tender offer for acquisition of GLOW.
- The increase in retained earnings during the period.

Key Financial Ratio

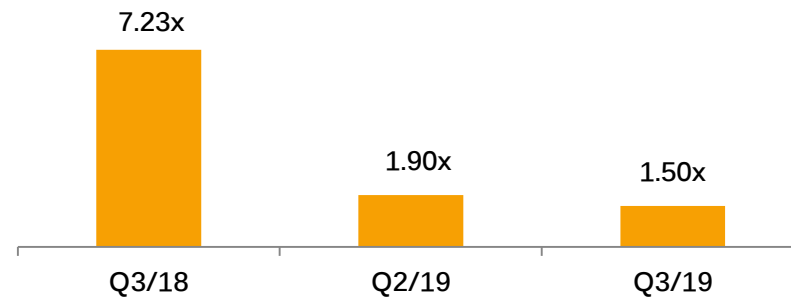
Total D/E and Net Debt/ Equity ratio

(Times)



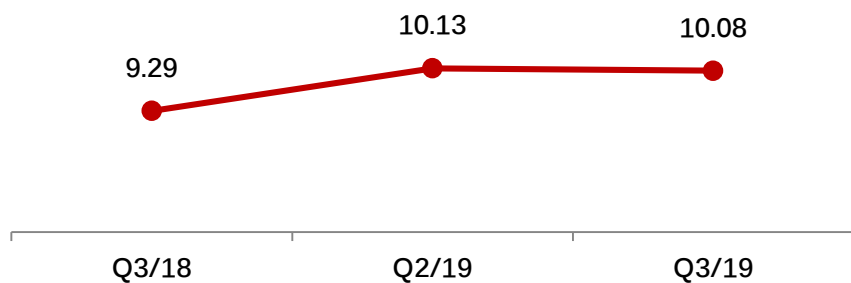
Interest Coverage Ratio

(Times)



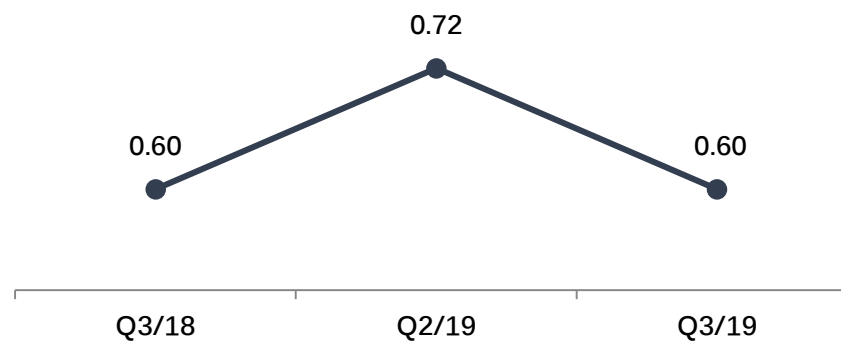
ROE

(%)



Earning per share (EPS)

(THB/share)

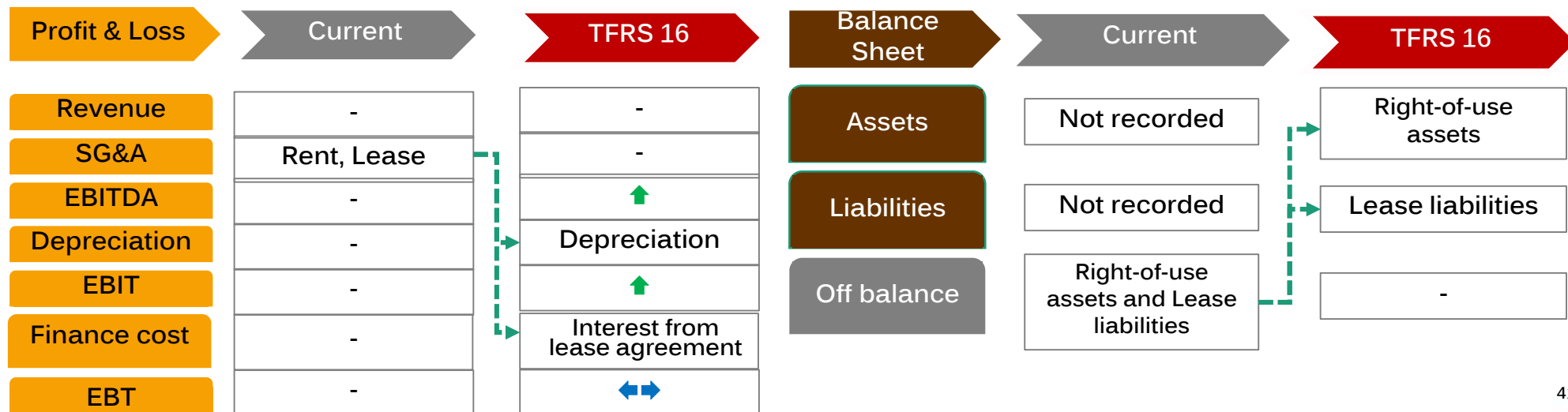


Accounting impacts in 2020

TFRS 9

Assets	As-Is GPSC Policy	Impacts on TFRS 9
1. Derivatives (e.g. IRS ,CCS , FW)	<ul style="list-style-type: none"> Disclosed in the notes to the financial information 	<ul style="list-style-type: none"> Recorded at fair value
2. Other long-term investments (e.g. RPCL, 24M)	<ul style="list-style-type: none"> Recorded at cost Gain or loss on sale of assets are presented in the statement of income 	<ul style="list-style-type: none"> Recorded at fair value Gain or loss on sale of assets are not presented in the statement of income
3. Impairment of assets (e.g. receivables, loans)	<ul style="list-style-type: none"> Impairment from historical information 	<ul style="list-style-type: none"> Consider the future credit risk of the debtor which may cause impairment faster

TFRS 16



Outlook 2020

Economic Outlook

- Several ongoing global challenges will weigh on global and Thailand's economic slow down.
- To be seen whether the government will launch additional fiscal measures e.g. EEC to boost the economy next year.

Key assumption

▲ **NG & Coal** : Natural gas and coal are forecasted to slightly decreased due to the supply that remains high

▲ **Ft rate** : Ft maintains in Jan-Apr 2020 and assumed to be slightly decreased in line with average national fuel prices

Performance

▲ Performance improvements:

- **CUP-4** (COD on Sep'19) will improve contribution margin
- **Xayaburi**: 25% stakeholder (COD on Oct'19)
- **CCE** (COD on Nov'19)
- **GRP** expected to close all conditions precedent soon.

▲ **Interest cost** continue to reduce from:

- The deleveraging plan has been completed of RO and 1st lot of debenture issuance
- Outstanding debt decreases

▼ **Gheco-1**:

- AP significant drops by 35%
- Full year impact of the first BOI period end
- Unfavorable FX impact (slightly appreciation THB against USD)

▼ The dispatch of **HHPC** assumes to be lower than 2019

▼ **PPA amortized** cost continued to impact P/L as scheduled amortization profile

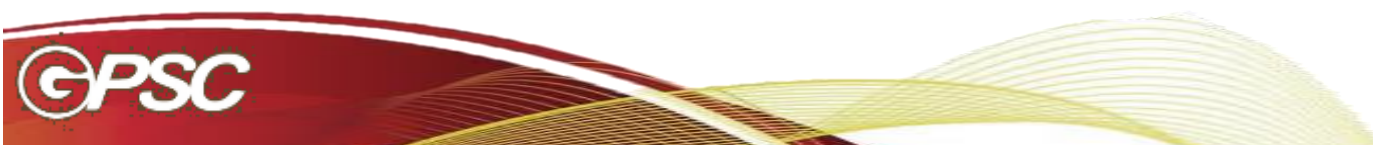
Accounting impacts

- **TFRS 9 , TFRS 16** : Accounting impact to the statement of financial position and comprehensive income statement

THANK YOU

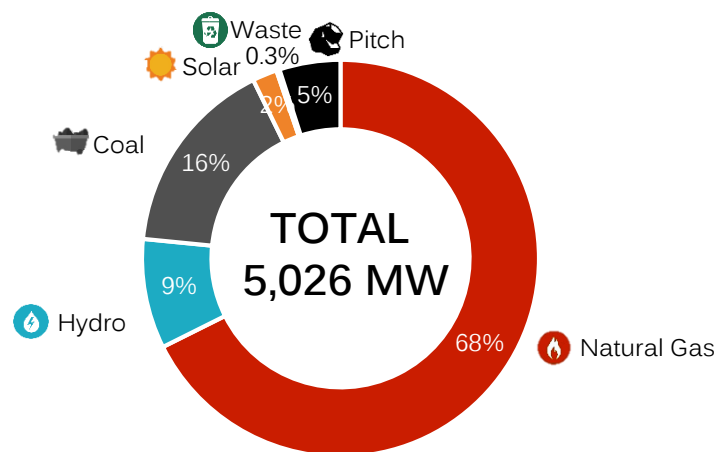
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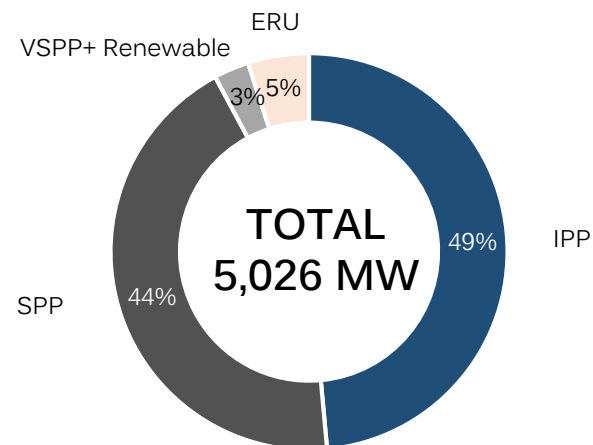


GPSC's Business Portfolio by Fuel and Plant Type

Equity Capacity by fuel types



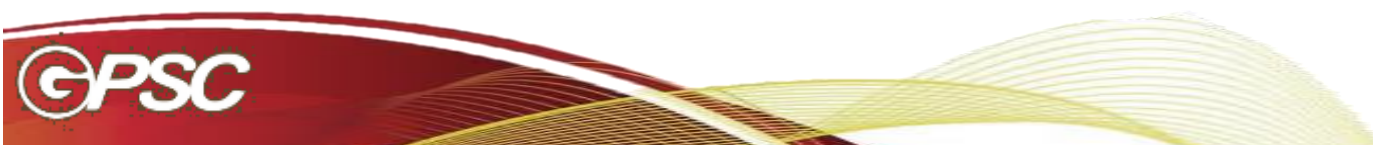
Equity Capacity by Plant Type



Energy Type	Installed MW			Equity MW		
	Total capacity	%	In operation	Total capacity	%	In operation
Natural gas	5,047	63.00%	4,987	3,399	67.64%	3,381
Hydro	1,502	18.75%	1,502	449	8.94%	449
Coal	1,045	13.04%	1,045	814	16.20%	814
Solar	149	1.86%	149	101	2.00%	101
Waste	18	0.23%	9	13	0.25%	3
Pitch	250	3.12%	-	250	4.97%	-
Total	8,011	100%	7,691	5,026	100%	4,748

Energy Type	Installed MW			Equity MW		
	Total capacity	%	In operation	Total capacity	%	In operation
IPP	4,910	61.29%	4,910	2,440	48.54%	2,440
SPP	2,614	32.63%	2,554	2,192	43.61%	2,174
VSP+ Renewable	237	2.96%	227	144	2.87%	134
ERU	250	3.12%	-	250	4.97%	-
Total	8,011	100%	7,691	5,026	100%	4,748

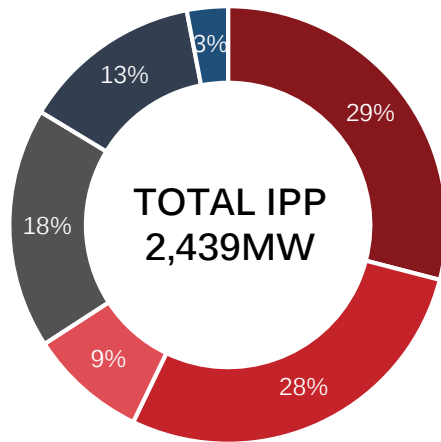
Note: Equity capacity includes 100% stake in GLOW, GRP and ERU
GPSC Portfolio as of end-2019



GPSC's Business Portfolio by Plant Type

IPP

(49%)



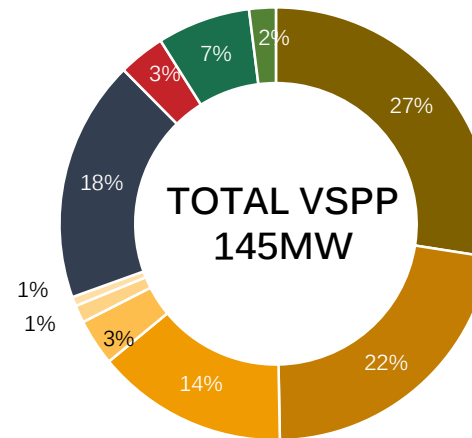
Natural gas		
Sriracha Power Plant	700MW	
GLOW IPP	677MW	
Ratchaburi Power (RPCL)	210MW	

Coal		
GHECO-ONE	429MW	

Hydro		
Xayaburi Power (XPCL)	321MW	
Houay Ho	102MW	

VSPP and Renewable

(3%)



Solar		
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	

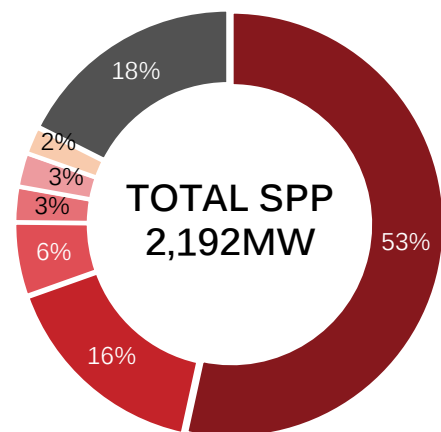
Hydro		
Nam Lik 1 Power (NL1PC)	26MW	

Natural gas		
CHPP	5MW	

Waste		
Rayong WTE	10W	
Chonburi Clean Energy (CCE)	3MW	

SPP

(43%)



Natural gas		
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	

Coal		
Glow Co-Generation	385MW	

ERU

(5%)



Pitch		
Thaioil	250MW	

Note: Equity capacity includes 100% stake in GLOW, GRP and ERU
GPSC Portfolio as of end-2019

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
IN OPERATION									
IPP									
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	321	-	-	GPSC (25%)	2019	29/2048
Total IPP		4,910	2,439	2,439	-	80			
SPP									
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

Note: Equity capacity includes 100% stake in GLOW, GRP and ERU
GPSC Portfolio as of end-2019

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
IN OPERATION									
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	15	-	-	GPSC (100%)	2019	n/a
Rayong Expansion (CUP-4)	SPP	45	45	45	70	-	GPSC (100%)	2019	-
Total SPP		2,614	2,192	2,174	2,701	7,292			
VSPP and others									
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	26	-	-	GPSC (40%)	2019	27/2044
Chonburi Clean Energy (CCE)	VSPP	8.6	2.87	2.87	-	-	GLOW (33%)	2019	20
Rayong WTE	VSPP	9.8	9.8	-	-	-	GPSC (100%)	2021	18/2039
Total VSPP and others		237	145	135	-	-			
ERU									
ERU	Cogen	250	250	-	175	-	GPSC (100%)	2023	25/2048
Total ERU		250	250	-	175	-			
Total capacity		8,011	5,026	4,748	2,876	7,372			

Note: Equity capacity includes 100% stake in GLOW, GRP and ERU
GPSC Portfolio as of end-2019

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 1Y 8											
	GTG16/HRSG16	8 Days	9 1Y 16											
	GTG14/HRSG14	14 Days	17 HGPI 30											
	Aux. Boiler.11	14 Days			15 3Y 28									
	GTG12/HRSG12	11 Days				7 1Y 17								
	GTG11/ HRSG11	24 Days					15/5 MI 7/6							
	GTG13/HRSG13	11 Days							12 1Y 22					
	GTG15/HRSG15	14 Days										14 HGPI 31		
CUP-2	GTG21/HRSG21	11 Days			9 1Y 19									
	GTG22/HRSG22	11 Days						12 1Y 22						
	Aux. Boiler.21	14 Days						1 3Y 14						
	Steam Turbine.21	-												
CUP-3	Aux. Boiler.31	11 Days							4 1Y 14					
	Aux. Boiler.33	11 Days										10 1Y 15		
	Aux. Boiler.32	11 Days									26/9 1Y 6/10			
	Steam Turbine.31	-												
SRC	GT11/HRSG#1											15	25 8	16
	GT12/HRSG#2	200 hours (8.33 days)										15	1YO 25	
	Steam Turbine.10													

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 2nd Major Overhaul for Steam Turbine 23 days
2MO 2nd 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

2020 Maintenance schedule: Sriracha and Rayong plants

2020														
Site	Description	Duration	Q1			Q2			Q3			Q4		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CUP-1	HRSG-11	8 Days					1Y							
	GTG16/HRSG16	14 Days	HGPI/3Y											
	HRSG14	8 Days	1Y											
	Aux. Boiler.11	8 Days			1Y									
	GTG12/HRSG12	22 Days				MI/3Y								
	HRSG13	8 Days						1Y						
	HRSG15	8 Days										1Y		
CUP-2	HRSG21	8 Days			1Y									
	GTG22/HRSG22	22 Days						MI/3Y						
	Aux. Boiler.21	8 Days						1Y						
	STG21	27 Days							2M					
CUP-3	Aux. Boiler.31	13 Days							3Y					
	Aux. Boiler.32	13 Days										3Y		
	Aux. Boiler.33	13 Days								3Y				
	Steam Turbine.31	-												
CUP-4	GTG41	5 Days												RM
	HRSG41	11 Days						1Y						
SRC	GT11	-												
	HRSG#1	8 Days											1Y	
	GT12	8.33 Days											1Y	
	HRSG#2	8 Days											1Y	
RDF	All Equipment	7 Days										1Y		

Notes Rayong Site			Notes Sriracha Site		
GTG			GTG		
HGPI	Hot Gas Path Inspection for Gas Turbine	14 days	CI	Combustion Inspection for Gas Turbine	8 days
MI	Major Inspection for Gas Turbine	22 days	HGPI	Hot Gas Path Inspection for Gas Turbine	26
STG			MO	Major Overhaul for Gas Turbine	33
Minor	Minor Inspection for Steam Turbine	15 days	RCIE	Rotor and Casting Inspection Evaluation	49
1MO	2 nd Major Overhaul for Steam Turbine	23 days			
2MO	2 nd 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			HRSG		
1Y	One Year Inspection HRSG	11 days	1Y	One Year Inspection HRSG	8 days
3Y	Three Year Inspection HRSG	14 days	3Y	Three Year Inspection HRSG	33 days
Other			Other		
1Y	One Year Inspection NG Station Test	Online	1Y	One Year Inspection NG Station Test	Online
5Y	Five Year Inspection NG Station (NDT)	Online	5Y	Five Year Inspection NG Station (NDT)	Online
FO	Forced Outage	Depending on physical damage	FO	Forced Outage	Depending on physical damage

2019 & 2020 Maintenance schedule: IRPC-CP

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

Plant	Unit	2020			
		Q1 (F)	Q2 (F)	Q3 (F)	Q4 (F)
IRPC-CP	<u>Block 1</u>				
	CTG 21	6	1	1	1
	HRSG 21	6	1	1	1
	CTG 22	6	1	1	1
	HRSG 22	6	1	1	1
	STG 23	6			
	<u>Block 2</u>				
	CTG 31	1	6	1	1
	HRSG 31	1	6	1	1
	CTG 32	1	1	1	6
	HRSG 32	1	1	1	6
	STG 33				6
	Aux. Boiler		7		

Notes

YI Yearly Inspection 5 days

YI Yearly Inspection Aux Boiler 15 days

1 = 1 Day (24 hours)







3 = 3 Days (72 hours)





6 = 6 Days (144 hours)

7 = 7 Days (168 hours)



2019 & 2020 Planned Maintenance Schedule of Main Units from Glow

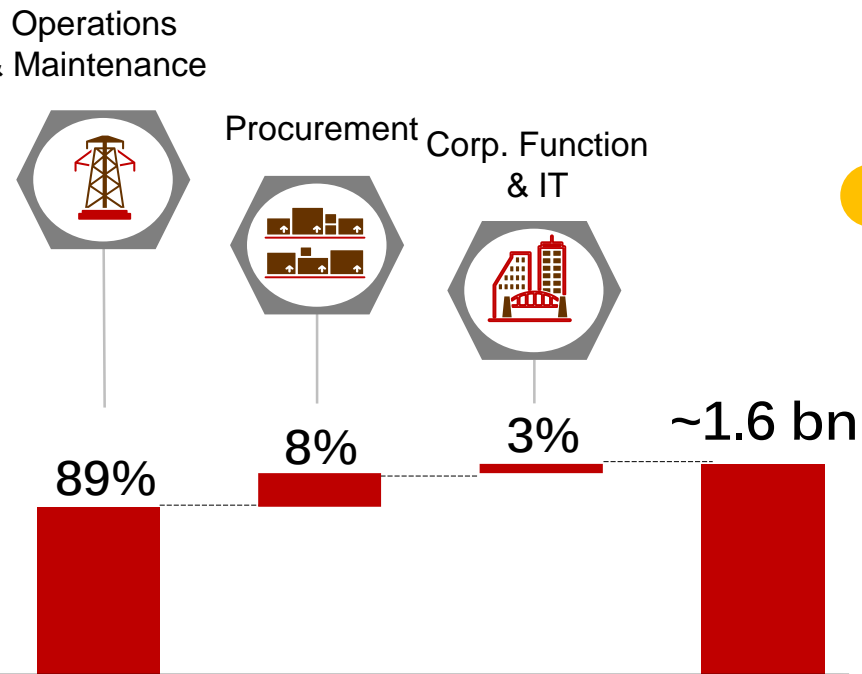
Main Units	Planned Maintenance Duration (Days)						
	2017	2018	2019	2019 by quarter			
				Q1	Q2	Q3	Q4
GHECO-One	36	-	39	 39			
GIPP: Unit 1	-	-	-				
GIPP: Unit 2	-	-	-				
CFB 1	38	27	5		 5		
CFB 2	27	5	21		 21		
CFB 3	7	26	45	 5			 40
Phase 5	31	5	23				 23

Main Units	Planned Maintenance Duration (Days)							
	2017	2018	2019	2020	2020 by quarter			
					Q1	Q2	Q3	Q4
GHECO-One	36	-	39	-				
GIPP: Unit 1	-	-	-	-				
GIPP: Unit 2	-	-	-	-				
CFB 1	38	27	5	25		 25		
CFB 2	27	5	21	26	 5			 21
CFB 3	7	26	45	5			 5	
Phase 5	31	5	23	-				

Expected Synergy Benefit

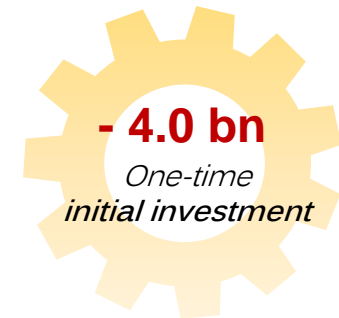
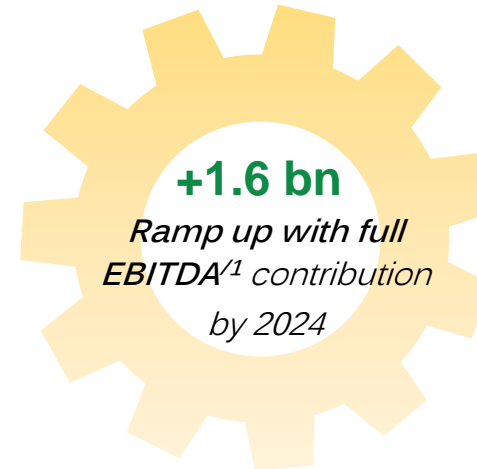
Phase 1

(Unit : THB bn)¹
EBITDA Contribution Per Annum Identified in Phase 1



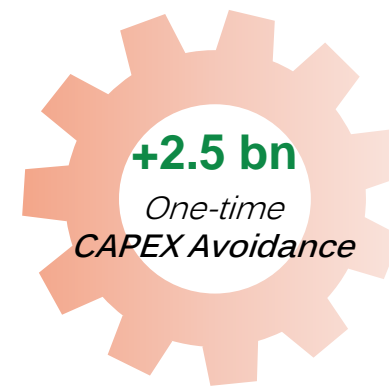
Note: 1. Recurring EBITDA synergy value based on current portfolio
2. Use "THB bn" for numbers without unit.

1. Recurring Benefit in Phase 1



2. Additional One-time Benefit

Phase 1

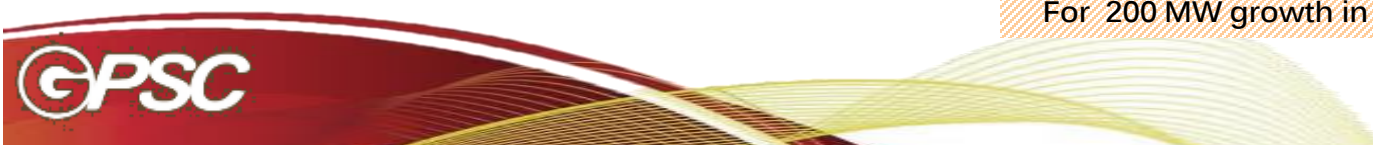


3. Further Identification in Phase 2

Phase 2



For 200 MW growth in MTP



Synergy and Integration Implementation

Highlights of phase 2



Working as
one team to
**deliver
synergy**

A

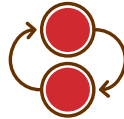


Ops & Maintenance

Aligning policies across companies

- Planned Maintenance & Operations policies changes in some areas to leverage combined assets
- Planning for move to a common maintenance team in 2020

B



Integration

Aligning with clients on possible operational changes

- Identified operational changes that require client approval to unlock value
- Conducting discussions to get client approval on operational changes

C



Procurement

Leveraging combined volumes

- Many contracts renegotiated and signed on spend baseline
- Planned roadmap to continue renegotiating even more contracts in 2020

D



Organization

To operate as one team

- Target organization to go live in Q2-2020

Synergy and Integration Implementation

Highlights of phase 2



Implementing
best practices
across
companies



A



Ops & Maintenance

Exploring new digital capabilities

- Reviewing potential & planning pilots on innovative projects:
 - Mobile-enabled workforce
 - Machine Learning-based reliability & maintenance improvements
 - Drone-based inspections

C



Procurement

Implementing digital procurement practices

- First e-auction conducted to secure cheaper coal prices
- Further e-auctions planned in 2020 with higher volumes and impact
- Developed SpendCube tool suite to analyze costs & renegotiate across companies

D



IT

Consolidating systems and moving to Cloud

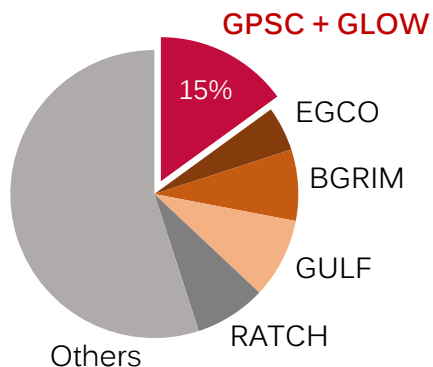
- Preparing 5-year IT roadmap, including:
 - Consolidation of both companies core systems & ERP
 - Cloud-first strategy
 - Business Process Automation
 - Developing new workforce tech skills

Leadership Position in SPP

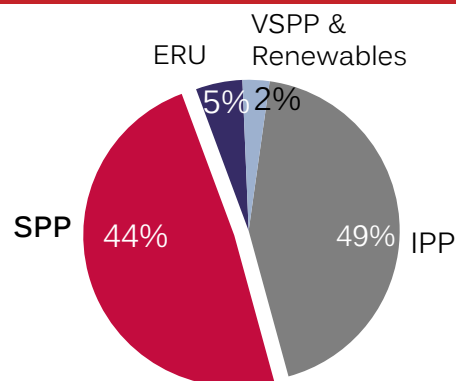
SPP Market Share by Installed Equity MW/¹

Thailand's largest SPP player

with strong resources and network reliability



GPSC's Committed Portfolio/²



**Committed Equity
5,026 MW**

**with SPP
2,192 MW**

Note: 1. Data source from companies' website and ERC as of July 2019
2. Based on 100% in GLOW

SPP Replacement Project: Stage 1 and 2 Projects (Tentative only)

Plant	Power (MW)	Steam (TPH)	Max. EGAT PPA	Notice to proceed	SCOD
Stage 1					
GEN Phase 2	192	300	30 x 2	2020	2022
Stage 2					
GSPP2	192	300	30 x 2	2022	2024
GSPP3 (Coal)	120	168	30 x 2	2022	2024, 25
GSPP11#1	80	-	30 x 1	2023	2025
Total	584	768			

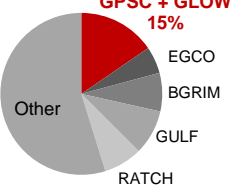
Source: Glow Analyst Meeting Q1/2019
As of Nov-2019, we're waiting for the official notice from EGAT for 6 EGAT PPAs.

Growth Platform Strengthened by Synergies

‘Larger and Stronger Power House’


1 Leadership Position in SPP

SPP market share by Installed Equity MW




■ Thailand **largest SPP** Player with **strong resources** and **network reliability**

2 Solid Growth Platform




Secured by PTT Growth Pipeline




Facilitated by EEC Industrial Growth

Consistent SPP Replacement

3 Stronger HR capabilities




PTT group's local power and utilities expertise




International best practice previously capped by investment policy constraints

‘Continuous Synergy Realization’

A Operations and Maintenance




Network Integration




CAPEX Avoidance

B Procurement and Corporate Functions




Optimize Procurement




Optimize Cash & Debt Management

C Process and Business Initiation



New tools to improve efficiency

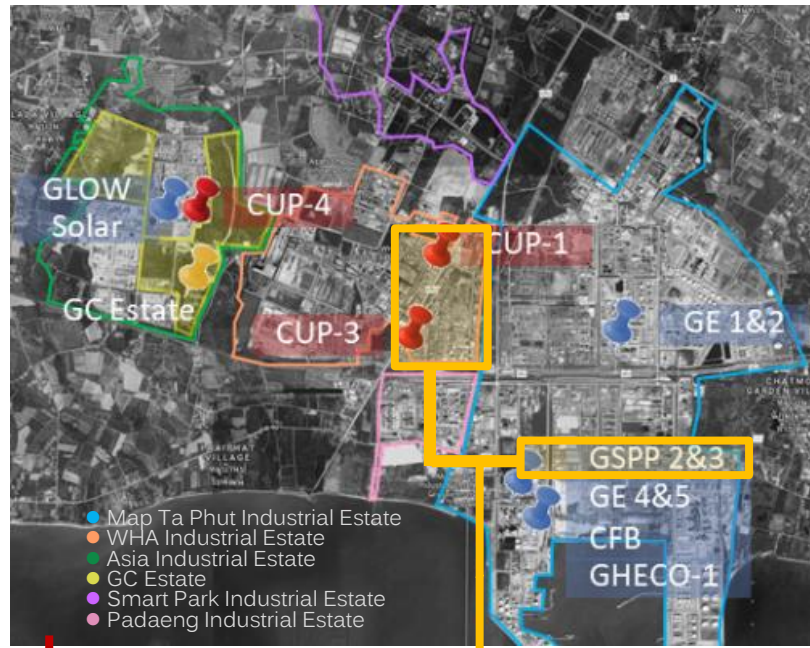


New business ideas and innovation



Quick wins & Big wins

Power and Steam Integration leads to cost savings and more capacities to serve new demand



Big-win

Full Integration from Power and Steam Integration

- Rebalance production to optimize cost

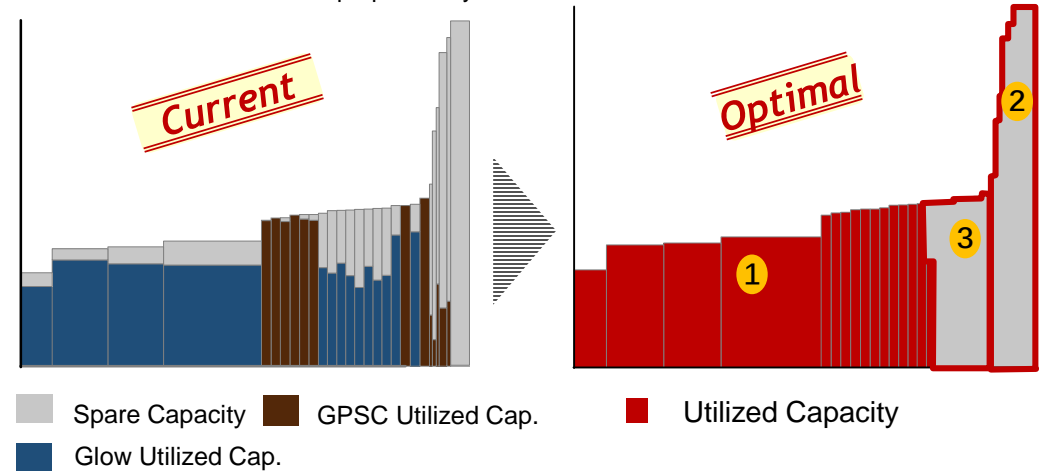
Quick-win

Immediate benefits from Power and Steam Integration

- Reduce standby time

Marginal cost per unit (THB / MWh)

For Illustrative purpose only



1

Substitute GPSC supply by GLOW's lower cost of production



2

Optimize Back-Up Capacity and Cost



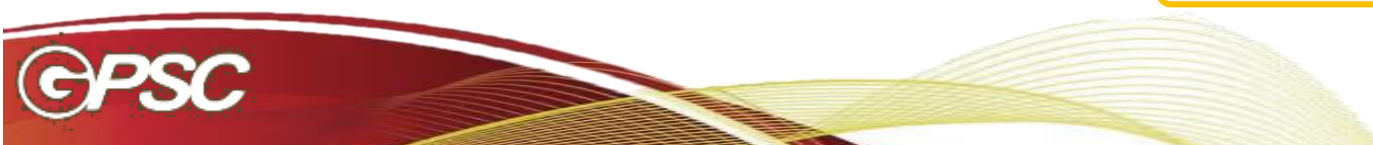
3

Avoid or Delay Power Plant and Distribution Network CAPEX

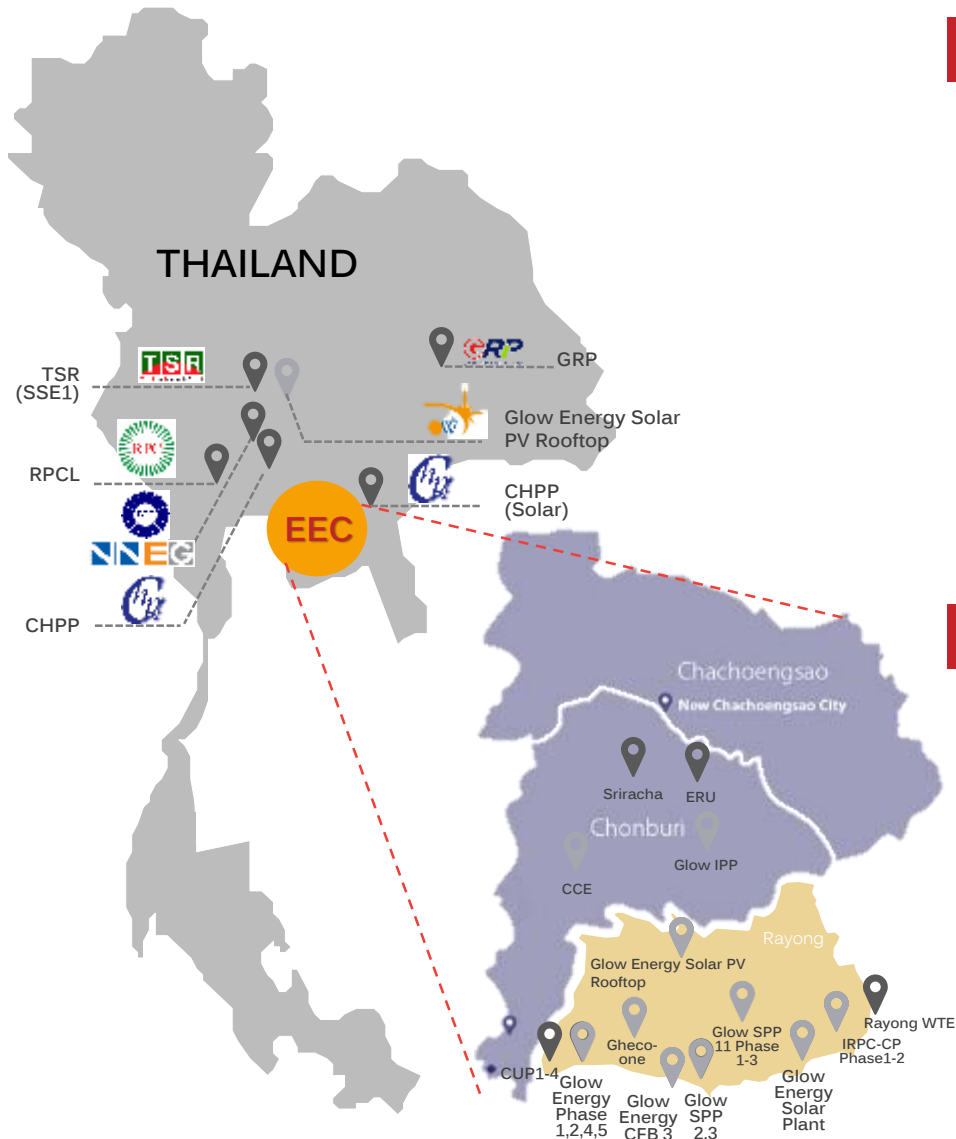


4

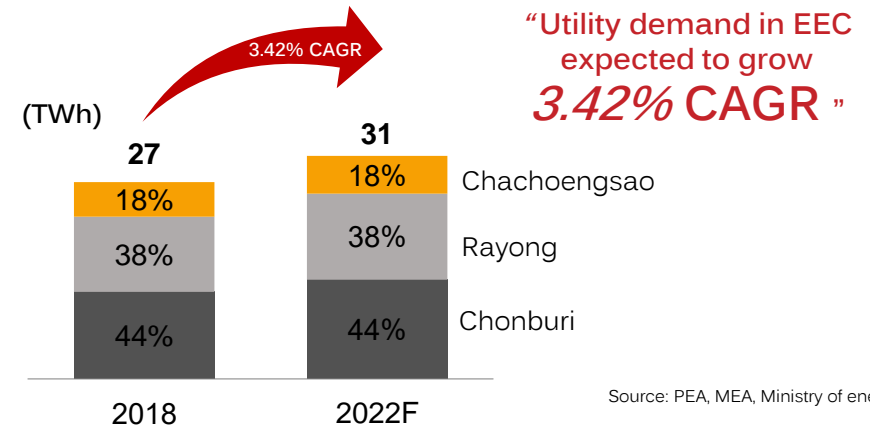
Increase Supply Opportunities



Solid growth platform and Expansion in EEC



Capture solid growth in EEC



Supportive Industrial Customers Landscape

- >5 Industrial estates
- >5 Industries
 - Petrochemical
 - Chemical
 - Refinery
 - Steel
 - Industrial gas
- ~75 companies
- ~120 plants & facilities

Customer needs

- Reliability
- Cost competitiveness
- Backup support
- Flexibility

Human Resource Key Enablers



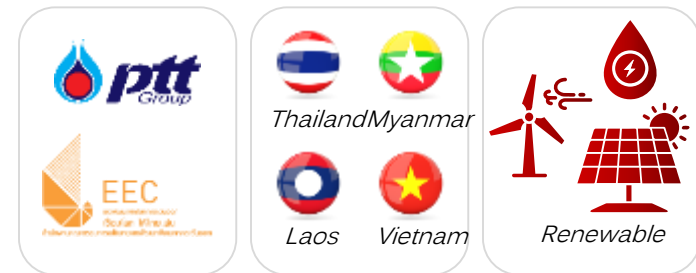
- Culture Alignment
- Growth Mindset
- Leadership Development
- Strengthening Core Competencies
- Employee Engagement
- People System Alignment



Group's Objectives

Selected Growth

- Core and project management Expertise
- Technical Expertise
- International BD talents
- M&A, Legal & Financial



S Curves and Digitization

- Dedicated digital energy team
- Technical Expertise
- System integrator / micro-grid
- New Initiatives



Equity Offering Summary

Objectives



Achieve THB 74 bn as required



Completion by 2019



Optimize Free-float



Right Offering



Giving rights to existing shareholders (no control dilution if rights are exercised)



Allow oversubscription for fund raising completion objective



Offered at discounted market price to attract existing shareholders to subscribe

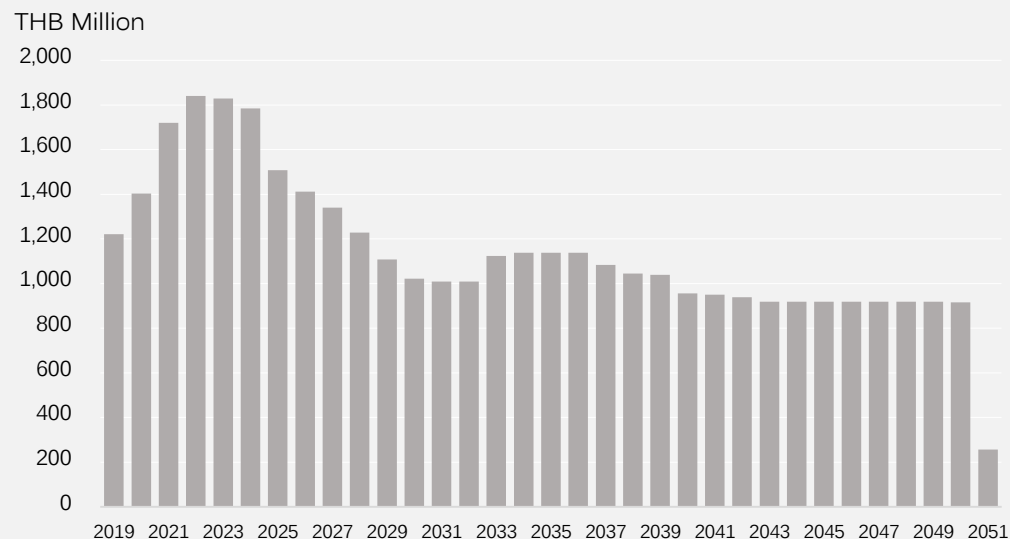


Appropriate method for meeting fund raising in timely manner

Fair Value Measurement of Net Assets from the Acquisition of GLOW

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

Amortization of Fair Value Measured from Net Assets acquired from GLOW during 2019 - 2051
(Computed based on 100% of GLOW shares)



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

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



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