







# **Executive Summary**

Operating Highlights in Q4/2019 & 2019	Q4/18	Q3/19	Q4/19	Chang	e +/(-)	2018	2019	Change +/(-)
(Unit: Million Baht)				QoQ	YoY			
Operating revenue	5,863	19,226	18,279	(5%)	212%	24,880	66,562	168%
Gross Profit	1,265	5,476	4,682	(15%)	270%	6,356	18,662	194%
EBITDA	973	5,057	4,198	(17%)	331%	5,457	16,783	208%
Shares of profit of associates and joint ventures	158	138	463	236%	193%	595	837	41%
Net profit for the company	486	893	1,145	28%	136%	3,359	4,061	21%
Adjusted Net Income <sup>1</sup>	486	1,265	1,529	21%	215%	3,359	5,177	54%
Gross profit margin (%)	22%	28%	26%	(2%)	4%	26%	28%	2%
Net profit margin (%)	8%	5%	6%	1%	(2%)	14%	6%	(8%)
Adjusted Net Income margin (%)	8%	7%	8%	1%	0%	14%	8%	(6%)

Note: 1. Adjusted Net Income is the net profit attribute to the company that excludes the fair value of intangible asset from the acquisition of GLOW

2. From the second quarter of 2019, the company has changed the classification of operating income and cost of sales resulting in the operating income until the gross profit being reported differently from the previous periods



# **Key Financial Activities and** The result of GLOW's Tender offer

Global Power Synergy Public Company Limited (GPSC) ('company') has finished the financial activities in accordance with the company's financial deleveraging plan from the offering of newly issued ordinary shares to existing shareholders in proportion to the number of shares held by each shareholder (Rights Offering) in the amount of Baht 74,000 million and the issuance of debentures of Baht 35,000 million for repaying short-term loan (Bridge Financing) that the company used to acquire Glow Energy Public Company Limited ("GLOW") was completed in Q4/2019. The company has been successful following the capital increase and debenture issuance result in an appropriate capital structure and financial ratio that could be fairly to peers comparison in the same industry as well as support the investment in current and future projects.

In terms of the progress on Delisting Tender Offer of GLOW, the process was completed on 2 December 2019 and GLOW has been delisted from being listed on the Stock Exchange of Thailand on 13 December 2019.

On 31 December 2019, the company has hold a total of 1,460,360,024 shares of GLOW or 99.83% of the total issued shares of GLOW.



# Q4/2019 & 2019 **Operating Highlights**

For 2019, the net profit of the company was at Baht 4,061 million, increased by Baht 702 million or 21% from 2018 mainly caused from the recognition of the operating results of the projects that the Company has invested and the commencement of commercial operations of projects in 2019 which are Rayong Central Utility Plant 4 (CUP-4), Namlik 1 Power Company Limited (NL1PC) and Xayaburi Power Company Limited (XPCL), notwithstanding the recognition of expenses incurred from the acquisition of GLOW. However, the net profit of the company excluding amortization of the difference between fair value and book value of the net assets of GLOW (Adjusted Net Income) amounted to Baht 5,177 million, reflecting actual profits from its normal operations.

For Q4/2019 compared to Q3/2019, the Company's net profit increased by Baht 252 million, although EBITDA decreased by Baht 859 million or 17% as a result of GLOW's power plants have reached the Contracted Availability Hours set out in the PPA in December 2019, resulting in the decrease of Availability Payment in Q4/2019. In addition, there was the planned maintenance shutdown from Glow Energy Power Plants. With regards to the operating result in Q4/2019 compared to Q4/2018, the Company's EBITDA increased by Baht 3,225 million from the recognition of GLOW's performance, reflecting strong growth in both the operation of the two businesses and the Company's net profit, which increased by Baht 659 million.





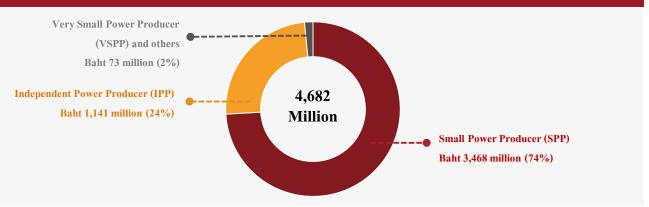






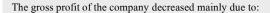
# Operating performance by plant in Q4 2019





The company's gross profit was at Baht 4,682 million in Q4/2019 which decreased by Baht 794 million or 14% from Q3/2019 and increased by Baht 3,417 million or 270% from Q4/2018. This was mainly due to the following reasons:





- Independent Power Producer (IPP): The gross profit decreased by Baht 572 million due to the decrease in gross profit from Sriracha Power Plant by Baht 87 million. This was due to the maintenance shutdown as planned for 10 days, the decrease in finance leases and the gross profit of GHECO-One Power Plant decreased by Baht 76 million due to the decrease in Availability Payment and Energy Payment following reached the Contracted Availability Hours, together with planned maintenance shutdown resulting in the maintenance costs has increased by Baht 73 million.
- Small Power Producer (SPP): The gross profit decreased by Baht 190 million as a result of the decrease in electricity and steam sales together with the increase in maintenance costs due to Glow Energy Power Plants have the maintenance shutdown as planned. However, gross profit of Rayong Central Utility Plants (CUP) increased by Baht 64 million from the amount of electricity sales volume to industrial customers and the average steam selling price increased by 4%.
- Very Small Power Producer (VSPP) and other: The gross profit decreased by Baht 32 million mainly due to the seasonal decreased in revenue from selling electricity of Ichinoseki Solar Power 1 GK (ISP1) as a result of the lower light intensity in winter season.



The gross profit of the company increased mainly due to:

- Independent Power Producer (IPP): The gross profit increased by Baht 1,245 million as a result of recognizing gross profit from 3 of GLOW's IPP plants of Baht 1,056 million, As for Sriracha Power Plant, gross profit increased by Baht 189 million due to the increase of Availability Payment after major overhaul maintenance shutdown in Q4/2018, resulting in higher revenue recognition together with the increase electricity sales volume corresponding to EGAT's dispatch instruction and the decrease in maintenance cost as a result of the expiration of contract since Q4/2018.
- Small Power Producer (SPP): The gross profit increased by Baht 2,184 million as a result of recognizing gross profit from GLOW's SPP plants of Baht 2,081 million. As for GPSC's SPP plants, gross profit increased by Baht 103 million due to the increase in electricity sales volume resulting in the increase in revenue from selling electricity while the average natural gas price per unit decreased by 4%.
- Very Small Power Producer (VSPP) and other: The gross profit decreased by Baht 11 million mainly due to the increased in the cost of goods sold and rendering service from maintenance cost from Ichinoseki Solar Power 1 GK (ISP1) and the decrease in revenue of solar cell implementation service from Combine Heat and Power Producing Company Limited (CHPP) following the existing projects.











The gross profit of the company during 2019 increased by Baht 12,306 million from 2018 mainly due to:

- Independent Power Producer (IPP): The gross profit increased by Baht 5,384 million mainly due to recognizing gross profit from 3 of GLOW's IPP plants since 14<sup>th</sup> March 2019 of Baht 5,177 million. In addition, the gross profit of Sriracha Power Plant increased by Baht 207 million due to the lower cost of maintenance in which contract expiration.
- Small Power Producer (SPP): The gross profit increased by Baht 6,918 million from GLOW's SPP plants of Baht 7,191 million. Ho wever, the company's SPP plants which is Rayong Central Utility Plants (CUP) gross profit has decreased by Baht 214 million due to the growth of cost of natural gas by 5% resulting in the higher adjustment of operating cost which is higher than the adjustment of company income. In addition, the increase in maintenance costs as a result of the maintenance of gas turbine electricity generators. Also, the gross profit from IRPC Clean Power Plant (IRPC-CP) has decreased by Baht 59 million due to the increase in natural gas cost in accordance with the usage volume and the increase in the price of natural gas.
- Very Small Power Producer (VSPP) and other: The gross profit increased by Baht 5 million, mainly because of the growth in revenue from
  electricity sales of Ichinoseki Solar Power 1 GK (ISP1) of Baht 26 million in 2019 while the revenue from Combined Electricity and Power
  Company Limited (CHPP) had a slight fall in revenue corresponding to existing projects.











# Q4/2019 Significant Events

#### Financial activities during GLOW acquisition

In order to acquire shares of Glow Energy Public Company Limited ("GLOW"), the company had obtained a short-term loan from financial institution and major shareholders to make the payment to ENGIE Global Developments B.V., which was the major shareholders of GLOW, and to obtain remaining shares from minority shareholders through Tender Offer. During Q4/2019, the company has completed the Right offering process in the amount of Baht 74,000 million on 9 October 2019, with the company allocating 1,321,428,567 ordinary shares at the price of 56 baht per share. At present, the company has a total ordinary shares of 2,819,729,367 shares with the par value of Baht 10 per share and have changed the paid-up capital to a total of Baht 28,197,293,670, which the new ordinary shares have started to be traded on the first day on 11 October 2019.

On 8 November 2019, the company implemented a plan to issue 6 corporate debentures in the amount of Baht 35,000 million to in stitutional investors and High Networth investors with an average interest rate of 2.80 baht per year by receiving a credit rating of AA - from TRIS Rating Company Limited. The purpose of the issuance of debentures was to use a portion of the proceeds to repay the short-term loan (Bridging Finance) from financial institutions and major shareholders. And in order to maintain the financial ratio to be at an appropriate level which can be compared with companies in the same industry group including investment support for both current projects and future projects which is in accordance with the company's financial deleveraging plan.

In this regard, the Company has finished the Delisting Tender Offer of Glow Energy Public Company Limited (GLOW) on 2 December 2019 and already delisted the securities of GLOW from the Stock Exchange of Thailand on 13 December 2019.

On 31 December 2019, the company has hold a total of 1,460,360,024 shares of GLOW or 99.83% of the total issued shares of GLOW.



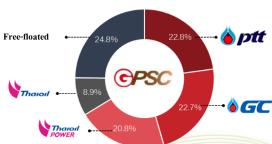
#### Major shareholders of the Company

The Major shareholder structure of the company after changing of the paid-up capital on 9 October 2019, PTT Public Company Limited holds 22.81% of shares, PTT Global Chemical Public Company Limited holds 22.73% of shares, Thai Oil Public Company Limited holds 8.91% of shares, Thai Oil Power Company Limited holds 20.78% of shares and 24.77% of shares offered to the public.





#### The shareholding after capital increase











#### Certifications and Awards from Well recognized Magazine and Public Organization



On 26 November 2019, the company has received an award from SET Awards 2019 in two categories, which are the Sustainability Excellence Award in Rising Star Sustainability Awards or the listed companies that operating the outstanding business in sustainability prospects with market capitalized between Baht 30,000 - 100,000 million. And the company also received the Thailand Sustainability Investment (THSI) award or sustainability stocks 2019 for the second consecutive year. The two awards are given by the SET to listed companies with business models based on international standards of sustainable development, taking into account the Environmental, Social and Governance or ESG, as well as seeing good returns and continuous growth.



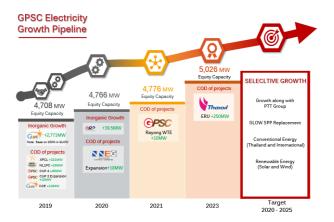
On 5 December 2019, the Company has received 3 Awards from The Asset, the leading financial magazine in Asia which given in The Asset ESG Corporate Award 2019. The first prize is (1) ESG: Platinum Award - Excellence in Environment Social and Governance reflects that the company proves the determination of business management for sustainable growth and taking responsibilities for all stakeholders. (2) Best Investor Relations Award reflects that the company has a high potential for giving an information to shareholders and Analysts. And (3) Best Initiative award - Innovation: Energy storage system solution.



On 11 December 2019, the company has received Sustainability Disclosure Award (Honorary award) from Thaipat institute which given in the Sustainability Disclosure Award announcement 2019. The company has been disclosing all sustainability information to the public and all stakeholders in the sustainability report which reflects its operations focusing on sustainable development in all dimensions.

#### Company investment project and the progress of construction project

#### Company investment project



#### **Update of Projects in 2019-2020**

- In 2019, the company can recognize the operating results from projects which have commenced operations as follows:
  - Rayong Central Utility Plant 4 (CUP-4) has started commercial operation on 12 September 2019.
  - The Hydro Power Plant Project of Nam Lik 1 Company Limited (NL1PC) and Xayaburi Power Company Limited (XPCL) have commercial operations on 1 July 2019 and 29 October 2019, respectively.
  - The Industrial Waste Management Project of Chonburi Clean Energy Company Limited (CCE) has commenced commercial operation on 7 November 2019.
- The company's project 3 projects under construction as follow:
  - Nava Nakorn Electricity Generating Company Limited (NNEG) (progress at 85.7%)
  - Rayong Waste to Energy: WTE (progress at 36.8%)
  - Energy Recovery Unit project: ERU (progress at 23%)







# GINFINITE

#### Synergy from the acquisition of GLOW

- On 31 December 2019, the company was able to recognize the synergy value from the acquisition of approximately Baht 76 million as a result of the financial
  management following the PTT Group scheme. In addition, increasing the efficiency of procurement and managing, and reducing inventory costs by applying
  digital systems to improve processes such as using the E-Auction systems and purchasing discount (economy of scale).
- The company has preliminary valuation of GPSC and GLOW synergy that will occur during the year 2019-2024, with the EBITDA expected to gradually increase until the value can be recognized at approximately 1,600 million baht in 2024.



#### Economic outlook 2020

- Electricity consumption in Thailand during January November 2019 stood at 173,602 gigawatts-hour and Thailand's highest electricity consumption (Peak Demand) in 2019 was at 37,312 megawatts. The power consumption increased by 3.4% compared to the same period of last year. Power consumption of household sector increased by 10.1%, in line with the economic and living indices of Thai households, which has improved slightly. On the other hand, the power consumption by industrial sector decreased by 1.7% due to the economic slowdown of the main trading partners, as well as the more cautious stance of the financial institutions in granting loans, resulting in lower domestic consumption. The forecast of economic slowdown indicates a potential impact on growth of power and steam sales to industrial clients in Map Ta Put, which may weaken.
- The outlook of energy consumption in 2020 is projected to grow in line with the economic conditions and the progress of the Eastern Economic Corridor (EEC). The new Power Development Plan 2018-2037 (PDP 2018) gave priority to renewable energy by supporting power plants that use fuel from biomass and wastes, as well as solar rooftop system and energy storage systems. This is a positive factor that supports the expansion of installed capacity and investment. The company realizes and places importance on the environment with the goal of increasing the proportion of investment in renewable energy power plants to maintain balance and sustainability.
- Natural gas prices continuously decreased in the second half of 2019 and has a slight downward trend in 2020. However, various situations remain uncertain, making it challenging to accurately forecast the trend of natural gas prices and fuel charge adjustment (Ft).
- Drought situation in 2020 will continue from 2019 due to the effect of El Niño phenomenon, resulting in less rainfall than usual. It is expected that rainfall in the region from January to March of 2020 will be less than the normal range, causing the amount of water bud get during the dry season of 2020 to be lower than normal level. The Company has closely monitored the situation and has prepared appropriate measures for the drought situations.

#### The effect of new accounting standards announcement (Effective in 2020)

- TFRS 9 on Financial Instruments: It is the financial reporting standard with main contents divided into 3 parts which include
  - Amendment of classification and valuation of financial instruments such as long-term investments, which currently are measured at cost. The new reporting standard will instead require the valuation to be done at fair value and recognize gains or losses from changes in fair value in profit and loss or other comprehensive income.
  - Recognition of additional basis of impairment, which now includes impairment based on expected events in the future (Expected Credit Loss), whereas the previous basis of impairment include past experience and current events only (Incurred Loss).
  - Hedge accounting, such as reporting hedging transactions, which currently are not recognized by Thai accounting standards.
- TFRS 16 on lease agreements: It is a financial reporting standard in which the lessee recognizes the rights to use the assets as assets, and
  recognize the liabilities from the obligation arising from the lease into the financial statements. This accounting method will result in a fairer
  presentation of assets and liabilities of the lessee, as well as increases disclosure of information which will better reflect the financial risks and
  capital of the tenants.









# **Operating Results**

Overall Operating Results of the Company and its Subsidiaries	Q4/18	Q3/19	Q4/19	Chang	e +/(-)	2018	2019	Change +/(-)	
(Unit: Million Baht)				QoQ	YoY				
Operating revenue <sup>1</sup>	5,863	19,226	18,279	(5%)	212%	24,880	66,562	1689	
Cost of sales (exclude depreciation and amortization)	(4,598)	(13,750)	(13,597)	(1%)	196%	(18,254)	(47,900)	1599	
Gross profit	1,265	5,476	4,682	(14%)	270%	6,356	18,662	1949	
Selling and administrative expenses	(297)	(425)	(489)	15%	65%	(909)	(1,896)	1099	
Other operating income	5	6	5	(17%)	0%	10	17	709	
EBITDA	973	5,057	4,198	(17%)	331%	5,457	16,783	2089	
Depreciation and amortization	(469)	(2,110)	(2,163)	2%	361%	(1,802)	(7,207)	3009	
EBIT	504	2,947	2,035	(31%)	304%	3,655	9,576	1629	
Finance costs	(136)	(1,960)	(1,197)	(39%)	780%	(514)	(5,140)	9009	
Other non-operating income and expenses	73	286	50	(83%)	(32%)	411	658	609	
Shares of profit of associates and joint ventures	158	138	463	236%	193%	595	837	419	
Income tax expenses	8	(129)	(43)	(67%)	(637%)	(243)	(247)	25	
Profit before FX & extraordinary items	607	1,282	1,309	2%	116%	3,904	5,684	46%	
Net foreign exchange gains (losses)	(3)	17	111	553%	n/a	(15)	317	n	
Net profit	604	1,299	1,420	9%	135%	3,889	6,001	54%	
Non-controlling interests	(118)	(406)	(275)	(33%)	132%	(530)	(1,940)	2669	
Net profit for the company	486	893	1,145	28%	136%	3,359	4,061	21%	
Adjusted Net Income	486	1,265	1,529	21%	215%	3,359	5,177	54%	
Earning per share (Baht/share)	0.32	0.60	0.64	7%	96%	2.24	2.25	09	
Weighted average number of common share (Million)	1,498	1,498	1,802	20%	20%	1,498	1,802	20%	

Note: 1. From the second quarter of 2019, the company has changed the classification of operating income and cost of sales resulting in the operating income until the gross profit being reported differently from the previous periods

#### **Adjusted Net Income**

Adjusted Net Income, the net profit attribute to the company that excludes the "fair value of intangible asset from the acquisition of GLOW", the assessment of the fair value of net assets and allocation of business acquisition cost which has been calculated backwards from 14th March 2019 (the first day that GPSC has recognize GLOW's performance in the consolidated financial statement) to reflects the company's true earnings from its normal operations. In Q4/2019, such amortization expense adds up to Baht 384 million consisting of the amortization of assets acquired from the acquisition of GLOW amounting Baht 541 million, the amortization of liabilities from the acquisition of GLOW amounting Baht 152 million and the non-controlling interest of Baht 5 million.

Adjusted Net Income	Q4/18	Q3/19	Q4/19	Change +/(-)		2018	2019	Change +/(-)
(Unit: Million Baht)				QoQ	YoY			
Net Profit for the Company	486	893	1,145	28%	136%	3,359	4,061	21%
Re-Add: Amortization of assets acquired from the	0	252	204	20/	. /-	0	1.116	. 1-
acquisition of GLOW	0	372	384	3%	n/a	0	1,116	n/a
Adjusted Net Income	486	1,265	1,529	21%	215%	3,359	5,177	54%

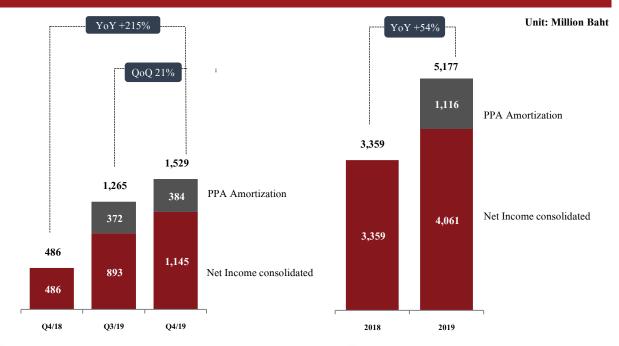








#### Adjusted Net Income (Excluding PPA amortization)





Adjusted Net Income was Baht 1,529 million in Q4/2019 which increased by Baht 264 million or 21% from Q3/2019 due to the following reasons:

• Gross profit of IPP and SPP plants decreased by Baht 566 million and Baht 196 million respectively, as a result of GLOW IPP and GHECO-One Power Plant reached the Contracted Availability Hours before the end of December for 15 days. Consequently, the revenue from Availability Payment has decreased from the third quarter of 2019, together with the increase in maintenance cost corresponding to planned maintenance shutdown from Sriracha Power Plant, Glow Energy Power Plant and Rayong Central Utility plant (CUP).



Adjusted Net Income increased by Baht 1,043 million or 215% from Q4/2018 due to the following reasons:

- Gross profits from IPP plants and SPP plants increased by Baht 1,251 million and Baht 2,178 million respectively from the recognition of GLOW gross profit (Q4/2018 GLOW was not yet acquired).
- Gross profit of Sriracha Power Plant has increased from the same quarter of previous year as a result of better performance after major overhaul maintenance shutdown during Q4/2018 together with higher dispatch volume from EGAT instruction. So, the revenue from selling electricity has increased significantly.



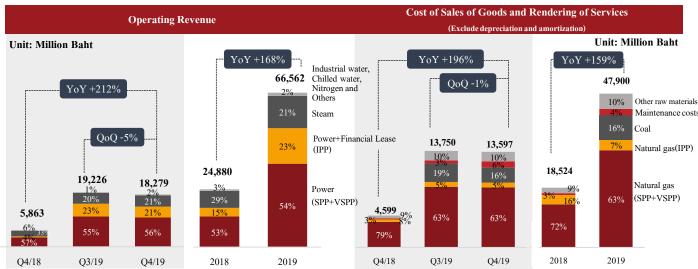
#### Comparing 2019 vs 2018

Adjusted Net Income was Baht 5,177 million in 2019 which increased by Baht 1,818 million or 54% from 2018 due to the following reasons:

- Gross profit from IPP plants and SPP plants increased by Baht 5,390 million and Baht 6,912 million respectively from the recognition of GLOW gross profit (in during 2018, GLOW was not yet acquired).
- The company recognized the operating results of the projects that the Company has invested and the commencement of commercial operations of projects in 2019 which are Rayong Central Utility Plant 4 (CUP-4), Namlik 1 Power Company Limited (NL1PC) and Xayaburi Power Company Limited (XPCL).
- The revenue from Sriracha Power Plant increased due to the higher Availability Payment (AP) and the increase in Contracted Availability Hours
  as well as management of the maintenance contract, resulting in reduced maintenance cost. In addition, there was already main tenance major
  overhaul in Q4/2018.









### **Analysis of Company Performance**



#### **Operating Revenue**

Operating revenue in Q4/2019 was Baht 18,279 million which decreased by Baht 947 million or 5% from Q3/2019. The decrease was mainly due to the following reasons:

- Revenue of Independent Power Producer (IPP) decreased by Baht 663 million as a result of revenue from Availability Payment of GLOW's IPP has decreased by Baht 552 million due to reached the Contracted Availability Hours from GHECO-One and Glow IPP in December. In addition, the revenue from selling electricity of Sriracha Power Plant decreased by Baht 111 million mainly due to the decrease in Availability Payment (AP) from the maintenance cost increased according to planned maintenance shutdown approximately 10 days. There was a fell in Energy Payment (EP) following the lower dispatch volume as EGAT instruction.
- Revenue of the company's Small Power Producers (SPP)
  decreased by Baht 251 million as a result of the decrease in
  revenue from selling electricity from GLOW's SPP due to
  planned maintenance shutdown corresponding to the decrease in
  sales volume while the maintenance cost increased.
- Revenue of the company's Very Small Power Producers (VSPP) decreased by Baht 34 million as a result of the fall in revenue from selling electricity from Ichinoseki Solar Power 1 GK (ISP1) due to the weather condition resulting in the lower light intensity compared to Q3/2019 and higher snowfall than normal which impacts the revenue has decreased by Baht 35 million. However, the revenue from selling electricity from Combine Heat and Power Producing Company Limited (CHPP) has slightly increased.



#### **Operating Revenue**

Operating revenue in Q4/2019 was Baht 18,729 million which increased by Baht 12,416 million or 212% from Q4/2018. The increase was mainly due to the following reasons:

- Revenue of Independent Power Producer (IPP) increased by Baht 3,434 million as a result of the revenue from Sriracha Power Plant has increased by Baht 259 million from the higher Availability Payment (AP) after maintenance shutdown during Q4/2018 and Energy Payment (EP) has increased from higher dispatch electricity instructed by EGAT. In addition, the recognition of revenue from GLOW's IPP plants increased by Baht 3,175 million from GLOW acquisition.
- Revenue of the company's Small Power Producers (SPP) increased by Baht 9,024 million due to the increase in revenue from selling electricity and steam from Rayong Central Utility Plant (CUP) which increased by Baht 181 million due to higher power sales volume distribute to industrial users. In addition, the recognition of GLOW's SPP plants increased by Baht 8,849 million from the acquisition of GLOW.
- Revenue of the company's Very Small Power Producers (VSPP) decreased by Baht 43 million mainly due to the decrease in average selling price per unit of electricity from the currency translation while the sales volume has slightly increased from Ichinoseki Solar Power 1 GK (ISP1). However, the revenue of solar cell installation from Combine Heat and Power Producing Company Limited (CHPP) has decreased in accordance with implementing scheme.









#### Cost of sales of goods and rendering of services

Cost of sales of goods and rendering services in Q4/2019 was Baht 13,597 million which decreased by Baht 153 million or 1% from Q3/2019. The details are as follows:

- The total cost of sales of goods and rendering services of Independent Power Producer (IPP) decreased by Baht 91 million mainly due to the lower cost of natural gas corresponding to EGAT's lower dispatch instruction from Sriracha Power Plant as well as the decrease in coal cost corresponding to the decrease in volume used from GHECO-One plant.
- The total cost of sales of goods and rendering services of Small Power Producer (SPP) decreased by Baht 61 million mainly due to the decrease in coal price corresponding to the decrease in volume. However, the maintenance cost increased as a result of planned maintenance shutdown from Rayong Central Utility Plants and Glow Energy Power Plant.
- The cost of sales of goods and rendering services of Very Small Power Producer (VSPP) and others decreased by Baht 2 million corresponding to implementing project of solar cell installation from Combine Heat and Power Producing Company Limited (CHPP).

#### Cost of sales of goods and rendering of services

Cost of sales of goods and rendering services in Q4/2019 was Baht 13,597 million which increased by Baht 8,998 million or 196% from Q4/2018. The details are as follows:

- The total cost of sales of goods and rendering services of Independent Power Producer (IPP) increased by Baht 2,189 million mainly from the increase in coal cost by Baht 1,496 million as a result of the recognition from GHECO-One plant as well as higher natural gas cost and maintenance cost arising from GLOW's IPP Power Plants. (Q4/2018 did not acquire GLOW
- The total cost of sales of goods and rendering services of Small Power Producer (SPP) in Q4/2019 increased by Baht 6,840 million due to the increase in natural gas consumption corresponding to the higher sales volume as well as the increase in coal consumption from GLOW's SPP Power Plant. In addition, the increase in maintenance cost from planned maintenance shutdown from Rayong Central Utility Plants in Q4/2019.
- The cost of sales of goods and rendering services of Very Small Power Producer (VSPP) and others decreased by Baht 31 million mainly from the decrease in solar cell installation cost from Combine Heat and Power Producing Company Limited (CHPP) corresponding to the projects implementation.



### **Comparing 2019 vs 2018**

#### **Operating Revenue**

Operating revenue in 2019 was Baht 66,562 million which increased by Baht 41,682 million or 168% from 2018. The increase was mainly due to the

- Revenue of Independent Power Producer (IPP) increased by Baht 11,979 million due to recognizing revenue from GLOW's IPP of Baht 12,232 million as GLOW has not been acquired in 2018. However, the revenue from Sriracha Power Plant has decreased by Baht 253 million corresponding to EGAT's lower dispatch instruction leading to fall in Energy Payment (EP) despite there was an increased in Availability Payment (AP) due to the Contracted Availability Hours is greater than 2018.
- Revenue of the company's Small Power Producers (SPP) increased by Baht 29,716 million as a result of the of recognition of electricity and steam sales of GLOW's SPP plants of Baht 28,739 million as GLOW has not been acquired in 2018. As for GPSC's SPP plants, revenue from electricity and steam sales increased by Baht 977 million corresponding to the increase in sales volume.
- Revenue of the company's Very Small Power Producers (VSPP) decreased by Baht 13 million, mainly due to the decrease in revenue from solar cell installation services according to the number of existing projects despite the revenue from selling chilled water from Combine Heat and Power Producing Company Limited (CHPP) has increased following the increase in sales volume.

#### Cost of sales of goods and rendering of services

Cost of sales of goods and rendering services in 2019 was Baht 47,900 million which increased by Baht 29,376 million or 159% from 2018. The details are as follows:

- The total cost of sales of goods and rendering services of Independent Power Producer (IPP) increased by Baht 6,594 million mainly from the recognition of GLOW's cost as a result of increase in natural gas and coal cost. In addition, the increase in maintenance cost from planned maintenance shutdown from GLOW's Power Plant.
- The total cost of sales of goods and rendering of services of Small Power Producer (SPP) increased by Baht 22,799 million due to the increase in maintenance cost from Rayong Central Utility Plants has maintenance shutdown of Gas Turbine Generator (GTG) in Q4/2019 and planned maintenance shutdown from Glow Energy Power Plant together with the recognition of natural gas and coal cost from GLOW's Power Plant.
- The cost of sales of goods and rendering services of Very Small Power Producer (VSPP) and others decreased by Baht 17 million mainly due to the decrease in solar installation cost corresponding to the number of existing projects.











Operating Performance	Q4/18	Q3/19	Q4/19	Change	e +/(-)	2018	2019	Change +/(-)
(Unit: Million Baht)				QoQ	YoY			
Revenue from Selling Electricity								
- Availability Payment: AP	(118)	1,566	1,229	(22%)	1,151%	272	5,263	1,840%
- Energy Payment: EP	367	2,690	2,370	(12%)	546%	2,957	9,667	227%
- Received Money to Submit to Power Developments Funds	1	2	1	(34%)	78%	12	10	(17%)
Total Revenue from selling electricity (GPSC)	249	4,258	3,600	(15%)	1,352%	3,240	14,940	361%
Other Income								
Revenue from finance lease agreement	130	223	192	(14%)	48%	543	773	42%
Other Income		21	22	3%	n/a	6	56	n/a
Total Revenue	380	4,477	3,814	(14%)	908%	3,790	15,769	316%
Cost of Raw Materials								
- Natural Gas	387	748	689	(8%)	78%	2,947	3,397	15%
- Coal	-	1,688	1,496	(11%)	n/a	-	5,293	n/a
- Others	25	39	40	(3%)	60%	77	123	60%
<b>Total Cost of Raw Materials</b>	412	2,475	2,225	(10%)	439%	3,024	8,813	191%
Maintenance cost	19	63	177	181%	832%	197	314	59%
Others (exclude depreciation and amortization)	52	226	271	26%	448%	185	873	372%
Total Cost of Sales of Goods and Rendering of Services	484	2,764	2,673	(3%)	454%	3,406	10,000	194%
Gross Profit	(104)	1,713	1,141	(33%)	1,196%	384	5,768	1,404%
Gross Profit Margin	(27%)	38%	30%	(8%)	57%	10%	37%	27%

#### **Gross Profit**

An Independent Power Producer's (IPP) gross profit depends on Availability Payment (AP) of the power plant and having a structure to calculate the costs of selling electricity by the 'Pass Through' concept where the cost can be passed on to the Electricity Generating Authority of Thailand (EGAT). The gross profit of GPSC's Independent Power Producer (IPP) was Baht 1,141 million in Q4/2019 decreased from Q3/2019 by Baht 572 million or 33% and increased by Baht 1,245 million or 1,196% from Q4/2018 due to the following reasons:



The gross profit of Independent Power Producer (IPP) decreased mainly due to:

• The decrease in gross profit of GLOW's IPP plants by Baht 572 million as a result of the Availability Payment decreased by Baht 337 million corresponding to planned maintenance shutdown approximately 10 days from Sriracha Power Plant in Q4/2019 together with GHECO-One Power Plant has reached the Contracted Availability Hours in the first half of December.



The gross profit of Independent Power Producer (IPP) increased mainly due to:

- The recognition of gross profit from all 3 of GLOW's IPP plants (Q3/2018 GLOW was not yet acquired) which increased by Baht 1,056 million.
- The total revenue of Sriracha Power Plant increased by Baht 189 million after the planned maintenance shutdown during Q4/2018 resulting in the higher Availability Payment. In addition, the revenue from selling electricity has risen following the increase in dispatch volume to EGAT.











The gross profit of Independent Power Producer (IPP) increased from 2018 by Baht 5,384 million or 1,402% mainly due to:

• The recognition of gross profit from all 3 of GLOW's IPP plants (from 14 March 2019 or the first day of acquired GLOW) increased by Baht 5,177 million together with the gross profit of Sriracha Power Plant has increased by Baht 207 million as a result of Contracted Availability Hours is greater than 2018 despite the power sales volume decreased following the lower dispatch volume instructed by EGAT.

Key revenue drivers	Q4/18	Q3/19	Q4/19	Chang	ge +/(-)	2018	2019	Change +/(-)
				QoQ	YoY			
Availability Rate								
Availability Rate (%) - Sriracha Power Plant	40%	100%	90%	(10%)	50%	85%	97%	12%
Availability Rate (%) – GIPP	n/a	100%	100%	0%	n/a	n/a	100%	n/a
Availability Rate (%) - GHECO-One	n/a	98%	92%	(6%)	n/a	n/a	84%	n/a
Dispatch								
Dispatch (GWh)	74	1,690	1,495	(12%)	1,912%	1,150	5,772	402%
Average Selling Price								
Average Selling Price (Baht/kWh)	5.11	2.65	2.55	(4%)	(50%)	3.29	2.74	(17%)

#### Revenue

The revenue of Independent Power Producer (IPP) was at Baht 3,814 million in Q4/2019, which decreased by Baht 663 million or 15% from Q3/2019 and increased by Baht 3,434 million or 904% from Q4/2018 due to the following reasons:



The revenue of Independent Power Producer (IPP) decreased mainly due to:

- Revenue from Sriracha Power Plant decreased by Baht 111
  million mainly from scheduled maintenance shutdown
  approximately 10 days corresponding to the revenue from
  Availability Payment has decreased, together with the fell in
  Energy Payment (EP) due to lower dispatch instruction by
  EGAT.
- Revenue from GHECO-One Power Plant has decreased by Baht 525 million from the previous quarter due to reached the Contracted Availability Hours in the first half on December which impact the Availability Payment and Energy Payment decreased by Baht 257 million and Baht 268 million respectively as a result of lower power generation. In addition, the revenue from Glow IPP plant dropped by Baht 38 million following achieved the Contracted Availability Hours in December.



The revenue of Independent Power Producer (IPP) increased mainly due to:

- Revenue from selling electricity from GLOW's IPP plant increased by Baht 3,092 million as a result of the recognition of GLOW's performance (Q4/2018 GLOW was not yet acquired).
- Revenue from Sriracha Power Plant increased by Baht 259 million after the maintenance shutdown during Q4/2018 approximately 53 days. As a result, the revenue from Availability Payment has increased by Baht 161 million. In addition, the higher dispatch volume according to EGAT instruction resulting in the Energy Payment has increased by Baht 93 million and others income slightly increased by Baht 5 million.













The revenue of Independent Power Producer (IPP) increased by Baht 11,979 million or 316% from 2018 mainly due to:

- The recognition of revenue from selling electricity from GLOW's IPP plant according to GLOW was not yet acquired in 2018.
- The revenue from selling electricity from Sriracha Power Plant has decreased by Baht 253 million despite the Contracted Availability Hours in 2019 is greater than 2018 approximately 3,000 hours and the number of maintenance schedules lower than 2018 approximately 44 days which impacts the increase in Availability Payment by Baht 31 million while the appreciation of Thai Baht. Nevertheless, the Energy Payment has decreased by Baht 268 million corresponding to the lower dispatch volume to EGAT.

Key cost drivers	Q4/18	Q3/19	Q4/19	Chang	e +/(-)	2018	2019	Change +/(-)
				QoQ	YoY			
Natural Gas								
Natural Gas Consumption								
Natural Gas Consumption ('000 MMBTU) - Sriracha Power Plant	611	1,227	976	(20%)	59%	9,034	7,255	(20%)
Average Price of Natural Gas								
Average Price of Natural Gas (Baht/MMBTU) - Sriracha Power Plant	632	610	706	10%	(25%)	326	468	13%
Coal								
Coal Consumption (Ton/JPU)	n/a	507,119	445,782	(12%)	n/a	n/a	1,562,475	n/a
Average Coal Cost (exclude transportation cost) (USD/Ton JPU)	n/a	98.71	101.25	(3%)	n/a	n/a	100.04	n/a

#### Total Cost of Sales of Goods and Rendering of Services (exclude depreciation and amortization)

The total cost of sales of goods and rendering services of Independent Power Producer (IPP) in Q4/2019 was Baht 2,673 million, which decreased by Baht 91 million or 3% from Q3/2019 and increased by Baht 2,189 million or 452% from Q4/2018 due to the following reasons:



- The cost of natural gas decreased by Baht 59 million corresponding to EGAT's dispatch instruction from Sriracha Power Plant, causing natural gas cost to decrease corresponding to the lower volume. However, the maintenance cost has increased by Baht 114 million from scheduled maintenance shutdown.
- The cost of coal decreased by Baht 192 million as a result of the lower coal required for GHECO-One plant, corresponding to reached the Contracted Availability Hours in December as well as maintenance cost increased following the maintenance schedule.



- The cost of natural gas increased by Baht 302 million as a result of higher dispatch volume according to EGAT instruction resulting in natural gas consumption has increased by 59% corresponding to sales volume.
- The cost of coal increased by Baht 1,496 million as a result of the recognition from GHECO-One plant since acquired GLOW in 2019.



**Comparing 2019 vs 2018** 

The total cost of sales of goods and rendering services of Independent Power Producer (IPP) increased by Baht 6,594 million or 194% from 2018 mainly due to:

- The cost of coal increased by Baht 5,293 million mainly from recognizing coal from GHECO-One plant (GLOW was not yet acquired in 2018).
- The natural gas consumption from Sriracha Power Plant has decreased corresponding to lower dispatch instruction by EGAT together with the decrease in maintenance cost due to contract management.









# 2. SPP Operating Performance



Operating Performance	Q4/18	Q3/19	Q4/19	Chan	ge +/(-)	2018	2019	Change +/(-)
(Unit: Million Baht)				QoQ	YoY			
Revenue								
Revenue from Selling Electricity	3,299	10,534	10,238	(3%)	210%	12,771	35,627	179%
Revenue from Selling Steam	1,910	3,859	3,901	1%	104%	7,297	13,835	90%
Other Income	110	201	204	2%	86%	411	734	78%
Total Revenue	5,319	14,594	14,343	(2%)	169%	20,480	50,196	145%
Cost of Raw Materials								
Natural Gas	3,628	8,600	8,511	(1%)	135%	13,244	29,987	126%
Coal	n/a	918	665	(28%)	n/a	n/a	2,535	n/a
Others	170	247	221	(10%)	30%	799	882	10%
Total Cost of Raw Materials	3,798	9,765	9,397	(4%)	147%	14,043	33,404	138%
Maintenance cost	122	376	630	67%	415%	413	1,569	280%
Others (exclude depreciation and amortization)	115	795	848	7%	637%	430	2,713	528%
Total Cost of Sales of Goods and Rendering of Services	4,035	10,936	10,875	(1%)	169%	14,887	37,686	153%
Gross Profit	1,284	3,658	3,468	(5%)	170%	5,593	12,511	124%
Gross Profit Margin	24%	25%	24%	(1%)	0%	27%	25%	(2%)

#### **Gross Profit**

Gross profit of Small Power Producer (SPP) in Q4/2019 was Baht 3,468 million, which decreased from Q3/2019 by Baht 190 million or 5%, and increased from Q4/2018 by Baht 2,184 million or 170% due to the following reasons:



Gross profit of Small Power Producer (SPP) increased mainly from the following reasons:

- The gross profit from GPSC's SPP plants increased by Baht 70 million due to the increase in electricity sales volume of Rayong Central Utility Plant (CUP) corresponding to the increase in revenue from selling electricity since the industrial users returns to its normal operation after maintenance shutdown.
- The gross profit from GLOW's SPP plants decreased by Baht 260 million from Q3/2019 mainly due to the decreased in electricity and steam sales volume as well as maintenance cost has increase from Glow Energy Power plants following the scheduled maintenance shutdown during Q4/2018.



Gross profit of Small Power Producer (SPP) increased mainly from the following reasons:

- The recognition of gross profit from GLOW's SPP plants (Q4/2018 GLOW was not yet acquired) which caused gross profit to increased by Baht 2,081 million.
- The gross profit from GPSC's SPP plants increased by Baht 103 million which increased by Baht 92 million from Rayong Central Utility plant as a result of higher electricity and steam sales volume which impacts the higher in total revenue while the average natural gas price per unit decreased by 4%.













The gross profit of Small Power Producer (SPP) increased from 2018 by Baht 6,912 million or 124% mainly due to:

• The recognition of gross profit from GLOW's SPP plants (in 2018, GLOW was not yet acquired) which increased by Baht 7,127 million. Whereas, the gross profit of Rayong Central Utility plant decreased by Baht 215 million as a result of the cost of raw material is larger than the proportion of revenue resulting in an increase in natural gas cost following the higher power sales volume, together with the maintenance cost has increased from the maintenance shutdown of Gas Turbine Generator (GTG).

Key revenue drivers	Q4/18	Q3/19	Q4/19	Change +/(-)		2018	2019	Change +/(-)
				QoQ	YoY			
Power Sales Volume								
Sales Volume (GWh)	1,069	3,562	3,418	(1%)	220%	4,231	11,760	178%
Power Average Selling Price								
Weighted Average Selling Price (Baht/kWh)	3.09	2.96	2.99	1%	(3%)	3.02	3.03	0%
Steam Sales Volume								
Sales Volume (Thousand tons)	1,637	3,721	3,608	(3%)	120%	6,572	12,821	95%
Steam Average Selling Price								
Weighted Average Selling Price (Baht/ton)	1,167	1,037	1,081	4%	(7%)	1,110	1,079	(3%)

#### Revenue

Revenue from Small Power Producer (SPP) in Q4/2019 is Baht 14,343 million, which decreased from Q3/2019 by Baht 251 million or 2%, and increased from Q4/2018 by Baht 9,024 million or 169% due to the following reasons:



Total revenue of Small Power Producer (SPP) of the company decreased mainly due to:

- The recognition of revenue from electricity and steam sales of GPSC's SPP plants increased by Baht 91 million and Baht 94 million respectively, corresponding to the increased in sales volume due to the increase in demand from industrial users.
- The revenue from electricity and steam sales of GLOW's SPP plants decreased by Baht 388 million and decreased by Baht 52 million, respectively, mainly due to the decrease in electricity and steam sales volume from the maintenance shutdown during Q4/2019 from Glow Energy Power Plants.



Total revenue of Small Power Producer (SPP) of the company increased mainly due to:

- The recognition of revenue from electricity and steam sales of GLOW's SPP plants increased by Baht 8,834 million, as a result of being the recognition of revenue from GLOW (Q4/2018 GLOW was not yet acquired).
- The revenue from electricity and steam sales from Rayong Central Utility plant has increased by Baht 190 million as a result of the amount of sales volume to industrial users has increase while the average price of natural gas per unit which is the cost of production decreased by 4%.













Total revenue of Small Power Producer (SPP) of the company increased from 2018 by Baht 29,716 million or 145% mainly due to:

- The recognition of revenue from electricity and steam sales of GLOW's SPP plants increased by Baht 28,724 million (in 2018 GLOW was not yet acquired).
- The revenue from electricity and steam sales of GPSC's SPP plants increased by Baht 537 million and Baht 468 million, respectively, and others income decreased by Baht 13 million. This is due to the increase in electricity and steam sales volume.

Key cost drivers	Q4/18	Q3/19	Q4/19	Change +/(-)		2018	2019	Change +/(-)
				QoQ	YoY			
Natural Gas								
Natural Gas Consumption								
Natural Gas Consumption ('000 MMBTU)	12,468	31,110	30,610	(2%)	146%	49,345	106,845	117%
Average Price of Natural Gas								
Average Price of Natural Gas (Baht/MMBTU)	291	276	278	1%	(4%)	268	281	5%
Coal								
Coal Consumption (Ton JPU)	n/a	288,391	252,248	(13%)	n/a	n/a	847,465	n/a
Average Coal Cost (exclude transportation cost) (USD/Ton JPU)	n/a	95.34	79.13	(17%)	n/a	n/a	89.05	n/a

#### Total Cost of Sales of Goods and Rendering of Services (exclude depreciation and amortization)

Total cost of sales of goods and rendering of services (exclude depreciation and amortization) of Small Power Producer (SPP) in Q4/2019 was Baht 10,875 million, decreased from Q3/2019 by Baht 61 million or 1% and increased from Q4/2018 by Baht 6,840 million or 170% due to the following reasons:



Total cost of sales of goods and rendering of services of Small Power Producer (SPP) decreased mainly due to:

- Coal cost decreased by Baht 253 million due to the decreased in coal consumption by 13% as sales volume decrease. In addition, the cost of coal also decreased at an average of 16.21 USD/Ton JPU or 17%.
- Maintenance cost increased by Baht 254 million mainly due to the maintenance shutdown from Rayong Central Utility plant and Glow Energy Power Plants.
- The natural gas cost decreased by Baht 89 million due to the decreased in natural gas consumption by 2% corresponding to the average price of natural gas increased by 1% or was at 278 Baht/MMBTU in Q4/2019.



Total cost of sales of goods and rendering of services of Small Power Producer (SPP) increased mainly due to:

- Natural gas cost increased by Baht 4,883 million due to the increase in natural gas volume required as sales volume increased. In addition, coal cost increased by Baht 665 million due to the recognition of coal cost from GLOW (Q4/2018 GLOW was not yet acquired).
- Maintenance cost increased by Baht 508 million from Rayong Central Utility plant, there was a planned maintenance shutdown of Gas Turbine Generator (GTG). In addition, Glow Energy Power Plants has scheduled maintenance shutdown during Q4/2019.













Total cost of sales of goods and rendering of services of Small Power Producer (SPP) increased from 2018 by Baht 22,799 million or 153% mainly due to:

- Natural gas cost increased by Baht 16,743 million due to the increase in average natural gas price compared to 2018 and the recognition of natural
  gas cost from GLOW (in 2018, GLOW was not yet acquired).
- Coal cost increased by Baht 2,535 million due to the recognition of coal cost from GLOW.
- Maintenance cost increased by Baht 1,156 million which increased by Baht 51 million from Rayong Central Utility Plant and increased by Baht
  1,114 million from GLOW due to the full quarter recognition of maintenance cost from GLOW whereas the maintenance cost from IRPC-CP has
  decreased by Baht 9 million.



# 3. VSPP and Others Operating Performance



Operating Performance	Q4/18	Q3/19	Q4/19	Change +/(-)		2018	2019	Change +/(-)
(Unit: Million Baht)				QoQ	YoY			
Revenue								
Revenue from Selling Electricity	65	96	64	(34%)	(3%)	321	348	8%
Revenue from Selling Chilled Water	49	51	48	(7%)	(2%)	187	203	8%
Other income	50	8	11	25%	(79%)	101	46	(54%)
Total Revenue	164	156	122	(22%)	(26%)	610	597	(2%)
Cost of Raw Materials								
Natural gas and Others	57	28	17	(37%)	(69%)	150	111	(26%)
Total Cost of Raw Materials	57	28	17	(37%)	(69%)	150	111	(26%)
Maintenance cost	8	9	13	57%	64%	30	38	29%
Others (exclude depreciation and amortization)	15	15	18	25%	21%	52	65	25%
Total Cost of Sales of Goods and Rendering of Services	80	51	49	(4%)	(38%)	232	215	(7%)
Gross Profit	84	105	73	(31%)	(14%)	378	383	1%
Gross Profit Margin	51%	67%	60%	(8%)	8%	62%	64%	2%

Note: VSPP and others include Combine Heat and Power Producing Company Limited (CHPP), Ichinoseki Solar Power 1 GK (ISP1) and Refuse Derived Fuel Plant (RDF)

#### **Gross Profit**

The gross profit of Very Small Power Producer (VSPP) and others was Baht 73 million in Q3/2019, which decreased by Baht 32 million or 31% from Q3/2019 and decreased by Baht 11 million or 14% from Q4/2018 due to the following reasons:



Comparing **Q4/2019** vs **Q3/2019** 

The gross profit of Very Small Power Producer (VSPP) and others decreased mainly due to:

• The revenue from selling electricity of Ichinoseki Solar Power 1 GK (ISP1) decreased due to lower light intensity as a seasonality effect, as well as the increase in maintenance cost. In addition, the revenue from Combine Heat and Power Producing Company Limited (CHPP) has slightly decrease due to the demand of industrial users was lower from weather condition during Q4/2019.



The gross profit of Very Small Power Producer (VSPP) and others decreased mainly due to:

• Revenue decreased mainly from the lower revenue of solar cell implementation service from Combine Heat and Power Producing Company Limited (CHPP) as well as the slight fell in revenue from selling electricity from Ichinoseki Solar Power 1 GK (ISP) as a result the decrease in average selling price per unit decreased by 4% due to the appreciation of Thai Baht.













The gross profit of Very Small Power Producer (VSPP) and others increased by Baht 5 million or 1% from 2018, mainly due to:

The revenue from selling electricity from Ichinoseki Solar Power 1 GK (ISP1) increased from 2018 according to higher sales volume while the cost of rendering of services has increase from maintenance cost. However, the revenue from Power Producing Company Limited (CHPP) decreased from implementing solar installation service although the revenue from chilled water has increased by Baht 16 milli on corresponding to the increase in sales volume by 8%.

Key revenue drivers	Q4/18	Q3/19	Q4/19	Chang	e +/(-)	2018	2019	Change +/(-)
				QoQ	YoY			
Power								
Sales volume (GWh)	7	9	7	(25%)	0%	31	34	9%
Average selling price (Baht/kWh)	9.85	10.52	9.32	(11%)	(5%)	10.23	10.18	(1%)
Chilled water								
Sales volume (Thousand RT)	6,940	7,504	6,707	(11%)	(3%)	27,266	29,343	8%
Average selling price (Baht/RT)	7.04	6.85	7.12	4%	1%	6.88	6.92	1%

#### Revenue

The revenue of Very Small Power Producer (VSPP) and others was at Baht 122 million in Q4/2019, which decreased by Baht 34 million or 22% from Q3/2019 and decreased by Baht 42 million or 26% by Q4/2018 due to the following reason:



The revenue of Very Small Power Producer (VSPP) and others decreased mainly due to:

- The revenue from selling electricity from Ichinoseki Solar Power 1 GK (ISP1) decreased by Baht 35 million from Q3/2019 due to lower light intensity from the fourth quarter seasonality effect as well as higher snowfall during the period.
- The revenue from selling chilled water from Combine Heat and Power Producing Company Limited (CHPP) decreased by Baht 3 million mainly due to lower sales volume corresponding to the demand from industrial users. However, the others revenue has decreased by Baht 3 million.



The revenue of Very Small Power Producer (VSPP) and others decreased mainly due to:

- Revenue from solar cell installation service of Combine Heat and Power Producing Company Limited (CHPP) has decrease corresponding to the implementing scheme as the revenue will be recognized based on the stage of completion of the project and number of ongoing projects.
- However, the revenue from selling electricity from Ichinoseki Solar Power 1 GK (ISP1) decreased slightly by Baht 1 million compared to Q4/2018 as a result of the decreased in average selling price per unit due to currency translation while the power sales volume was slightly increase.



#### **Comparing 2019 vs 2018**

The revenue of Very Small Power Producer (VSPP) and others decreased by Baht 13 million or 2% from 2018 mainly due to:

- The revenue from selling electricity from Combine Heat and Power Producing Company Limited (CHPP) and Ichinoseki Solar Power 1 GK (ISP1) have increased by Baht 7 million together with the recognizing the incremental revenue by Baht 20 million from Claim R evenue Loss of Ichinoseki Solar Power 1 GK (ISP1)
- The revenue from solar cell installation from Combine Heat and Power Producing Company Limited (CHPP) has decreased by Baht 55 million corresponding to the implementing projects while the revenue from selling chilled water has increased by Baht 16 million following the higher sales volume.











#### Total Cost of Sales of Goods and Rendering of Services (exclude depreciation and amortization)

The cost of sales of goods and rendering of services of Very Small Power Producer (VSPP) and others was Baht 49 million, which decreased by Baht 2 million or 4% from Q3/2019 and decreased by Baht 31 million or 38% from Q4/2018 due to the following reasons:



The total cost of sales of goods and rendering of services of Very Small Power Producer (VSPP) and others decreased mainly due to:

 The total cost of rendering of services from Combine Heat and Power Producing Company Limited (CHPP) decreased by Baht 12 million due to the revision of operating cost from the completed project in solar cell installation service.



The total cost of sales of goods and rendering of services of Very Small Power Producer (VSPP) and others decreased mainly due to:

 The cost of raw materials and other costs of Combine Heat and Power Producing Company Limited (CHPP) has decreased corresponding to the number of existing projects while the maintenance cost increased by Baht 8 million from Ichinoseki Solar Power 1 GK (ISP1)



The total cost of sales of goods and rendering of services of Very Small Power Producer (VSPP) and others decreased by Baht 17 million or 7% from 2018 mainly due to:

The cost of raw materials and maintenance cost decreased corresponding to the number of ongoing solar cell installation projects of Combine Heat
and Power Producing Company Limited (CHPP) while the maintenance cost of Ichinoseki Solar Power 1 GK (ISP1) increased.











Other Expenses	Q4/18	Q3/19	Q4/19	Chang	ge +/(-)	2018	2019	Change +/(-)
(Unit: Million Baht)				QoQ	YoY			
Selling and Administrative Expenses	297	425	489	15%	65%	909	1,896	109%
Depreciation and Amortization	469	2,110	2,163	3%	361%	1,802	7,207	300%
Finance Costs	136	1,960	1,197	(39%)	780%	514	5,140	900%
Income Tax Expense	(8)	129	43	(67%)	637%	243	247	2%
Net Foreign Exchange Losses (Gain)	3	(17)	(111)	554%	n/a	15	(317)	n/a
<b>Total Other Expenses</b>	897	4,607	3,781	(18%)	321%	3,483	14,173	307%

Other expenses in Q4/2019 was at Baht 3,781 million, which decreased by Baht 826 million or 18% from Q3/2019 and increased by Baht 2,884 million or 321% from Q4/2018. Details are as follows:



- Selling and Administrative Expenses: Selling and Administrative expenses was at Baht 489 million in Q4/2019, which increased by Baht 14 million or 15% compare to Q3/2019. This increase was mainly due to increase in consulting fees and business development expenses.
- **Depreciation and Amortization:** Depreciation and Amortization costs was Baht 2,163 million in Q4/2019, which increased by Baht 53 million or 2% from Q3/2019 as a result of the recognition of depreciation expense from Rayong Central Utility Plant 4 (CUP-4) which is commenced the Commercial Operation Date (COD) in Q3/2019.
- Finance Costs: Finance costs was at Baht 1,197 million in Q4/2019, which decreased by Baht 763 million or 39% from Q3/2019 mainly due to the decrease in short term loan interest, interest on loans from related parties and the fees for acquiring the loans used to acquire GLOW, corresponding to the revision of the short-term loan repayment plan which received from the Rights Offering of Baht 74,000 million and debenture issuance of Baht 35,000 million in Q4/2019.



- Selling and Administrative Expenses: Selling and Administrative expenses was Baht 489 million in Q4/2019, which increased by Baht 192 million or 65% from Q4/2018. This increase was mainly due to recognition of selling and administrative expenses from GLOW (Q4/2018 did not acquire glow yet) which increased by Baht 152 million, together with the increase in selling and administrative expenses of the company excluding GLOW by Baht 40 million, mainly from consulting fees and business development expenses.
- Depreciation and Amortization: Depreciation and Amortization costs was at Baht 2,163 million in Q4/2019, which increased by Baht 1,694 million or 361% from Q4/2018 mainly due to the depreciation and amortization of GLOW of Baht 1,130 million (Q4/2018 did not acquire GLOW yet), together with the Baht 564 million increase in depreciation of the company excluding GLOW, mainly due to the amortization of fair value of intangible assets used to acquire GLOW of Baht 487 million and the recognition of depreciation from Central Utility Plant 4 (CUP-4) which is commenced the Commercial Operation Date (COD) in Q3/2019.
- Finance Costs: Finance costs was at Baht 1,197 million in Q4/2019, which increased by Baht 1,061 million or 780% from Q4/2018. The increase mainly due to the recognition of finance costs from GLOW of Baht 539 million (Q4/2018 did not acquire GLOW yet), together with the Baht 522 million increase in finance costs of the company excluding GLOW, mainly due to the increase in interest on short term loan, interest on loans from related parties and fees for acquiring the loans used to acquire GLOW.









- Income Tax Expenses: Income tax expenses was at Baht 43 million in Q4/2019, which decreased by Baht 86 million or 67% from Q3/2019 as a result of the decrease in GLOW's income tax by Baht 81 million due to the decease to recognized GLOW's performance, together with the Baht 5 million decrease in reduction of income tax excluding GLOW due to income tax from Ichinoseki solar power plant (ISP-1) decreased by Baht 10 million according to the decrease of electricity sales revenue.
- Net Foreign Exchange Gain: Net foreign exchange gain was at Baht 111 million in Q4/2019 which increased by Baht 94 million or 554% from Q3/2019 mainly due to the recognition of net foreign exchange gain by Baht 94 million as a result of the appreciation of Thai Baht against US Dollar, causing a change in GLOW's US Dollar loan value.
- Income Tax Expenses: Income tax expenses was Baht 43 million in Q4/2019, which increased by Baht 51 million or 637% from Q4/2018, mainly due to the recognition of income tax from GLOW (Q4/2018 did not acquire GLOW yet) together with the Baht 17 million decrease in income tax excluding GLOW due to the recognition of interest expenses and the fees for acquiring GLOW.
- Net Foreign Exchange Gain: Net foreign exchange gain was at Baht 111 million in Q4/2019 which increased by Baht 114 million from Q4/2018 mainly due to the recognition of net foreign exchange gains from GLOW of Baht 110 million (Q4/2018 did not acquire GLOW yet).



#### **Comparing 2019 vs 2018**

Other expenses increased by Baht 10,690 million or 307% from 2018 mainly due to the recognition of other expenses from the acquisition of GLOW since 14th March 2019. Details are as follows:

- Selling and Administrative Expenses: Selling and Administrative expenses was Baht 1,896 million in 2019, which increased by Baht 987 million or 109% from 2018. This increase was mainly due to the recognition of selling and administrative expenses of GLOW (2018 did not acquire GLOW yet), which increased by Baht 737 million, together with the Baht 250 million increase in administrative expenses of the company excluding GLOW, as a result of the consulting fees for business development and management fees for support the business growth.
- Depreciation and Amortization: Depreciation and Amortization costs was at Baht 7,207 million in 2019, which increased by Baht 5,405 million or 300% from 2018. The increase was mainly due to the recognition of depreciation and amortization of GLOW of Baht 3,637 million (2018 did not acquire GLOW yet) and depreciation and amortization costs of the company, excluding GLOW, increased by Baht 1,768 million, mainly due to the amortization of the fair value of intangible assets arising from the acquisition of GLOW of Baht 1,555 million and the recognition of depreciation of Rayong Central Utility Plant 4 (CUP-4) which has commenced the Commercial Operation Date (COD) in Q3/2019.
- Finance Costs: Finance costs was at Baht 5,140 million in 2019, which increased by Baht 4,626 million or 900% from 2018 mainly due to the recognition of GLOW's finance costs of Baht 1,807 million (2018 did not acquire GLOW yet) and finance cost of the company, excluding GLOW increased by Baht 2,819 million, mainly from the increase in short term loan interest, interest on loans from related parties and financing fee on loan used to acquire GLOW.
- Income Tax Expenses: Income tax expenses was Baht 247 million in 2019, which slightly increased by Baht 4 million or 2% from 2018, resulting mainly from the recognition of income tax from GLOW of Baht 308 million (2018 did not acquire GLOW yet) together with the Baht 333 million decrease in income tax expenses mainly due to the recognition of interest expenses and the fees for acquiring GLOW and the increase in income tax from Ichinoseki solar power plant (ISP-1) by Baht 29 million due to the revision of corporate income tax in 2019.
- Net Foreign Exchange Gain: Net foreign exchange gain was Baht 317 million in 2019 which increased by Baht 332 million from 2018 mainly due to the recognition of net foreign exchange gains from GLOW (2018 did not acquire GLOW yet) of Baht 341 million mainly from the appreciation of Thai Baht against US Dollars while GLOW had liabilities in US Dollar. Net Foreign exchange losses of the company, excluding GLOW, increased by Baht 9 million from 2018 as a result of the appreciation of Thai Baht against US Dollars and the company had assets in Euro currency.











# **Shares of Profit of Associates and Joint Ventures**

Shares of Profit of Associates and Joint Ventures	% of shareholding	Q4/18	Q3/19	Q4/19	Chan	ge +/(-)	2018	2019	Change +/(-)
(Million Baht)					QoQ	YoY			
Independent Power Producer (IPP)									
Xayaburi Power Company Limited (XPCL)	25%	(6)	(9)	287	3,289%	4,883%	(25)	262	1,150%
Small Power Producer (SPP)									
Bangpa-in Cogeneration Company Limited (BIC)	25%	34	33	30	(9%)	(12%)	145	117	(19%)
Nava Nakorn Electricity Generating Company Limited (NNEG)	30%	28	29	22	(26%)	(23%)	112	43	(61%)
Nam Lik 1 Power Company Limited (NL1PC)	40%	19	17	17	(1%)	(12%)	54	65	20%
Total Small Power Producer		81	79	68	(14%)	(16%)	311	225	(28%)
Very Small Power Plant (VSPP)									
Thai Solar Renewable Company Limited (TSR)	40%	82	70	99	41%	20%	299	345	15%
Eastern Seaboard Clean Energy Company Limited	33%	n/a	(3)	9	(395%)	(145%)	n/a	5	n/a
Total shares of profit of associates and joint ventures		157	137	463	238%	195%	585	837	43%

Shares of profit of associates and joint ventures in Q4/2019 was at Baht 463 million, which increased by Baht 326 million or 238% from Q3/2019 and increased by Baht 306 million or 195% from Q4/2018. In addition, the shares of profit of associates and joint ventures increased by Baht 252 million or 43% from 2018 due to the following reasons:



#### XAYABURI POWER

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Company Power Limited

(XPCL): Shares of profit from XPCL increased by Baht 296 million from Q3/2019 and when comparing to Q4/2018, shares of profit also increased by Baht 293 million resulting from unrealized FX gain of project cost since the project has commenced the Commercial Operation Date (COD) on 29th October, 2019.



#### Bangpa-In Cogeneration Company Limited (BIC):

Shares of profit from BIC decreased by Baht 3 million from Q3/2019 and decreased by Baht 4 million due to the planned maintenance shutdown when compare to Q4/2018.



Nava Nakorn Electricity Generating Company

Limited (NNEG): Shares of profit from NNEG decreased by Baht 7 million from Q3/2019 and decreased by Baht 6 million when comparing to Q4/2018 as a result of planned maintenance shutdown approximately 15 days.



Nam Lik 1 Power Company Limited (NL1PC):

Shares of profit from Nam Lik 1 (NL1PC) decreased slightly by Baht 0.2 million from Q3/2019 and decreased by Baht 2 million from Q4/2018 due to an adjustment of revenue from accounting standards.

Thai Solar Renewable Company Limited (TSR): Shares of profit from Thai Solar Renewable Company Limited (TSR) increased by Baht 29 million from Q3/2019 and increased by Baht 17 million when compared to Q4/2018 due to the higher light intensity.



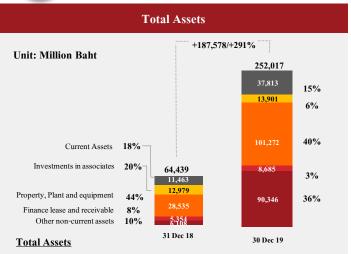






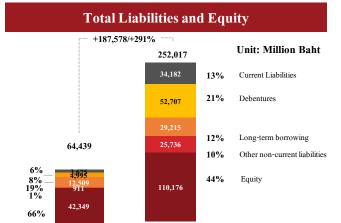


# Summary of Financial Position of the Company and its Subsidiaries



As of 31 December 2019, the total assets of the company and its subsidiaries were at Baht 252,017 million, increased by Baht 187,578 million or 291% from 31 December 2018. The gain resulted mainly from the acquisition of GLOW on 14 March 2019 and the details of significant changes are as follows:

- Current assets: increased by Baht 26,350 million or 230% mainly due to increased from cash and cash equivalent by Baht 13,179 million (Increased from GLOW by Baht 16,005 million and company's subsidiary by Baht 303 million), account receivable increased by Baht 6,098 million and increased by Baht 6,097 million from inventory.
- Property, plant and equipment: increased by Baht 72,737 million or 255% due to the increase of book value in property, plant and equipment of GLOW amounting to Baht 68,519 million and recording the fair value of property, plant and equipment from the purchase of GLOW amounting to Baht 3,599 million.
- Finance lease and receivable net: increased by Baht 3,331 million or 62% in which GLOW financial lease and receivable increased by Baht 2,979 million and the recording the fair value of financial lease from the acquisition of GLOW Baht 991 million.
- Other non-current assets increased by Baht 84,238 million or 1,379% mainly due to the increase of goodwill from the acquisition of GLOW in the amount of Baht 36,090 million and the intangible assets for the right in the Power Purchase Agreement from the acquisition of GLOW in the amount of Baht 43,781 million.



As of 31 December 2019, total liabilities of the company and its subsidiaries were Baht 141,841 million, increased by Baht 119,751 million or 542% from 31 December 2018. This significant changes are as follows:

31 Dec 19

31 Dec 18

**Total Liabilities** 

- Current liabilities increased by Baht 30,507 million or 830% mainly from an increase in short-term loan by Baht 24,166 million, increased from account payable of Baht 5,239 million and increased by baht 1,606 million from Current portion of long-term borrowing from financial institution.
- Long-term borrowing and debentures increased by Baht 64,418 million from debenture issuance of Baht 35,000 million, GLOW's longterm borrowing and debenture of Baht 28,873 million and recording the fair value of long-term borrowing and debenture from GLOW acquisition of Baht 498 million.
- Other non-current liabilities increased by Baht 24,826 million in which GLOW's other non-current liabilities contributes to Baht 14,212 million and the increase in deferred tax liabilities of Baht 8,801 million from recording the fair value of net asset from the acquisition of GLOW.

#### **Total Equity**

As of 31 December 2019, the total shareholder's equity of the company and its subsidiaries was at Baht 110,176 million, which increased by Baht 67,827 million from company's paid up capital of Baht 74,000 million, legal reserve increased by Baht 639 million and unappropriated retained earning increased by Baht 1,496 million, the change in non-controlling interest of Baht 6,926 million and the difference from the change of investment portion in subsidiary of Baht 14,992 million.

#### **Total Interest-Bearing Debt**



#### **Debt Profile**

As of 31 December 2019, the company and its subsidiaries has total interest-bearing debt of Baht 106,088 million which comprised of current liabilities amounting to Baht 27,564 million or 26% and non-current liabilities amounting to Baht 78,524 million or 74%.





Cash Flow	2019
(unit : Million Baht)	
Net cash flow from operating activities	17,353
Net cash used in investing activities	(81,182)
Net cash flow from financing activities	77,931
Net cash and cash equivalent (before exchange rate effect)	14,102
Effect of exchange rate to cash and cash equivalent	(40)
Net increase in cash and cash equivalents (after taken into account exchange rate)	14,062
Cash and cash equivalents at the beginning of the period*	6,009
Cash and cash equivalents at the end of the period*	20,071

<sup>\*</sup>Included restricted cash and temporary investment

For 2019, the company and its subsidiaries has a net increase in cash and cash equivalents increased by Baht 14,062 million from 2018. Details are as follow.



### **Cash Flow from Operating Activities**

For 2019, the company and its subsidiaries had net cash inflow from operating activities of Baht 17,353 million, which increased from cash received from operating activities for Baht 18,432 million net with the corporate income tax payments of Baht 1,079 million.



### **Cash Flow from Financing Activities**

For 2019, the company and its subsidiaries had net cash received from financing activities of Baht 77,931 million, which cash received is mainly from the short-term loans from financial institutions and debentures issuance of Baht 52,627 million and cash to pay for bridge financing and capital increased of Baht 990 million, cash received from Rights Offering of Baht 74,000 million, and cash to repay noncontrolling interests Baht 40,806 million, cash to pay interest of Baht 4,270 million and cash to pay dividend of Baht 2,630 million.



### **Cash Flow from Investing Activities**

Investment	2019
(unit : Million Baht)	
CAPEX and Fixed Asset	(3,169)
Cash Paid for Investments in Associates and Subsidiaries	(79,072)
Dividend and Others	1,059

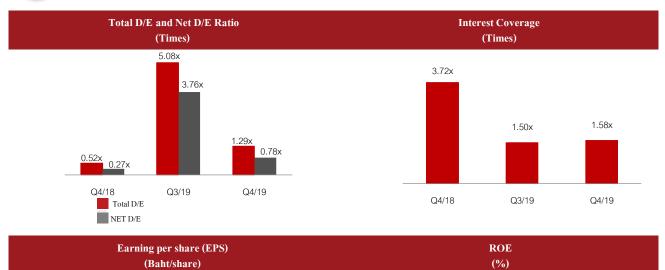
For 2019, the company and its subsidiaries had total net cash to be used in investment activities of Baht 81,182 million as a result of construction payment made by the company and its subsidiaries of Baht 3,169 million and the company also paid Baht 79,072 million for investing in its associates and subsidiaries. On the other hand, the company had received dividend and others of Baht 1,059 million.

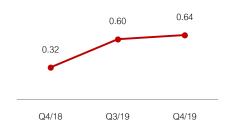


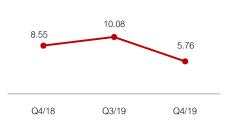


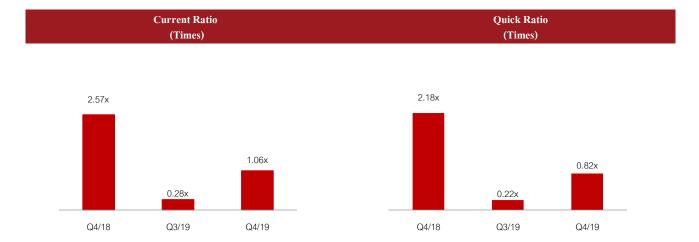












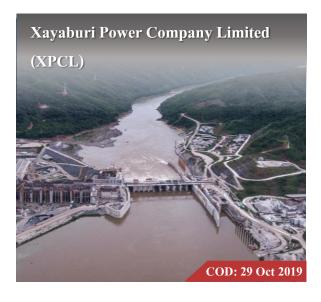






# Project Update

# **Update of Projects Under Construction**





Xayaburi Power Company Limited (XPCL) is a Run-of-River Hydropower Plant located on Khong River, in Lao PDR

#### **Project summary**

- Capacity: Electricity 1,285 Megawatts
- Customers: Power Purchase Agreement (PPA) with EGAT 1,220 Megawatts and Electricite Du Laos (EDL) 60 Megawatts (The total contract period is 31 years from the year of COD)
- GPSC holds: 25% of total shares
- Project updates: The project has commenced the Commercial Operation Date (COD) on 29 October 2019.





Rayong Central Utility Plant 4 (CUP-4) is a gas-fired cogeneration power plant located in Asia Industrial Estate, Rayong Province

#### **Project summary**

- Capacity: Electricity 45 Megawatts Stream 70 Tons per hour
- Customers: Industrial users in Asia Industrial Estate and neighboring industrial estate
- GPSC's operating asset: 100% of total shares
- Project updates: The project has commenced the Commercial Operation Date (COD) on 12 September 2019.









Project Update

# **Update of Projects Under Construction**





Chonburi Clean Energy (CCE) is joint venture of WHA Utilities and Power (WHAUP), Glow Energy (a subsidiary of GPSC) and SUEZ which is the advanced waste-to-energy power plant at WHA Chonburi Industrial Estate 1 in Chonburi province.

#### **Project summary**

Total Capacity: Electricity 8.63 Megawatts

RDF 400 Tons per day

Customers: Provincial Electricity Authority (PEA)

GLOW holds: 33% of total shares

Project updates: The project has commenced the Commercial Operation Date (COD) on 7 November 2019.

# Rayong Waste to Energy (WTE)





Rayong Waste to Energy (WTE) project consists of two main sub-projects including the RDF Project (construction completed) and RDF Power Plant Project (which is in the construction process) - where both projects are situated in the Rayong Province.

#### **Project summary**

Total Capacity of WTE: Electricity 9.8 Megawatts

RDF 300 Tons per day

Customers: Provincial Electricity Authority (PEA)

GPSC holds: 100% of total shares

Project updates: The RDF Project construction has been completed since 2018 while the RDF Power Plant Project construction began on 1st April 2019. Presently, the progress of the project has reached 36.8% and on scheduled.





**4Q19** 





## Project Update

SCOD: Q3/2020

# **Update of Projects Under Construction**



Nava Nakorn Electricity Generating

Nava Nakorn Electricity Generating

Company Limited (NNEG) is a gas-fired SPP cogeneration located in Nava Nakorn Industrial Promotion Zone, Pathumthani Province. NNEG is expanding its capacity further by 60 Megawatts and 10 Tons per hour of steam to serve the increasing demand from industrial users

Project summary

\* Total Capacity of NNEG: Electricity 185 Megawatts

Steam 40 Tons per hour

\* Customers: EGAT (SPP Firm for 90 Megawatts for 25 years) and industrial users in Nava Nakorn Industrial Promotion Zone

• GPSC holding: 30% of total shares

 Project updates: At the end of December 2019, the project progress has reached 85.7%. In which the engineering design, construction and procurement of main machinery and equipment are on schedule.





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, Sri Racha District, Chon Buri Province

#### **Project summary**

Total Capacity of ERU: Electricity 250 Megawatts

Steam 175 Tons per hour

Other by products such as Sulfuric acid, Condensate

Water

 Customers: CFP Project – Thai Oil (200 Megawatts Electricity and 175 Tons per hour Steam for 25 years counting from Closing Date)

• GPSC holds: 100% of total shares

Project updates: At the end of December 2019

Engineering design work: P&ID Review, HAZOP / SIL

 Construction work: Site preparation work, demolishing old equipment and temporary Fence

Purchasing machinery and equipment: Bid Evaluation / PO / P & ID

Can proceed as planned









# **Appendix**



# Plan of the company, its subsidiaries, associates and joint venture

									Commercial
Power plant	Fuel Type	Location	Installed Power capacity (MW)	Equity Power capacity (MW)	Equity in operation (MW)	Steam equity capacity (t/h)	Customers	Direct shareholding	Operation  Date (COD)
Independent Power Produce	er (IPP)								(002)
Houay Ho	Hydro	Attapeu Province, Lao PDR.	152	102	102	-	EGAT/EDL	GLOW (67%)	1999
Sriracha	Natural gas	Sriracha	700	700	700	-	EGAT	GPSC (100%)	2000
GIPP	Natural gas	WHA Chonburi Industrial Estate		677	677	-	EGAT	GLOW (95%)	2003
RPCL	Natural gas	Ratchaburi	1,400	210	210	-	EGAT	GPSC (15%)	2008
GHECO-One	Coal	Map Ta Phut Industrial Estate	660	429	429	-	EGAT	GLOW (65%)	2012
XPCL	Hydro	Loas	1,285	321	-	-	EGAT/EDL	GPSC (25%)	2019
Total capacity of IPP			4,910	2,439	2,118				
Small Power Producer (SPP	')								
GLOW Energy Phase 1	Natural gas	Map ta phut Industrial Estate	-	-	-	250	IU	GLOW (100%)	1994
GLOW Energy Phase 2	Natural gas	Map ta phut Industrial Estate	281	281	281	300	EGAT/IU	GLOW (100%)	1996
GLOW Energy Phase 4	Natural gas	Map ta phut Industrial Estate	77	77	77	137	EGAT/IU	GLOW (100%)	2005
GLOW Energy Phase 5	Natural gas	Map ta phut Industrial Estate	328	328	328	160	EGAT/IU	GLOW (100%)	2011
GLOW SPP 2 / GLOW SPP 3	Coal and natural gas	Map ta phut Industrial Estate	513	513	513	190	EGAT/IU	GLOW (100%)	1999
GLOW SPP 11 Phase 1	Natural gas	Siam Eastern Industrial Park	120	120	120	-	EGAT/IU	GLOW (100%)	2000
GLOW SPP 11 Phase 3	Natural gas	Siam Eastern Industrial Park	42	42	42	-	EGAT/IU	GLOW (100%)	2006
GLOW SPP 11 Phase 2	Natural gas	Siam Eastern Industrial Park	110	110	110	-	EGAT/IU	GLOW (100%)	2012
CUP-1	Natural gas	Hemaraj eastern industrial estate	776	226	226	890	EGAT/IU	GPSC (100%)	2006
CUP-2	Natural gas	Rayong industrial land	113	113	113	170	EGAT/IU	GPSC (100%)	2008
CUP-3	Natural gas	Hemaraj eastern industrial estate	-	-	-	280	IU	GPSC (100%)	2009
GLOW Energy CFB 3	Coal	Map ta phut Industrial Estate	85	85	85	79	-	GLOW (100%)	2010
BIC-1	Natural gas	Bangpa-in industrial estate	117	29.25	29.25	5	EGAT/IU	GPSC (25%)	2013
BIC-2	Natural gas	Bangpa-in industrial estate	117	29.25	29.25	5	EGAT/IU	GPSC (25%)	2017
IRPC-CP Phase 1	Natural gas	IRPC industrial Zone	45	23	23	86.7	EGAT/IU	GPSC (51%)	2015









# **Appendix**

							_		
Power plant	Fuel Type	Location	Installed Power capacity (MW)	Equity Power capacity (MW)	Equity in oepration (MW)	Steam equity capacity (t/h)	Customers	Company	Commercial Operation Date (COD)
IRPC-CP Phase 2	Natural gas	IRPC industrial Zone	195	99.4	99.4	66.3	EGAT/IU	GPSC (51%)	2017
NNEG	Natural gas	Nava Nakorn industrial promotion Zone	125	38	38	9	EGAT/IU	GPSC (30%)	2016/ 2020
NNEG Expansion	Natural gas	Nava Nakorn industrial promotion Zone	60	18	-	3	IU	GPSC (30%)	2020
Rayong Expansion (CUP-3)	Natural gas	Hemaraj eastern industrial estate	15	15	-	-	IU	GPSC (100%)	2019
Rayong Expansion (CUP-4)	Natural gas	Hemaraj eastern industrial estate	45	45	-	70	IU	GPSC (100%)	2019
Total capacity of SPP			2,614	2,192	2,114	2,701			
Very Small Power Producer	· (VSPP)								
СНРР	Natural gas	Government complex	5	5	5	-	MEA/ Government complex	GPSC (100%)	2008
CHPP (Solar)	Solar	Chanthaburi	5	5	5	-	PEA	GPSC (100%)	2016
Glow Energy Solar Plant	Solar	Asia Industrial Estate	1.55	1.55	1.55	-	EGAT	GLOW (100%)	2012
TSR (SSE1)	Solar	Suphanburi and Kanjanaburi	80	32	32	-	PEA	GPSC (40%)	2013
GLOW Energy Solar PV Rooftop	Solar	Hemaraj Saraburi Industrial Estate	0.87	0.87	0.87	-	IU	GLOW (100%)	2018
GLOW Energy Solar PV Rooftop	Solar	Amata Rayong Industrial Estate	1.00	1.00	1.00	-	IU	GLOW (100%)	2019
ISP1	Solar	Japan	20.8	20.59	20.59	-	IU	GPSC (99%)	2017
Solar Project	Solar	Phichit, Suphan Buri, Lopburi, Khon Kaen	39.5	39.5	-	-	PEA	GPSC (100%)	2014-2015
NL1PC	Hydro	Laos	65	26	26	-	EDL	GPSC (40%)	2019
Chonburi Clean Energy (CCE)	Industrial waste	Hemaraj Chonburi Industrial Estate	8.6	2.87	2.87	-	PEA/ IU	GLOW (33%)	2019
Rayong WTE	RDF	Rayong	9.8	9.8	-	-	PEA	GPSC (100%)	2021
Total capacity of VSPP			237	145	95	-			
Others									
ERU	Petroleum Pitch	Chonburi	250	250	-	175	Thai Oil PLC	GPSC (100%)	2023
Total capacity of Others			250	250	-	175			
Total			8,011	5,026	4,708	2,876			

Note:

IU : Industrial User

EGAT : Electricity Generating Authority of Thailand MEA : Metropolitan Electricity Authority

PEA: Provincial Electricity Authority

EDL : Electricite du Laos











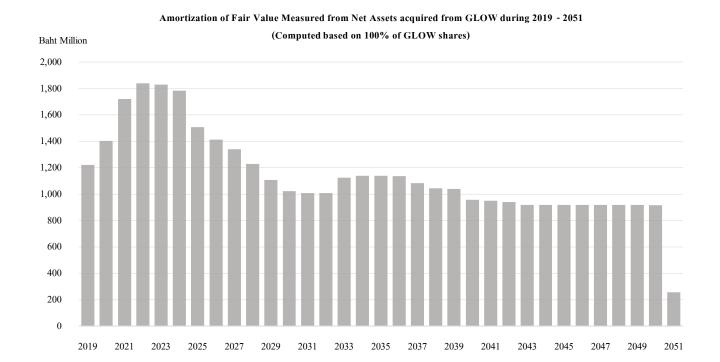


# Fair Value Measurement of Net Assets from the Acquisition of GLOW

As accounting standard established that after any business acquisition, the fair value of the company being acquired must be measured by using comparable present market value, GPSC has completed the process. When compared to business acquisition of 69.11% from ENGIE Global Developments B.V. on 14 March 2019 at Baht 93,001 million, the company has measured the fair value of GLOW net assets as follow:

Items	Book Value of GLOW	Fair Value of GLOW	Differential Value
(Unit: Million Baht)			
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	

From the fair value measured in the table, the majority portion is derived from valuing the Power Purchase Agreement (PPA) of Baht 37,594 million. The fair value recognition of net assets acquired from GLOW will be amortized yearly. The amortization of PPA will be completed based on the remaining period of the contract that appeared in intangible assets by using straight-line method with estimated useful life of 5 to 31 years.



Note: For 2019, the company has amortized this fair value measured from net assets acquired in proportionate holding on GLOW's shares

