



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 Eco Innovation Forum 2019
- The Certification of Green Meetings from 'Business Council for Sustainable and Environment Institute Foundation'

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



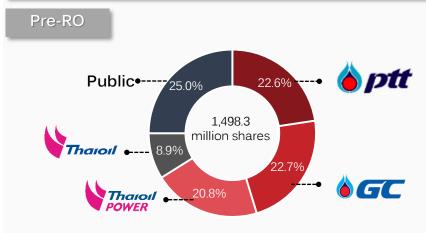
CPSC WTE is expected to COD in 2021



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

GPSC Innovative Power Company at a Glance

Shareholding Structure



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

Company Information

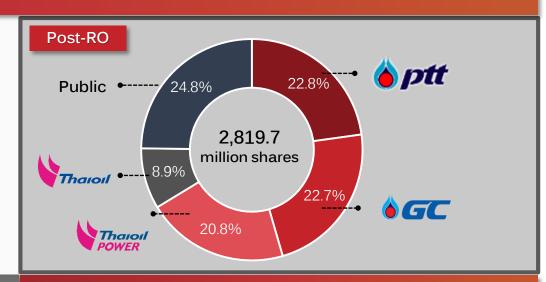
Head Office	555/2 Energy Complex Building B, 5th Floor, Vibhvadi-Rangsit Road, Chatuchak, Bangkok, Thailand				
Business Type	Energy & Utilities				
Registered Capital (Paid-up)	THB 28,197 million				
Market Cap (As of 13 Nov 2019)	THB 236,152.33 million				





STANDARD &POOR'S





In 2019, Total Equity Capacity¹

Electricity 5,026 MWe





Steam 2,876 T/H

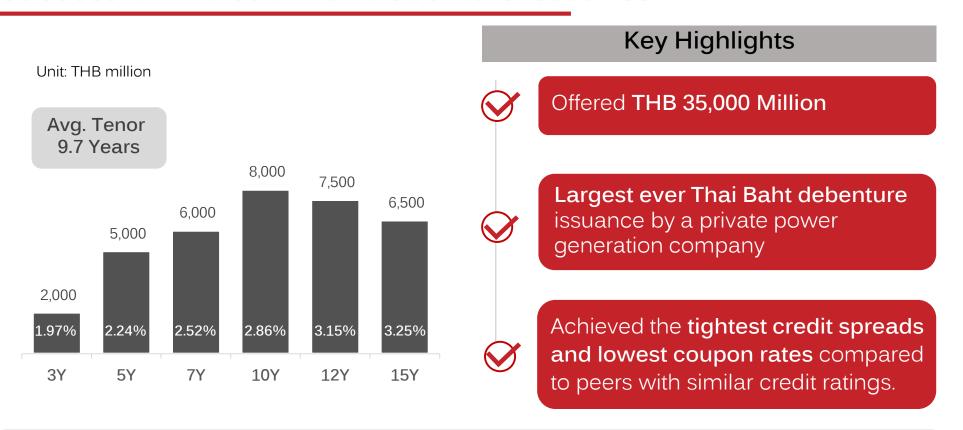




Note: 1) Equity capacity includes 100% stake in GLOW, GRP and ERU

2) Equity capacity includes ERU

Successful THB 35 Billion Debenture Issuance



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



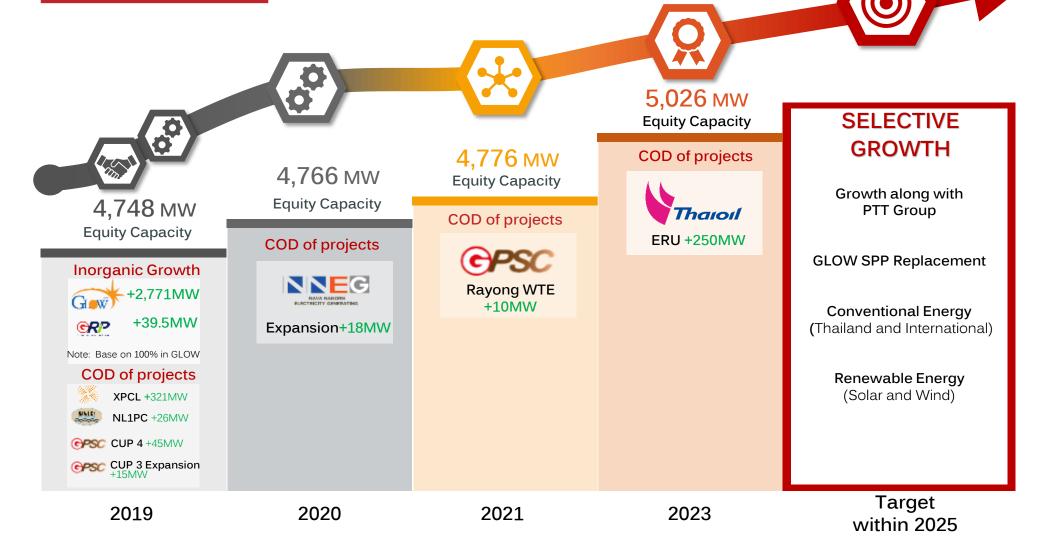
Financial Activities and Plans



Financial Performance

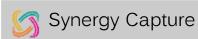


GPSC Electricity Growth Pipeline



Strategic Direction and Growth Strategy 3 Pillars





Operation Excellence & Asset Optimization

Corporate & Business Infrastructure

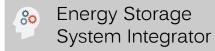




Domestic and International

7 Renewable









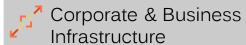
S-CURVE

Strategic Direction and Growth Strategy Synergy & Integration









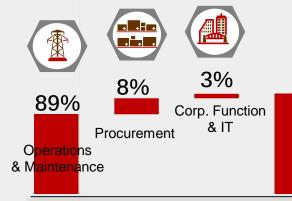
Synergy and Integration Implementation



Working as one team to deliver synergy



Recurring EBITDA synergy value based on current portfolio



THB+1.6 bn per year

Ramp up with full EBITDA¹ contribution by 2024 THB - 4.0 bn

One-time
initial investment

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.



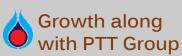
Strategic Direction and Growth Strategy Selective Growth

Sustainability Strategy & Commitment



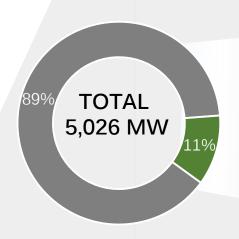
- To be listed in DJSI by 2022
- Increasing renewable energy up to 20% of GPSC's portfolio



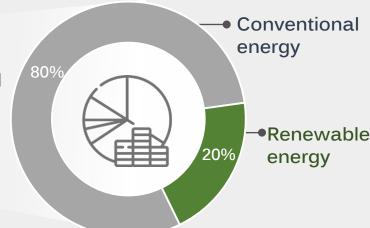


Domestic and International

Renewable



Way forward to Sustainable growth



Committed Equity Capacity 2019-2023



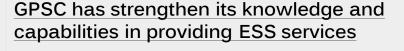
Seeking more international growth opportunities



Strategic Direction and Growth Strategy



S-CURVE





EXPLORE NEW S-CURVE BUSINESS FROM ESS

2019 Onwards





GPSC AS A SYSTEM

INTEGRATOR



SEEKING NEW MARKET AND **CUSTOMERS THROUGH PILOT PROJECTS**

2019





Developer in Micro-grid/ESS



Battery



Market and Technology Intelligence în Digital Energy





(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









Complete Contructing





Battery Business

Energy Storage System Integrator







GPSC Growth and Strategic Direction



Update of projects



Financial Activities and Plans

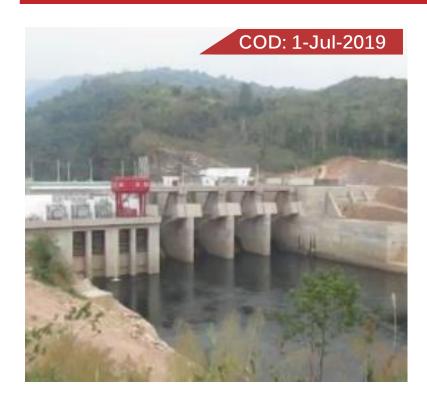


Financial Performance



Nam Lik 1 Power Company Limited (NL1PC)





PROJECT SUMMARY

TYPE

ELECTRICITY (MW)



Run-of-River Hydropower Plant 64.7

LOCATION

CUSTOMER

Northern of Vientiane, Lao PDR







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

GPSC holds

PROJECT UPDATE

40%

Of total share

• Overall construction and commissioning test was completed.



Xayaburi Power Company Limited (XPCL)





PROJECT SUMMARY

TYPE

ELECTRICITY (MW)





1,285

LOCATION

CUSTOMER

Lao PDR





PROJECT UPDATE

EGAT (1,220 MW)



Electricite Du Laos (EDL) (60 MW)

GPSC holds

• The

25% Of total share 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 PSC: CUP4 (THAILAND)



PROJECT SUMMARY

TYPE

ELECTRICITY (MW)

STEAM (T/h)



Gas-fired Cogeneration

45

70



CUSTOMER

Asia Industrial Estate, Rayong



Industrial users in Asia Industrial Estate and neighboring industrial estate





GPSC holds

100%

Of total share

PROJECT UPDATE

- 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%

• COD in November 2019

Of total share



Nava Nakorn Electricity Generation (NNEG) Expansion Project





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



• EGAT (SPP Firm 90 MW for 25 years)



GPSC holds

PROJECT UPDATE

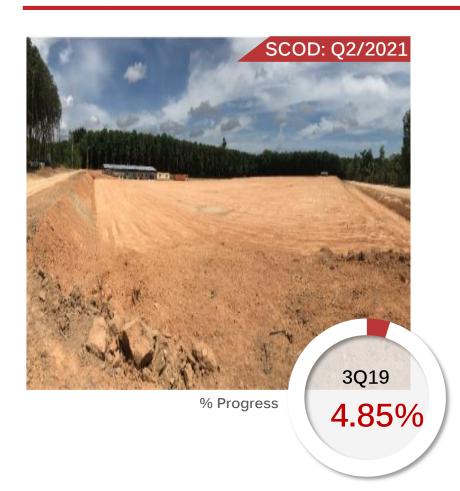
30%

Of total share

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

Rayong Waste to Energy **PSC** (WTE)





PROJECT SUMMARY

TYPE

ELECTRICITY (MW)

RDF (T/day)





Waste

300

LOCATION

CUSTOMER

Rayong





Provincial Electricity Authority (PEA)



GPSC holds

100%

Of total share

PROJECT UPDATE

- 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

ELECTRICITY (MW)

STEAM (T/h)

Pitch

250

175

And by products such as Sulfuric acid, Condensate Water

LOCATION

CUSTOMER

Thai Oil Refinery, Sri Racha, Chonburi



 Thai Oil Public Company Limited

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

GPSC holds

PROJECT UPDATE

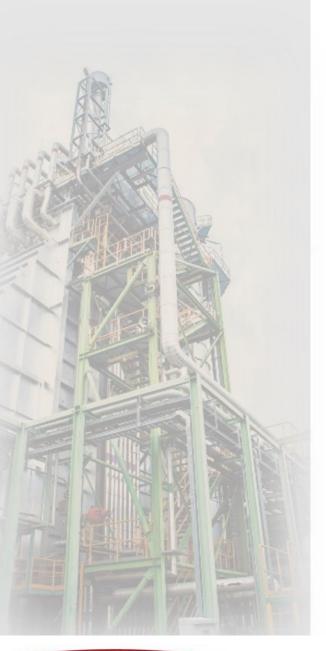
100%

Of total share in ERU co.

- 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









GPSC Growth and Strategic Direction



Update of projects



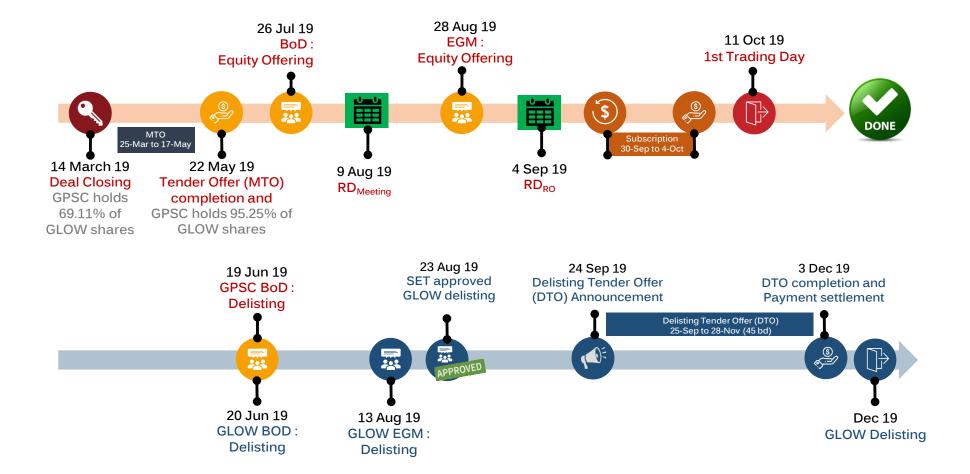
Financial Activities and Plans



Financial Performance

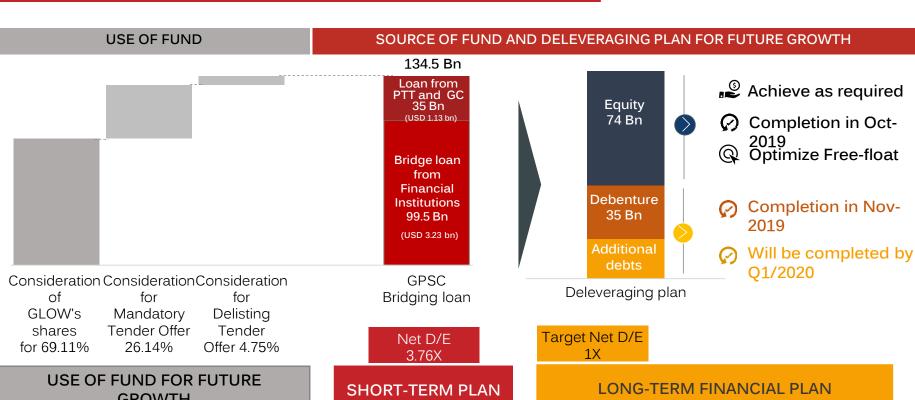


Timeline: Equity Offering and GLOW Delisting





Use and Source of Fund with Deleveraging Plan



GROWTH

- GPSC acquired shares of GLOW, equivalent to 69.11% from ENGIE Global Developments.
- GPSC completed the payment amounting to THB 93,000 million in total.
- GPSC has obtained accumulatively 95.25% and will tender the remaining shares via Delisting Tender Offer by Dec 2019

GPSC secured the shortterm loan at THB 134.500 million from PTT, GC and Financial institutions.

- Rights Offering proceed amounting Baht 74,000 million has been completed on 9 Oct 2019 and 11 Oct is the 1st Trading Day of the newly-issued shares
- · GPSC has successfully offered the senior and unsecured debentures in a total value of THB 35.000 million to domestic Institutional and HNW Investors on 8 Nov 2019
- GPSC will seek for additional long-term loans and/or debentures to repay the remain ST acquisition loans

GPSC's Prudent Financial Policy



Net Debt to Equity ≤ 1.0x



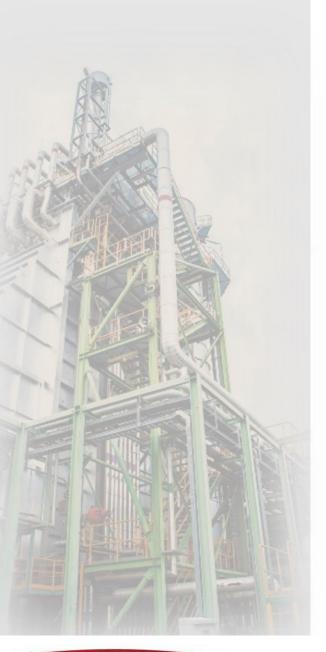
Net Debt to EBITDA ≤ 4.0x



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

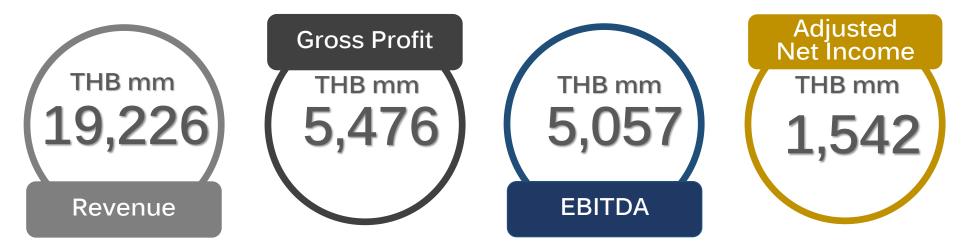


Financial Performance



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





52% Industrial Users



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

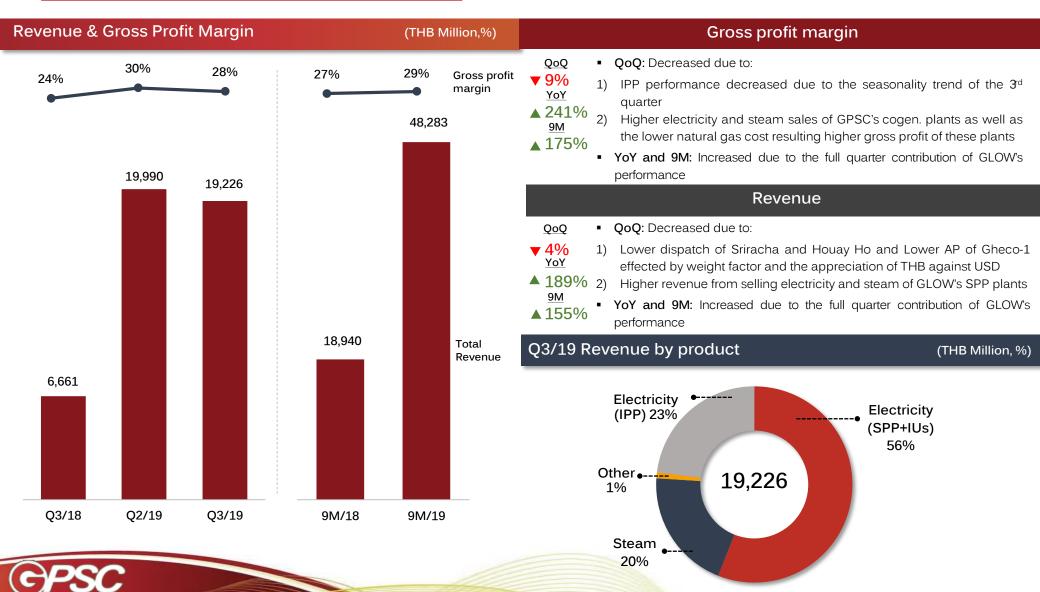


1% Others

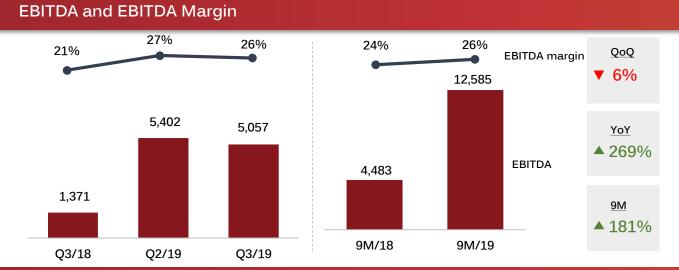
Q3/2019 Revenue by Customers



Q3/2019 Financial Performance Summary (1/2)

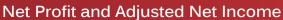


Q3/2019 Financial Performance Summary (2/2)

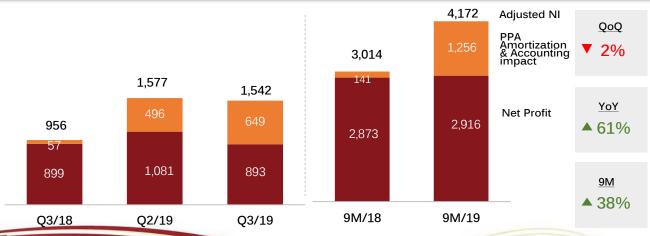


(THB Million, %)

- QoQ: Decreased due to:
- IPP performance decreased due to the seasonality trend of the 3rd quarter
- 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



(THB Million)

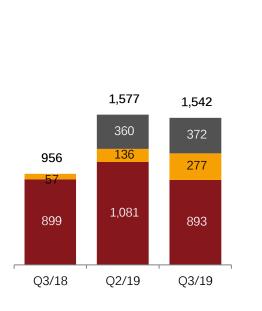


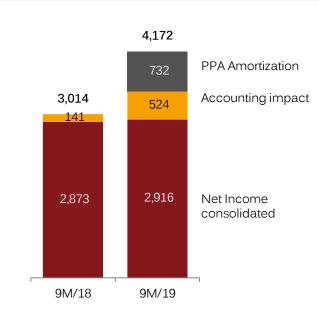
- OoO: Decreased due to:
- IPP performance decreased due to the seasonality trend of the 3rd quarter. Main reason from reduction of weight factor of Gheco-1, resulting in a decreased in AP and lower dispatch volume of Houay Ho as EGAT instruction.
- Higher interest expense from the tender offer of GLOW's 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)





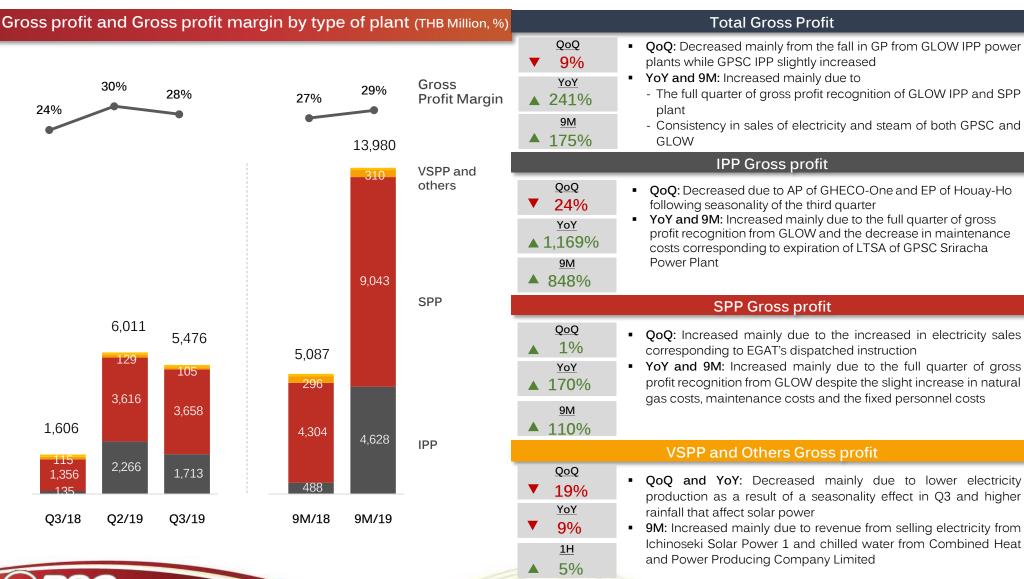
Adjusted Net Income, the net profit attribute to the company adjusted to *reflect the company's true earnings from its normal operations* which excludes:

- 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%

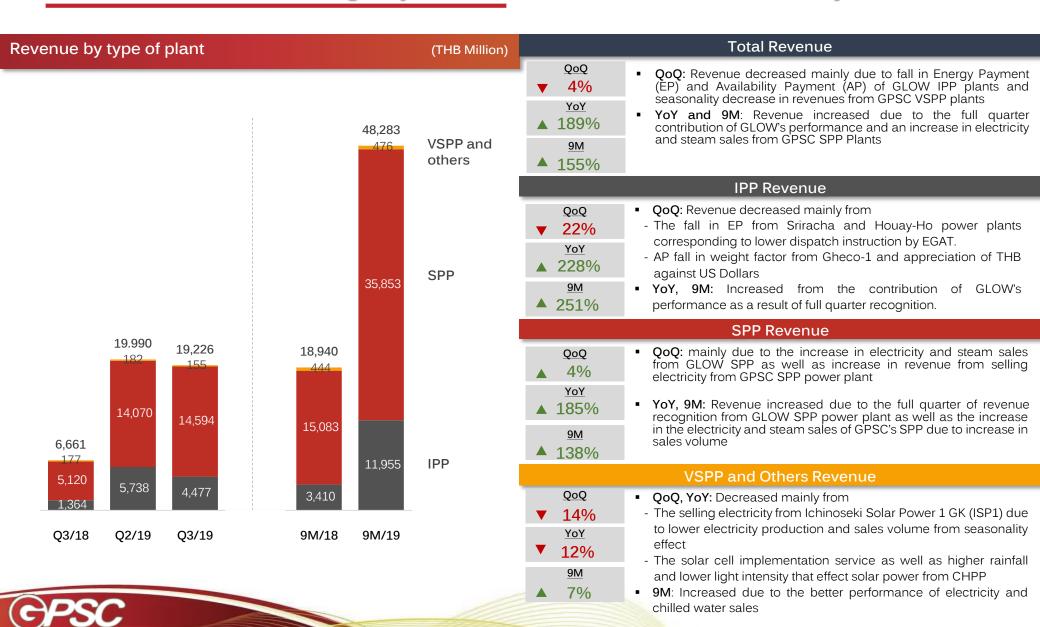


Gross Profit and Gross Profit Margin has slightly decreased due to seasonality trend in third quarter



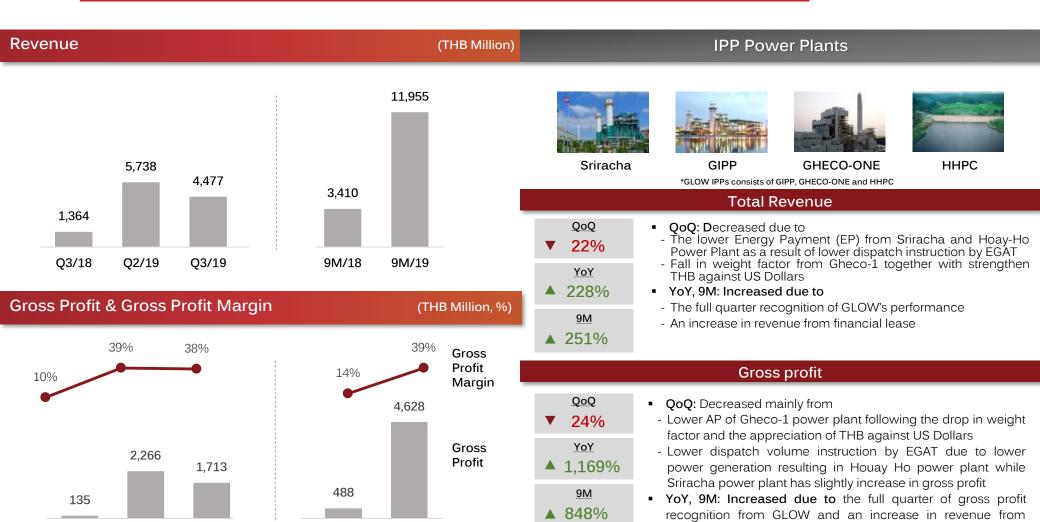


Total revenue has slightly decreased due to seasonality effects





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



financial lease



Q3/18

Q2/19

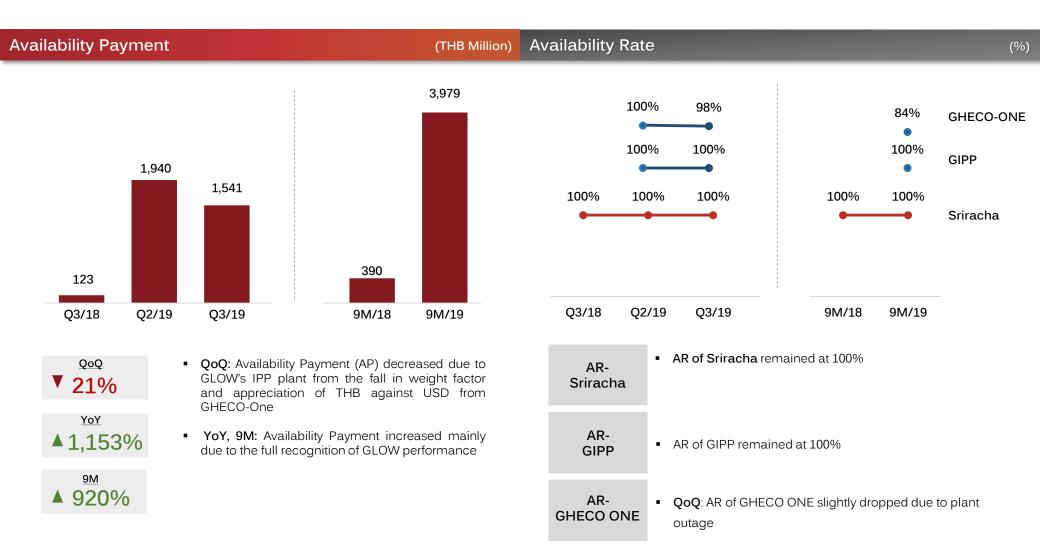
Q3/19

9M/18

9M/19



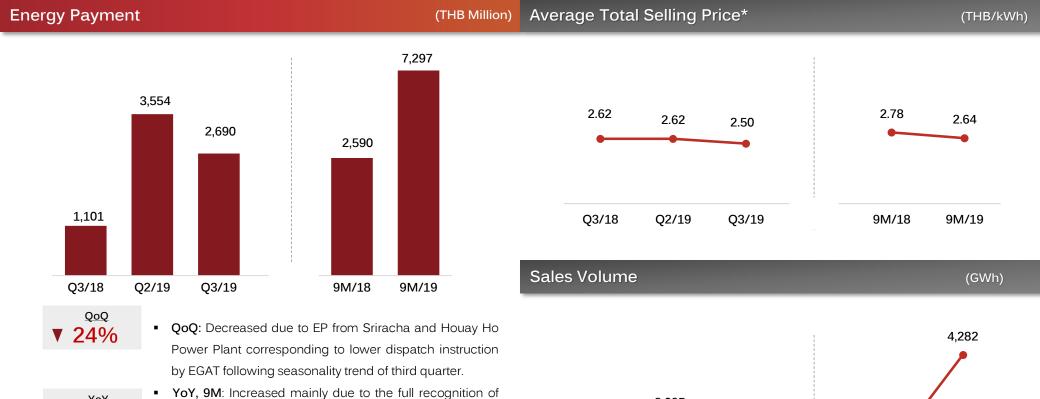
Availability Payment: Decreased by 21% QoQ







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





YoY

▲ 144%

GLOW performance



9M/18

1,690

Q3/19

2,095

Q2/19

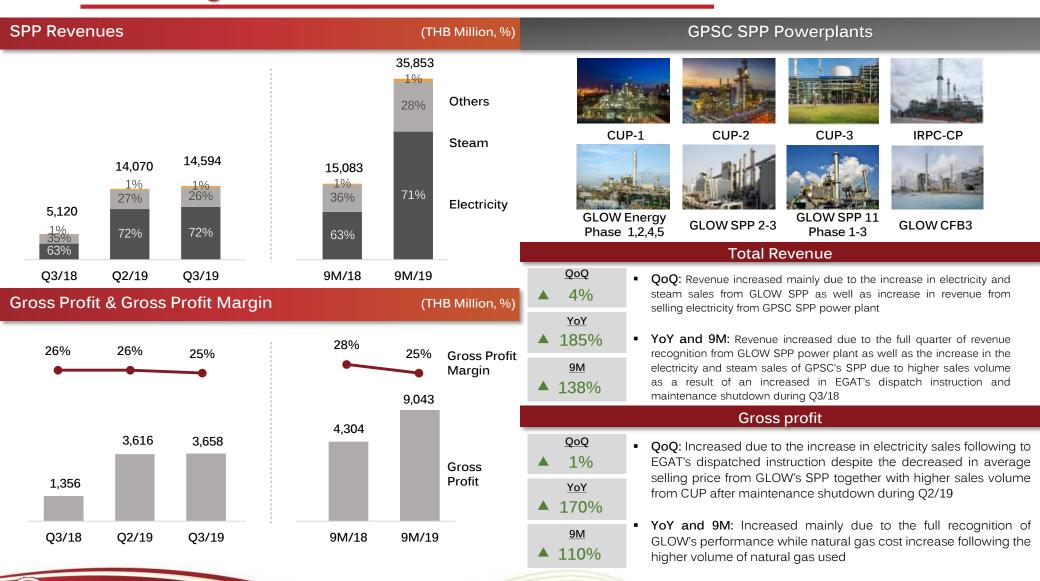
469

Q3/18

9M/19

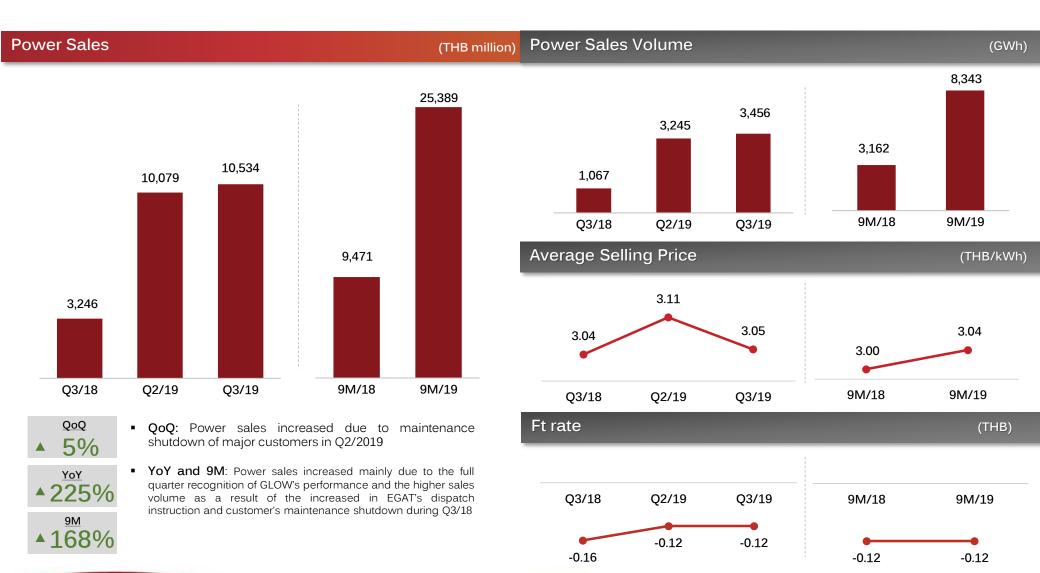


SPP Revenue: Increased 4% QoQ and 138% YoY due to higher sales volume and GLOW's contribution





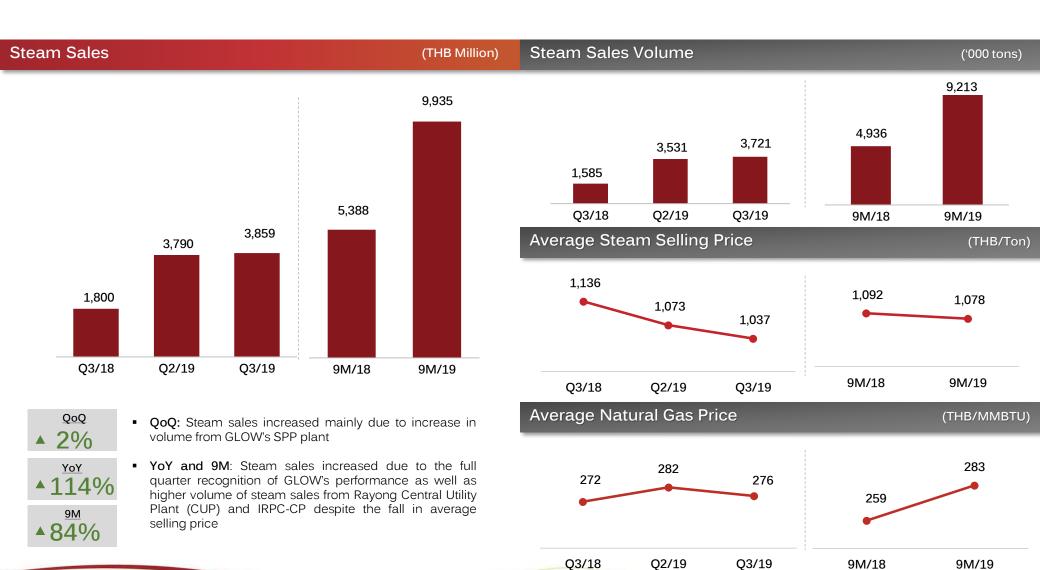
SPP Power Sales: Increased 5% QoQ and 225% YoY





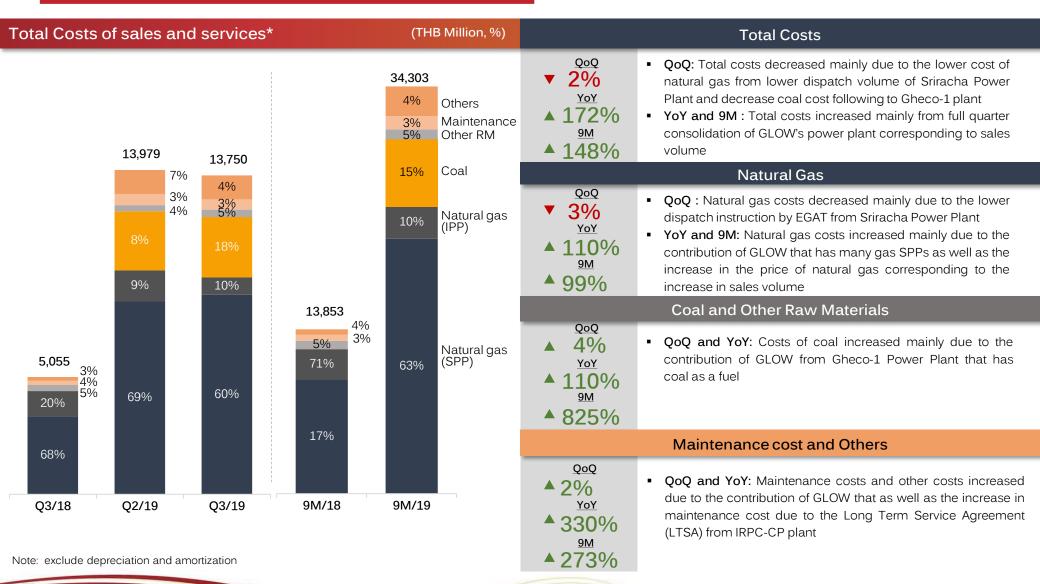


SPP Steam Sales: Increased 2% QoQ and 114% YoY



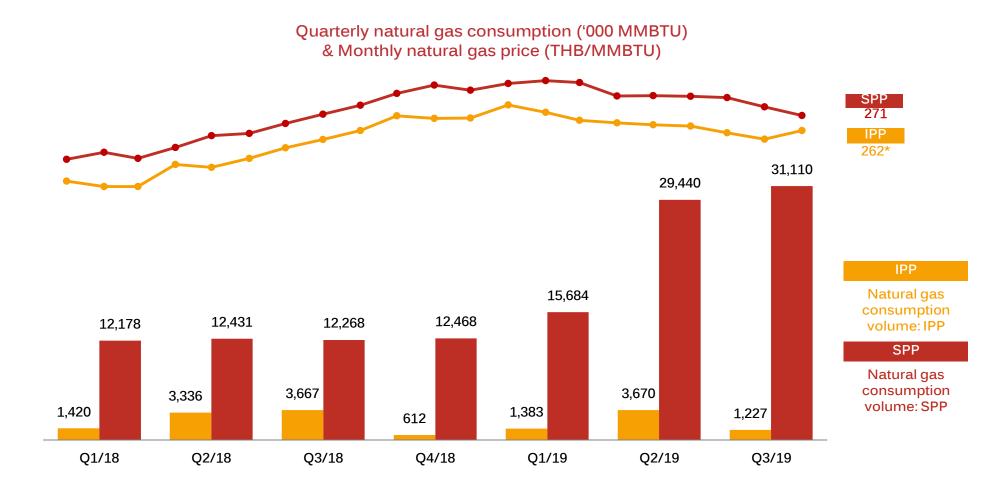


Total Cost Of Sales and Services





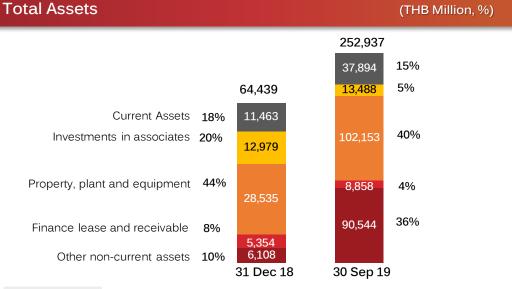
Natural Gas Consumption vs Price Trend



Remark: Latest price as of 30 Sep 2019 Note: *Excluded GLOW IPP



Financial Position of GPSC and Subsidiaries



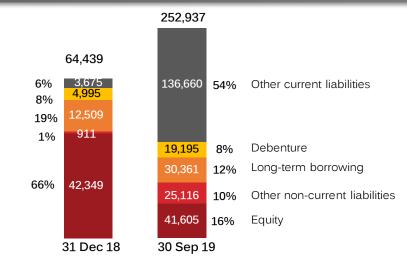
<u>Assets</u> **▲ 293%**

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 shortterm 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

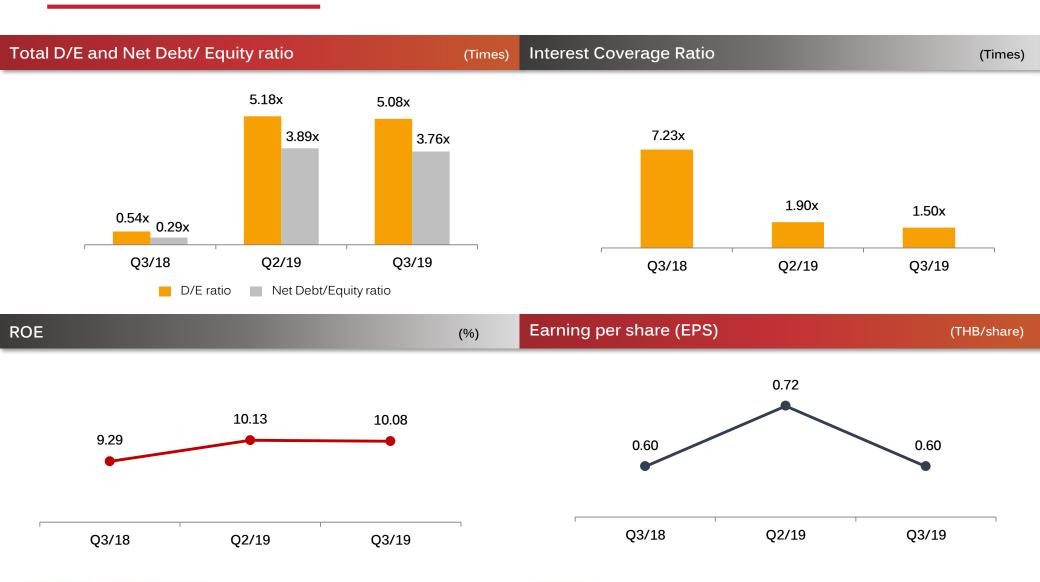
▼ 36%

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



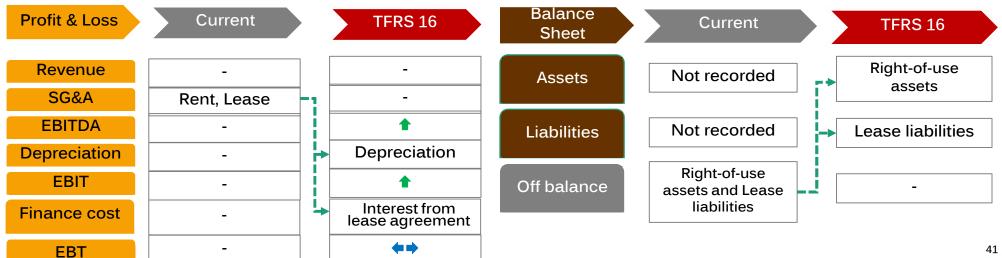


Accounting impacts in 2020

TFRS 9

Assets	As-Is GPSC Policy	Impacts on TFRS 9
1. Derivatives (e.g. IRS ,CCS , FW)	 Disclosed in the notes to the financial information 	Recorded at fair value
2. Other long-term investments (e.g. RPCL, 24M)	 Recorded at cost Gain or loss on sale of assets are presented in the statement of income 	 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)	Impairment from historical information	 Consider the future credit risk of the debtor which may cause impairment faster

TFRS 16

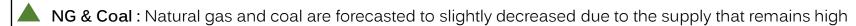


Outlook 2020

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



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

Performance

- Performance improvements:
- o CUP-4 (COD on Sep'19) will improve contribution margin
- o Xayaburi: 25% stakeholder (COD on Oct'19)
- o CCE (COD on Nov'19)
- o GRP expected to close all conditions precedent soon.
- ▲ Interest cost continue to reduce from:
 - \circ The deleveraging plan has been completed of RO and $1^{\rm st}$ lot of debenture issuance
 - o 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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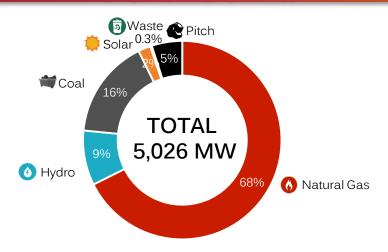
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GPSC's Business Portfolio by Fuel and Plant Type

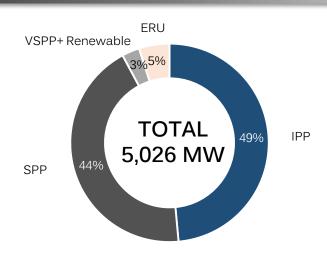
Equity Capacity by fuel types



Energy Type	Ins	stalled M	1VV	Equity MW		
	Total capacity	%	In operation	Total capacity	%	In operation
Natural gas	5,047	63.00%	4,987	3,399	67.64%	3,381
(i) 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

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

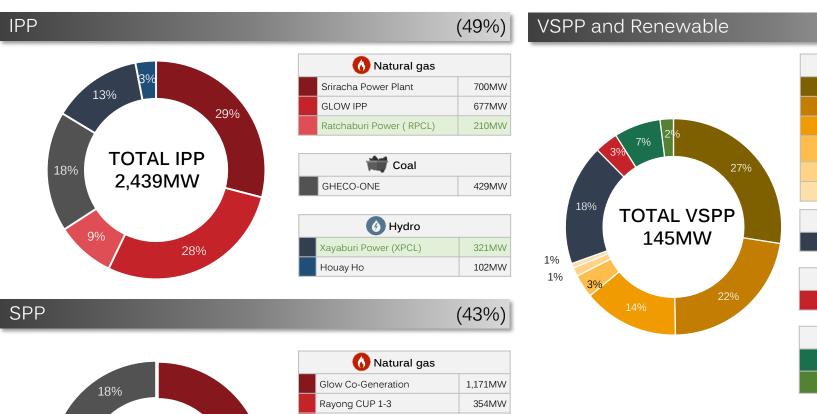
Equity Capacity by Plant Type



Energy Type	Ins	talled M	W	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
VSPP + 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



GPSC's Business Portfolio by Plant Type



/SPP and Renewable		(3%)
	Solar	
	Solar Project	39.5MW
	Thai Solar Renewable TSR (SSE1)	32MW
29%	Ichinoseki Solar Power (ISP1)	21MW
3%	Combined Heat and Power Producing (CHPP Solar)	5MW
27%	Glow Energy Solar PV Rooftop	2MW
	Glow Energy Solar Plant	1MW
TOTAL VSPP	6 Hydro	
145MW	Nam Lik 1 Power (NL1PC)	26MW
1% 1% 3%	Natural gas	
14%	СНРР	5MW
	(3) Waste	
	Rayong WTE	10W
	Chonburi Clean Energy (CCE)	3MW

IRPC-CP (Phase 1-2) 122MW Bangpa-in Cogeneration BIC 59MW **TOTAL SPP** (Phase 1-2) **NNEG** 56MW 2,192MW 53% Rayong CUP 4 45MW 📛 Coal 16% Glow Co-Generation 385MW



ERU

Pitch Thaioil 250MW

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



(5%)

Power Plants Portfolio of GPSC

Name	Туре	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	45 105	23	23	86.7	-	GPSC (51%)	2015	25/2040
IRPC-CP Phase 2	SPP	195	99.4	99.4	66.3	-	GPSC (51%)	2017	25-27/2044



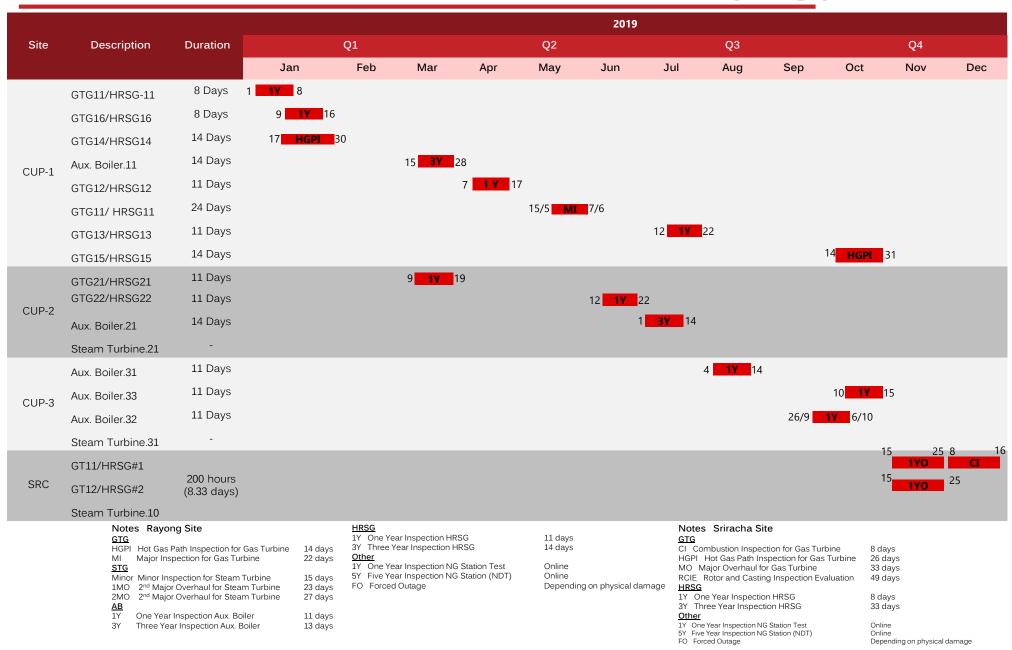
Power Plants Portfolio of GPSC

Name	Туре	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			

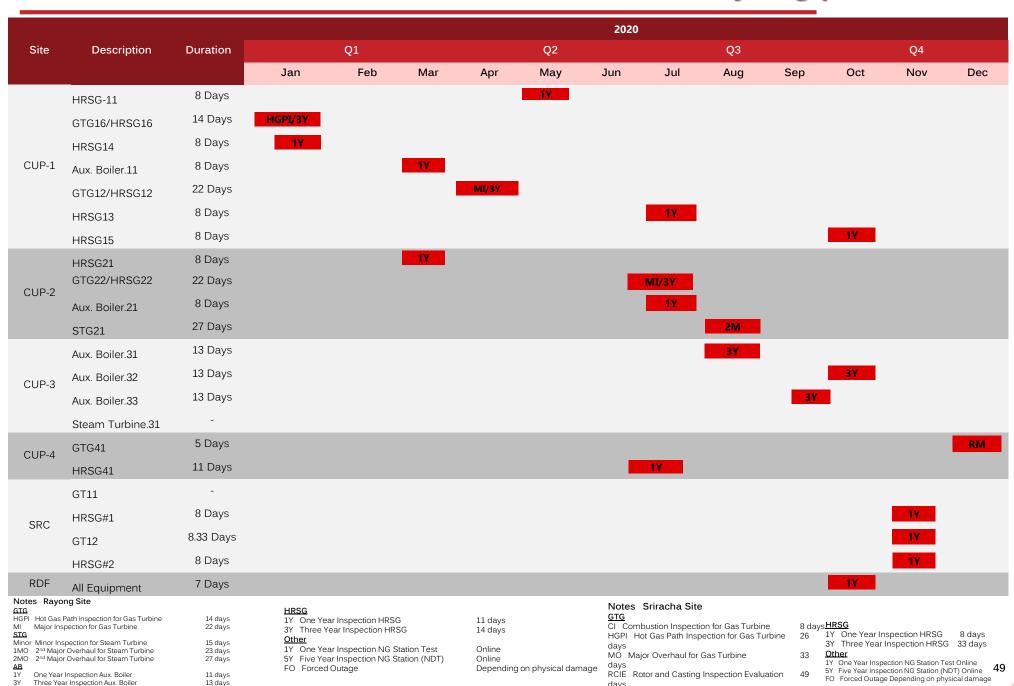


Note: Equity capacity includes 100% stake in GLOW, GRP and ERU GPSC Portfolio as of end-2019

2019 Maintenance schedule: Sriracha and Rayong plants



2020 Maintenance schedule: Sriracha and Rayong plants



2019 & 2020 Maintenance schedule: IRPC-CP

			20	19	
Plant	Unit	Q1 (A)	Q2 (A)	Q3 (A)	Q4 (F)
IRPC-CP	Block 1				
	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.			
	Block 2				
	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		

			20	20	
Plant	Unit	Q1 (F)	Q2 (F)	Q3 (F)	Q4 (F)
IRPC-CP	Block 1				
	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			
	Block 2				
	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 Haire		Planned Maintenance Duration (Days)								
Main Units	2017	2010	2010		2019 by	quarter				
	2017	2018	2019	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			

		Planned Maintenance Duration (Days)								
Main Units	2017	2018	2019	2020	2020 by quarter					
	2017	2016	2019	2020	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

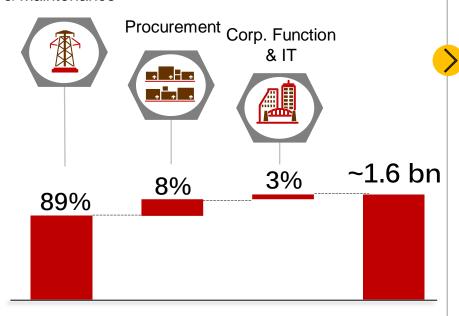
(Unit: THB



Phase 1

EBITDA Contribution Per Annum⁽¹⁾
Identified in Phase 1

Operations & Maintenance



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

1. Recurring Benefit in Phase 1

+1.6 bn
Ramp up with full
EBITDA'1 contribution

by 2024

- 4.0 bn
One-time
initial investment

2. Additional One-time Benefit

3. Further Identification in Phase 2

+2.5 bn
One-time
CAPEX Avoidance

Additional uplift from Growth Initiatives

For 200 MW growth in MTP



Synergy and Integration Implementation

Highlights of phase 2



Working as one team to deliver synergy



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



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



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



Target organization to go live in Q2-2020



Synergy and Integration Implementation



Highlights of phase 2



Implementing best practices across companies



Exploring new digital capabilities

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



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



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



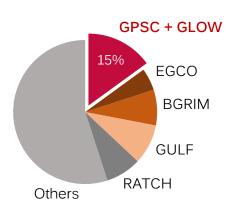
Leadership Position in SPP



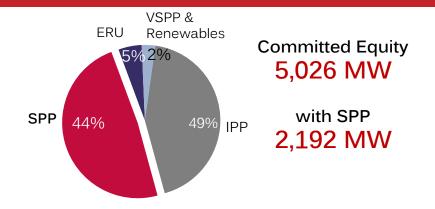
SPP Market Share by Installed Equity MW/1

Thailand's largest SPP player

with strong resources and network reliability



GPSC's Committed Portfolio/2



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
		Stag	ge 1		
GEN Phase 2	192	300	30 x 2	2020	2022
		Sta	ge 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'

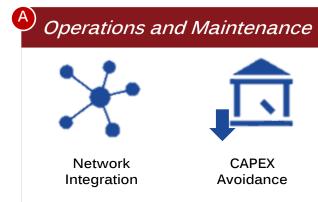


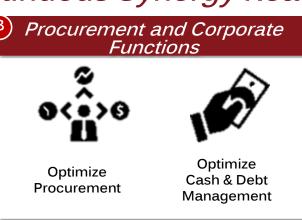
RATCH





'Continuous Synergy Realization'



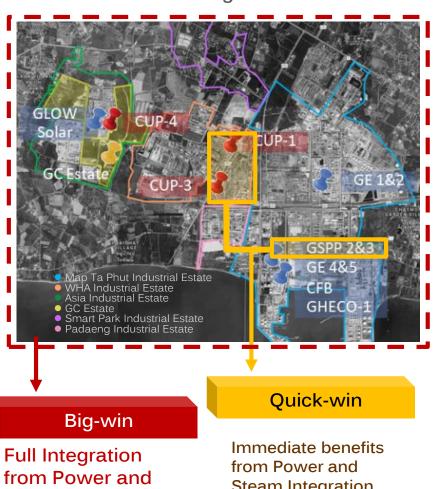




Quick wins & Big wins



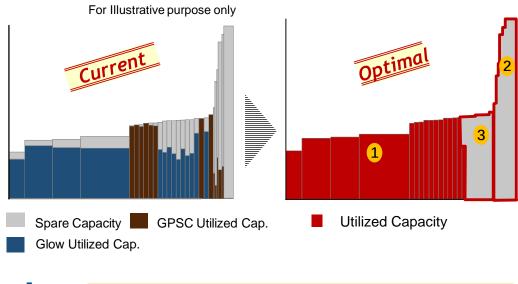
Power and Steam Integration leads to cost savings and more capacities to serve new demand

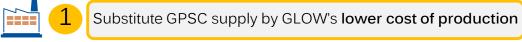


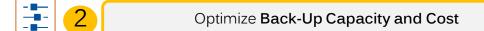
Steam Integration Steam Integration

• Reduce standby time

Marginal cost per unit (THB / MWheq)











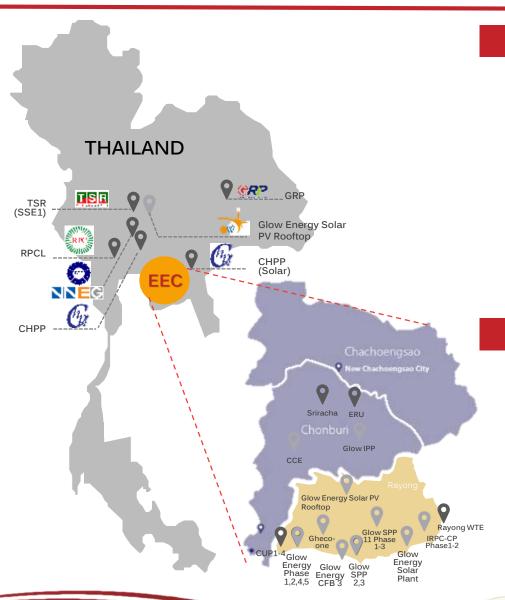


Rebalance production

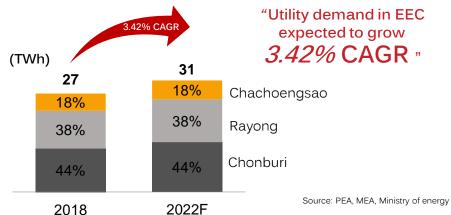
to optimize cost

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



Stronger HR capabilities



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

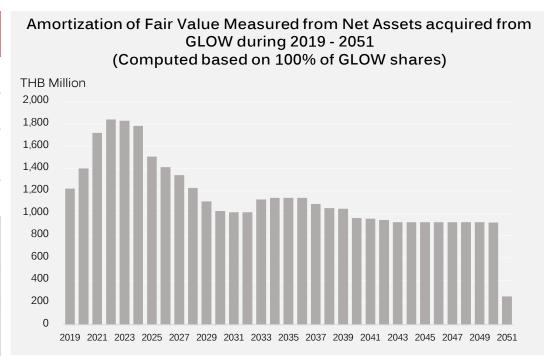


Appropriate method for meeting fund raising in timely manner



Fair Value Measurement of Net Assets from the Acquisition of GLOW

Items	Book Value of GLOW (THB Million)		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	



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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