GPSC

บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี่ จำกัด (มหาชน)

Global Power Synergy Public Company Limited

Analyst Meeting

Q3/2018

THE INNOVATIVE POWER FLAGSHIP OF PTT GROUP

NOVEMBER 14th, 2018

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GPSC's New CEO Introduction

Mr. Chawalit Tippawanich

President and Chief Executive Officer (Executive Director)

"The Global Leading Innovative and Sustainable Power Company"

Business Development for GPSC Strategic Growth

Operational Excellence Focus

Area of Expertise

- Business Development & Project Management
- Downstream Business
- Organization Effectiveness

2013 | 2014 | 2015 | 2016 | 2017 | 2018

President, HMC Polymers

Executive Vice President Organization Effectiveness (Thaioil)

Executive Vice President Petrochemicals and Refining Business Unit (ptt)

Introduction of the new GPSC's EVP–Asset Management

Mr. Sirimet Leepagorn

Executive Vice President Asset Management

Subsidiary Planning & Management
GPSC Corporate Business Planning

Area of Expertise

- Asset Management-Subsidiary Planning & Management
- Strategic Planning and Strategic transformation
- Corporate Business Planning
- Operational Improvement

2012 2013 2014 2015 2016 2017 2018

Director IRPC Oil
Acting Executive Vice President Corporate Business Planning
Executive Vice President Corporate Business Planning

Director IRPC Clean Power
Acting President IRPC Clean Power
EVEREST Project Director IRPC
Executive Vice President Strategic Transformation and Result Deliver

Q3/2018 Highlights

GPSC Business Opportunity

Investment in Affiliates

Financial Performance

Q3/2018 Highlights

GROWTH

- Grow with PTT group from the rise in utility demand in EEC
- International expansion by focusing on investment in Myanmar

PROFIT

33% Increase in EBITDA YoY, 47% Increase for 9M

◊ The increase in electricity sales from the COD of IRPC-CP Phase 2 and ISP1 since Q4/2017

SUSTAINABILITY

- 0.45 THB/share dividend payment for 1H/2018
- AWARDS

◊ Thailand Best Investor Relations Company Award 2018

◊ Trophy and certificate on Greenhouse Gas Mitigation and 2018 Top Innovative Organization Award

CONTROL

4 Projects are expected to COD in 2019-2020 as planned

Nam Lik1 | Xayaburi | CUP4 | NNEG Expansion

GPSC Strategic Direction and Growth Strategy

GPSC

The global leading innovative and sustainable power company

Operation Excellence

- Maximize Core Business
- Manage Invested companies

3 Growth Engines

- Growth along with PTT Group
- International
- Renewable

New S-curve

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

Digitalization – Improve internal work process to operation excellence

Sustainability – DJSI, OEMS, ESG, Customer Oriented

Finance - Support growth with competitive cost of capital

Human Resource & Corporate Value - People development and Drive GPSC “IT’S POWER” Culture

Q3/2018 Highlights

GPSC Business Opportunity

Investment in Affiliates

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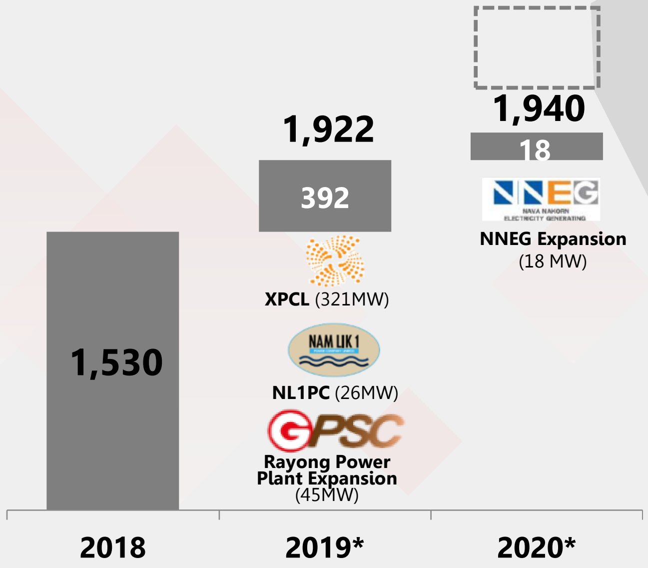
GPSC Electricity Growth Pipeline

Electricity Equity (MW)

+12.6% CAGR



Steam Equity (T/h)

2018	2019	2020
Total 1,512 T/h	**+70 T/h** (Total 1,582 T/h)	**+3 T/h** (Total 1,585 T/h)

Growth along with PTT

- Business expansion together with PTT Group under study and valuation 2-3 projects for more than hundreds MW

International Power Project

- Myanmar; Both small & large power plants are under study
- New opportunities in others countries

Renewable

- One portfolio, including Adder & FIT programs, is under final negotiation
- Explore and focus more to international opportunities in coming year

Battery and System Integrator

- Explore marketing strategy to commercialize battery package
- Expand ESS business to Non-PTT Group by using past-record information from past projects

GPSC's Energy Storage Implementations & Ongoing Projects

	Customer	Application	Status
Residential (rooftop)	CMU	Timeshift	**complete**
Residential (rooftop)	PTT InI	Timeshift / UPS	**complete**
Industrial	PTTPL	Timeshift / Cut peak	Under construction
Industrial	PTT Group	Back up	Final Negotiation
Grid scale	External customer		Negotiation
Micro Grid	Non PTT Group		Under study

Remark:
CMU: Chiang Mai University
PTT INI: PTT Innovation Institute
PTTPL: PTT POLYMER LOGISTICS CO., LTD

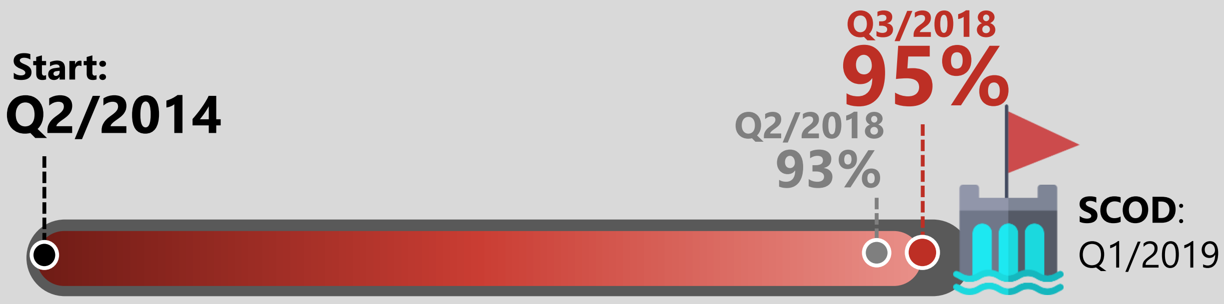
Q3/2018 Highlights

GPSC Business Opportunity

Investment in Affiliates

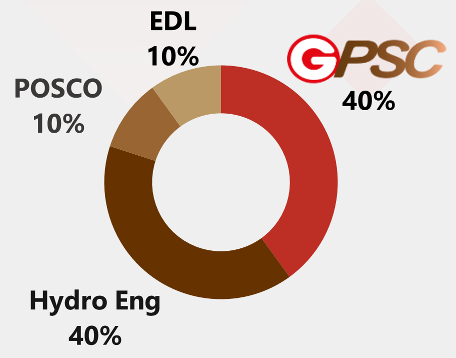
Financial Performance

Nam Lik 1 Power Company Limited (Lao PDR)



Type:	Run-of-River Hydropower
Electricity:	64.7 MW
Customer:	Electricity: EDL 63.8 MW (30 years PPA)

Shareholding:



Progress update:

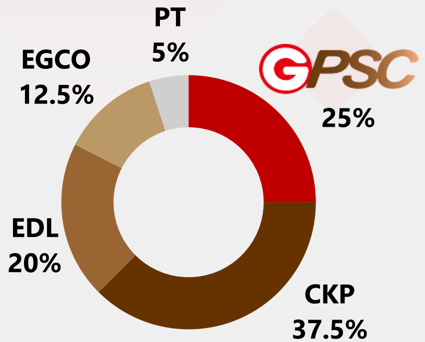
- As of 30 September 2018, the construction progress as appraised by technical advisor was at 95%.
- The main activities such as turbine and equipment installation in Powerhouse, and submit documents to the government are in the process.

Xayaburi Power Company Limited (Lao PDR)

XAYABURI POWER

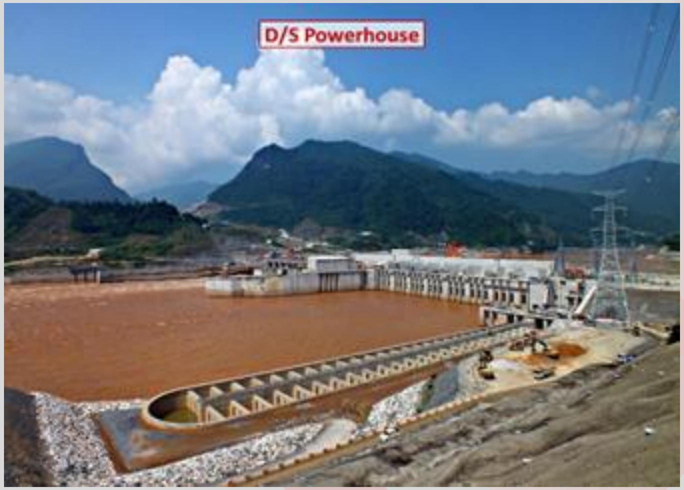
Type:	Run-of-River Hydropower
Electricity:	1,285 MW
Customer:	Electricity: EGAT 1,220 MW, EDL 60 MW

Shareholding:



Progress update:

- As of 30 September 2018, the construction progress was at 96% , appraised by of Lao PDR's technical advisor.
- Main tasks : power house, intermediate block fish ladder and 500 kV transmission line was in progress.



Central Utility Plant 4 : CUP4 (Thailand)

Type:	Gas-fired Cogeneration
Electricity:	45 MW
Steam:	70 T/h
Customer:	• PTT Group • Non-PTT Group • EGAT

Shareholding:

GPSC 100%

Progress update:

- The project is in the stage of design of connecting CUP-4 to CUP-3 exiting operating system.
- End of Q3/2018, engineering design progress is about 80% and site office construction and infrastructure of 10%.

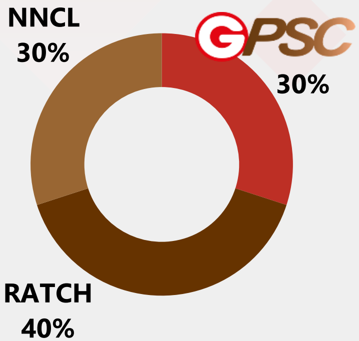
Nava Nakorn Electricity Generation (NNEG) Expansion Project

Start:
Q3/2018

SCOD: Q3/2020

Type:	Gas-fired cogeneration
Electricity:	60 MW
Steam:	10 T/h
Customer:	• Non-PTT Group

Shareholding:



Progress update:

As of Q3/2018,

- EPC contractor has been awarded
- Kick off meeting between NNEG, technical engineer and EPC has been finished
- EPC got notice to proceed and already accessed to the site to start fence installation

Q3/2018 Highlights

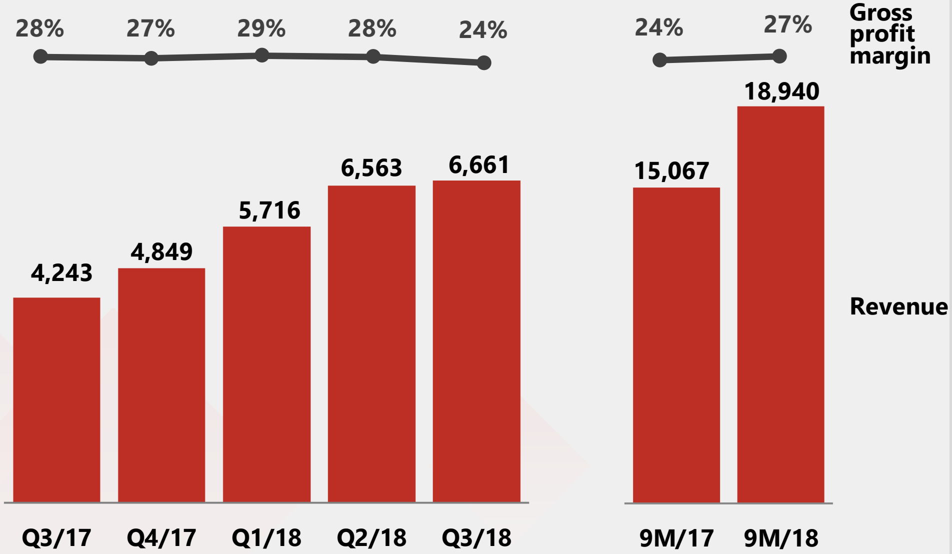
GPSC Business Opportunity

Investment in Affiliates

Financial Performance

Q3/2018 Financial Performance Summary (1/2)

Quarterly Revenue & Gross Profit Margin (THB Million,%)



YoY	QoQ	9 Months
▲ Rev. +2,418 /+57%	▲ Rev. +98 / +1%	▲ Rev. +3,873 / +26%
▼ GPM -4%	▼ GPM -4%	▲ GPM +3%

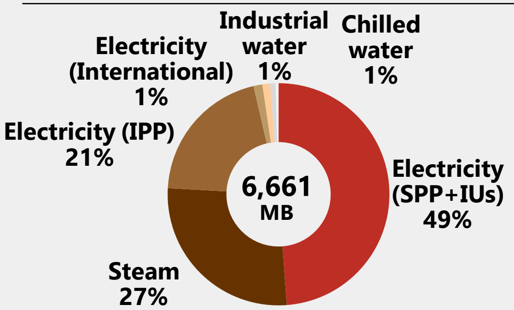
Q3/18 Revenue

- **YoY, 9M: Higher revenue** was mainly from an increase in electricity sales from the COD of IRPC-CP Phase 2 and ISP1 since Q4/2017
- **QoQ: The increase** was from higher dispatched volume of Sriracha Power Plant to EGAT

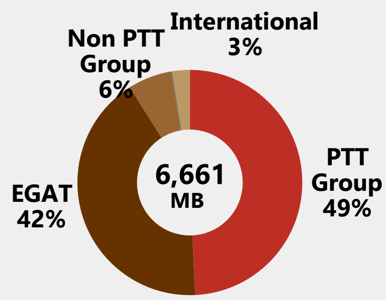
Q3/18 Gross Profit Margin

- **QoQ, YoY: GPM decreased 4%** due to a rise in natural gas prices while Ft rate remained constant
- **9M: GPM increased 3%** due to better efficiency in 2018 than 2017

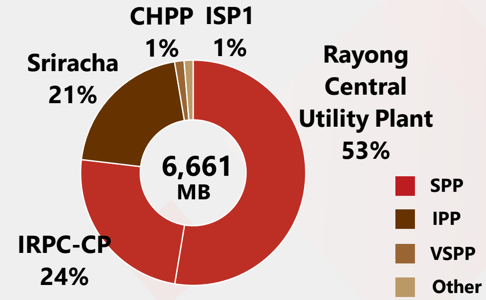
Q3/18 Revenue by product (THB Million)



Q3/18 Revenue by customer (THB Million)



Q3/18 Revenue by plant (THB Million)



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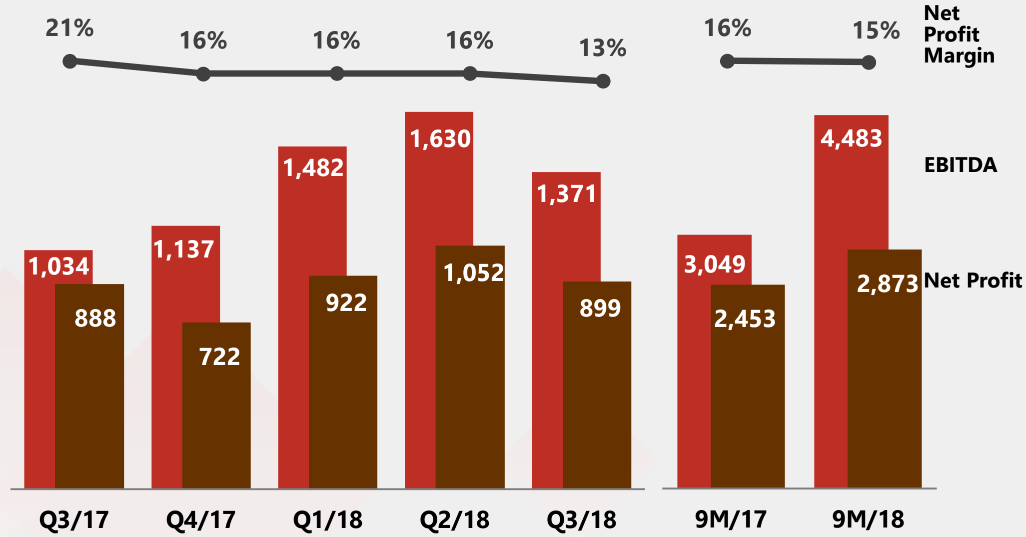
Q3/2018 Financial Performance Summary (2/2)

EBITDA, Net Profit* and Net Profit Margin (THB Million,%)



YoY	QoQ	9 Months
▲ EBITDA +337 / +33%	▼ EBITDA -259 / -16%	▲ EBITDA +1,438 / +47%
▲ NP +11 / +1%	▼ NP -153 / -15%	▲ NP +420 / +17%
▼ NPM -8%	▼ NPM -3%	▼ NPM -1%

Q3/18 EBITDA

- **YoY, 9M: EBITDA increased** due to The increase in electricity sales from the COD of IRPC-CP Phase 2 and ISP1 since Q4/2017
- **QoQ: EBITDA decreased** due to a rise in natural gas prices while Ft remained constant

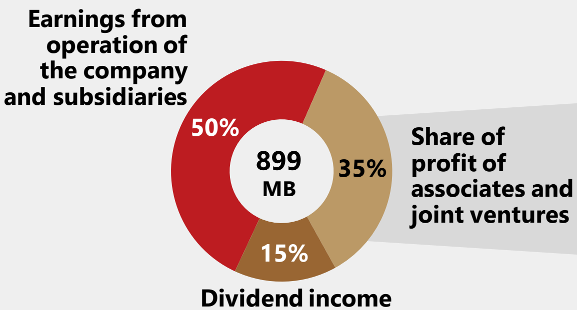
Q3/18 Net Profit

- **YoY, 9M: Net profit increased** according to COD of IRPC-CP Phase 2 and ISP1 in Q4/2017
- **QoQ: Net profit decreased** due to the rise in natural gas prices while Ft remained constant and a decrease in revenue from Availability Payment (AP) of Sriracha Power Plant

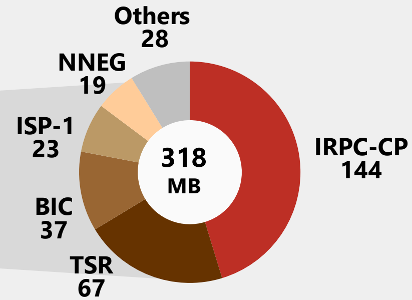
Q3/18 Net Profit Margin

- **YoY, 9M: Net profit margin decrease** mainly from drop in dividend income of RPCL from 270 to 135 and increase in depreciation of ISP1 which was COD in December 2017.
- **QoQ: Net profit margin decrease** due to significant rise in natural gas price which is main operating cost of power plant

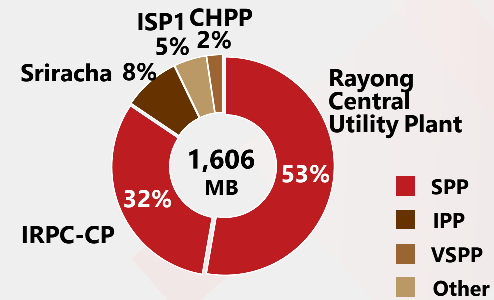
Q3/18 Net Profit by source (THB Million)



Q3/18 Net Profit by subsidiaries (THB Million)



Q3/18 Gross Profit by plant (THB Million)

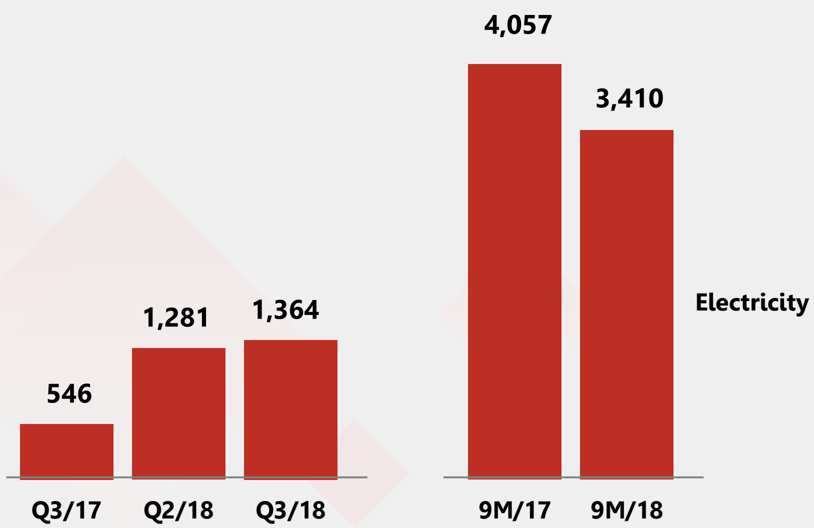


Remark: *Net profit-Owners of the company

Sriracha Power Plant : Revenue & Gross Profit

Quarterly Revenue
(THB Million, %)

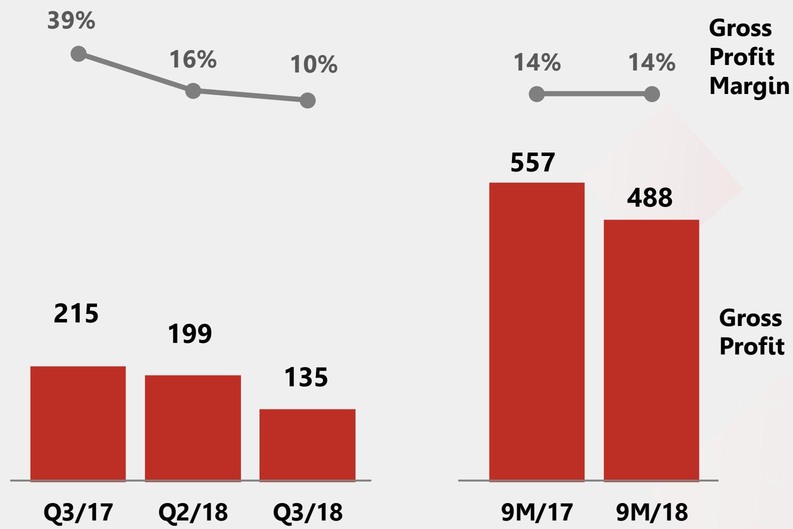
YoY	QoQ	9 months
▲Rev. +818 / n/a	▲ Rev. +83 / +6%	▼ Rev. -647 / -16%



- **QoQ, YoY: Total revenue increased** due to the rise in revenue from Energy Payment (EP) from the increase in dispatched volume to EGAT
- **9M: Total revenue decreased** due to the adjustment of finance lease receivable according to TFRIC4

Quarterly Gross Profit & Gross Profit Margin
(THB Million, %)

YoY	QoQ	9 months
▼ GP -80 / -37% ▼ GPM -29%	▼ GP -64 / -32% ▼ GPM -6%	▼ GP -69 / -12% GPM Unchanged



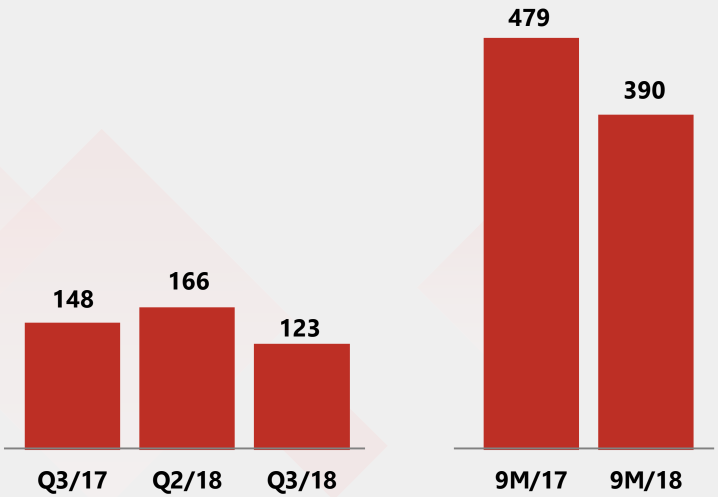
- **QoQ: Gross profit of Sriracha Power Plant decreased** from the drop in revenue from Availability Payment (AP) from lower Weight factor during rainy season, together with the higher maintenance cost followed greater dispatched volume to EGAT.
- **YoY, 9M: Gross profit decreased** due to the adjustment of finance lease receivable according to TFRIC4

Remark: *Revenue from Electricity (IPP) includes income from electricity sales and finance lease

Sriracha Power Plant : Availability Payment (AP)

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

YoY	QoQ	9 months
▼ AP -25 / -17%	▼ AP -43 / -26%	▼ AP -89 / -19%

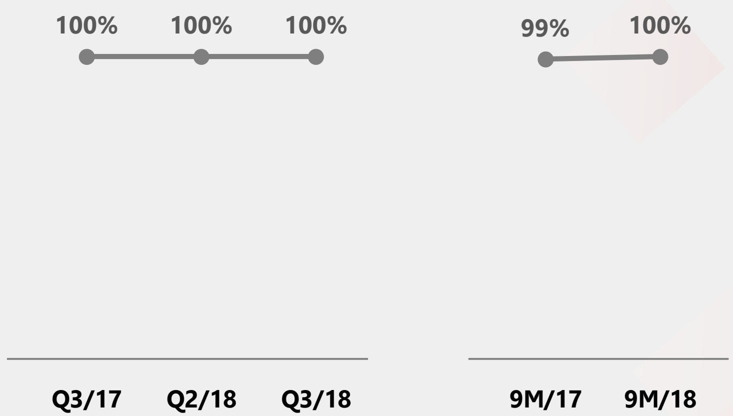


Revenue from AP

- **YoY, 9M: AP decreased** due to the adjustment of finance lease receivable according to TFRIC4
- **QoQ: AP decreased** due to the decline in Weight factor during rainy season

Quarterly Availability Rate
(%)

YoY	QoQ	9 months
Unchanged	Unchanged	▲ AR +1%

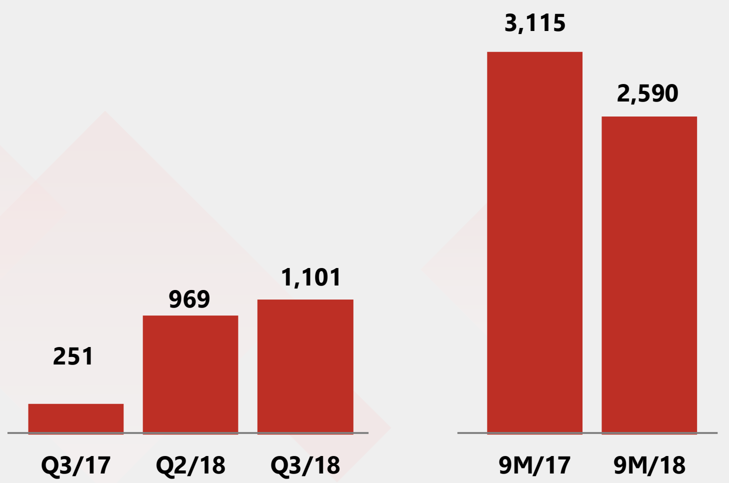


- **Availability rate: reached 100%, QoQ, YoY, and 9M** from better efficiency of Sriracha Power Plant

Sriracha Power Plant : Energy Payment (EP)

Quarterly revenue from Energy Payment (EP)
(THB million)

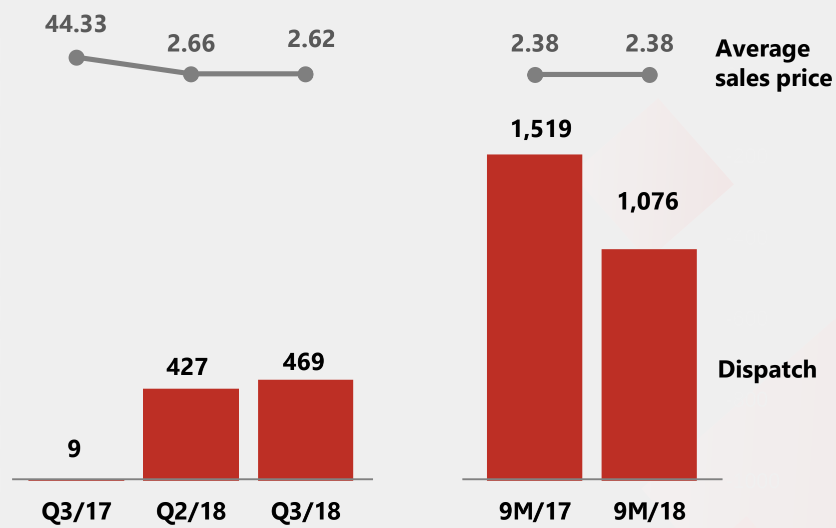
YoY	QoQ	9 months
▲ EP +850 / n/a	▲ EP +132 / +14%	▼ EP +525 / -17%



Revenue from EP

- **QoQ, YoY: EP increased** due to the increase in dispatched volume according to EGAT's dispatch instruction
- **9M: EP decreased** due to the decrease in dispatched volume according to EGAT's dispatch instruction

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

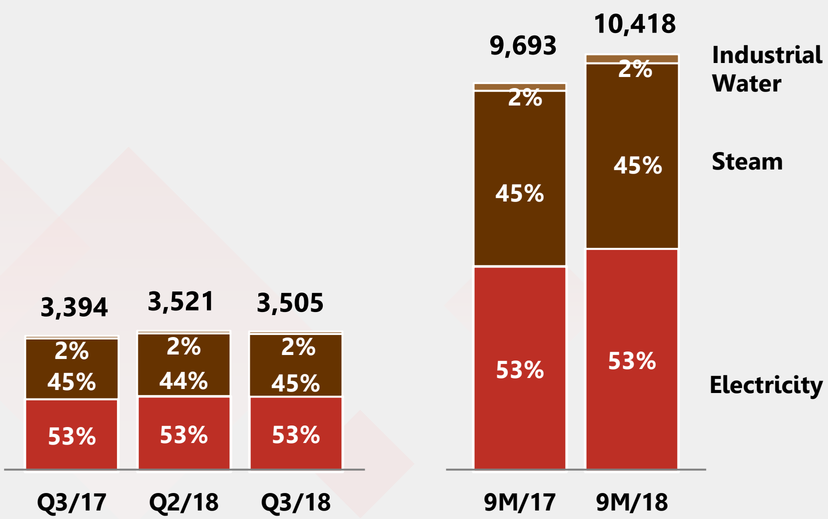


- **QoQ, YoY: Average sales price decreased** due to the increase in dispatched volume to EGAT as instructed
- **Dispatched volume:** increased YoY and QoQ but decreased in 9M according to EGAT's dispatch instruction

Rayong Power Plant (SPP) : Revenue & Gross Profit

Quarterly Revenue
(THB Million, %)

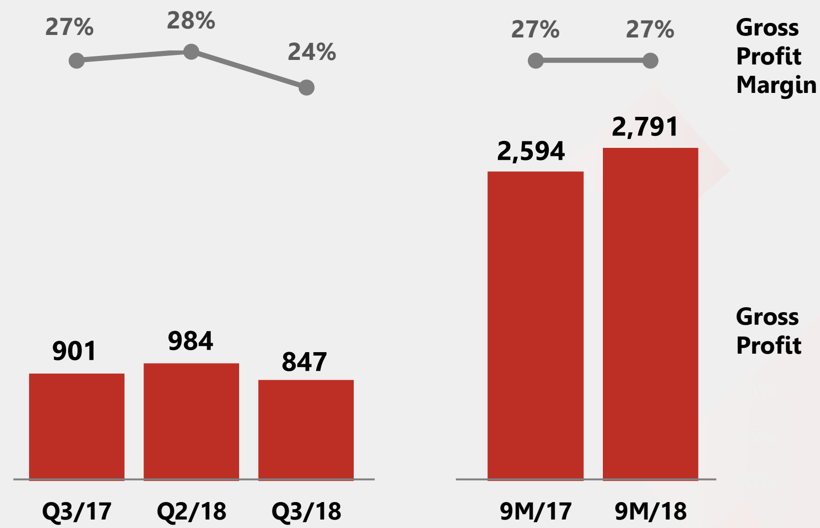
YoY	QoQ	9 months
▲ Rev. +111 / +3%	▼ Rev. -16 / 0%	▲ Rev. +725 / +7%



- **QoQ, YoY: Total revenue were quite stable**
- **9M: Total revenue increased** mainly from higher sales volume and sales price of both power and steam

Quarterly Gross Profit & Gross Profit Margin
(THB Million, %)

YoY	QoQ	9 months
▼ GP -54 / -6% ▼ GPM -3%	▼ GP -137 / -14% ▼ GPM -4%	▲ GP +197 / +8% ■ GPM unchanged

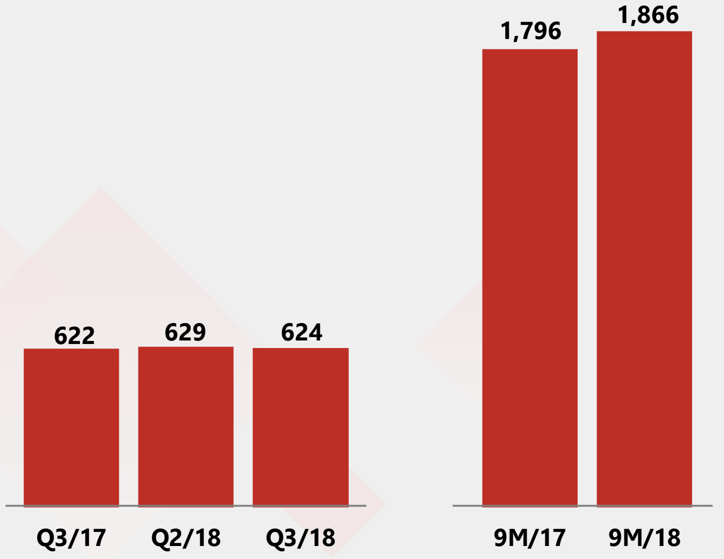


- **QoQ, YoY: Gross profit decreased** due to an increase in natural gas prices which is main cost of power plant operation
- **9M: Gross profit increased** mainly from higher sales volume and sales price of both power and steam

Rayong Power Plant (SPP) : Power Sales

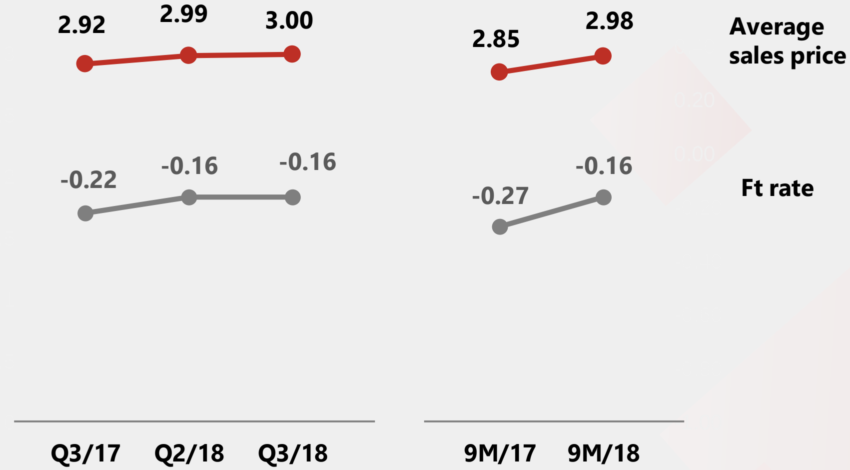
Quarterly power sales volume
(GWh)

YoY	QoQ	9 months
▲ Sales +2 / 0%	▼ Sales -5 / -1%	▲ Sales +70 / +4%



- **QoQ, YoY: Power sales volume were quite stable**
- **9M: Power sale volume** increased due to current customers expanded production capacities

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

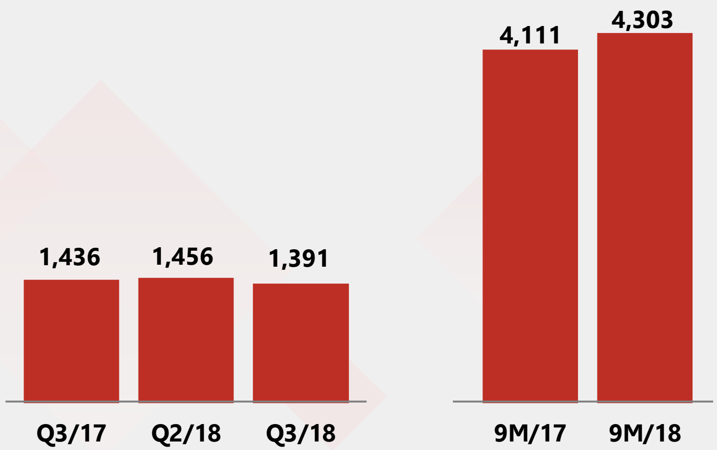


- **YoY, 9M: Average sales price** increased following the increasing trend of Ft rate and natural gas prices

Rayong Power Plant (SPP) : Steam Sales

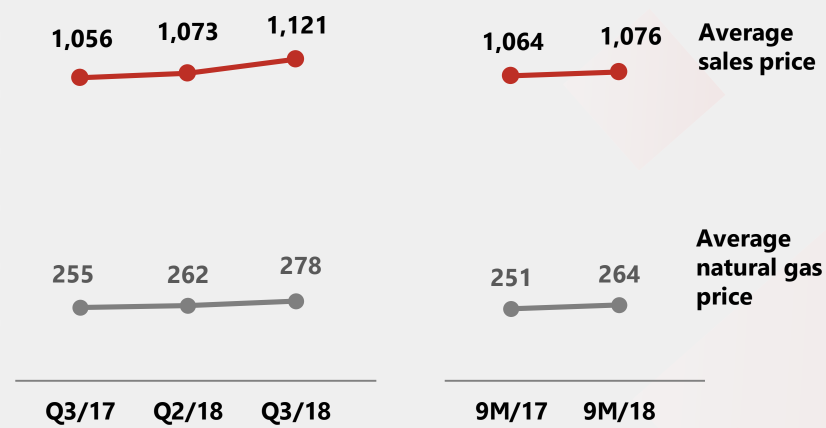
Quarterly steam sales volume
('000 tons)

YoY	QoQ	9 months
▼ -45 / -3%	▼ -65 / -4%	▲ +192 / +5%



- **QoQ, YoY: Steam sales volume decreased** due to maintenance shutdown of main customers in Q3/2018
- **9M: Steam sales volume increased** due to the maintenance shutdown by main customers during 9M/2017

Quarterly average sales price & Average natural gas price
(THB/ton, THB/MMBTU)

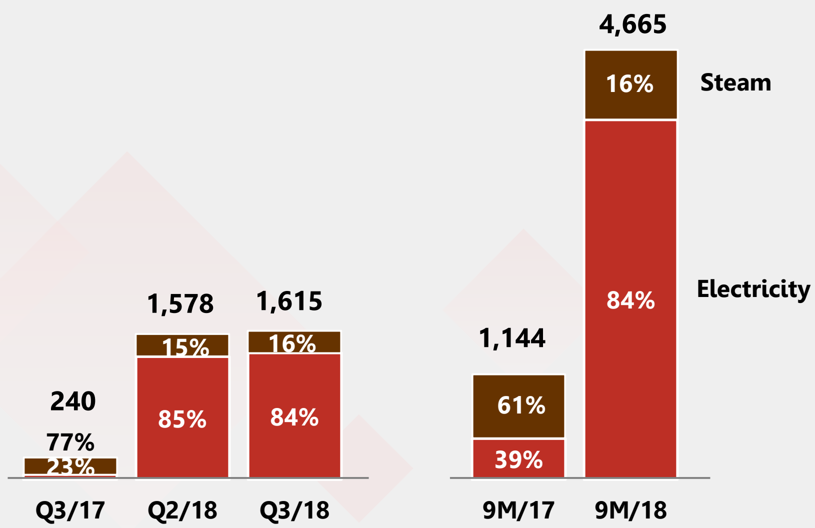


- **Average sales price QoQ, YoY, 9M increased** in line with the increasing trend of natural gas prices

IRPC-CP Power Plant (SPP) : Revenue & Gross Profit

Quarterly Revenue
(THB Million, %)

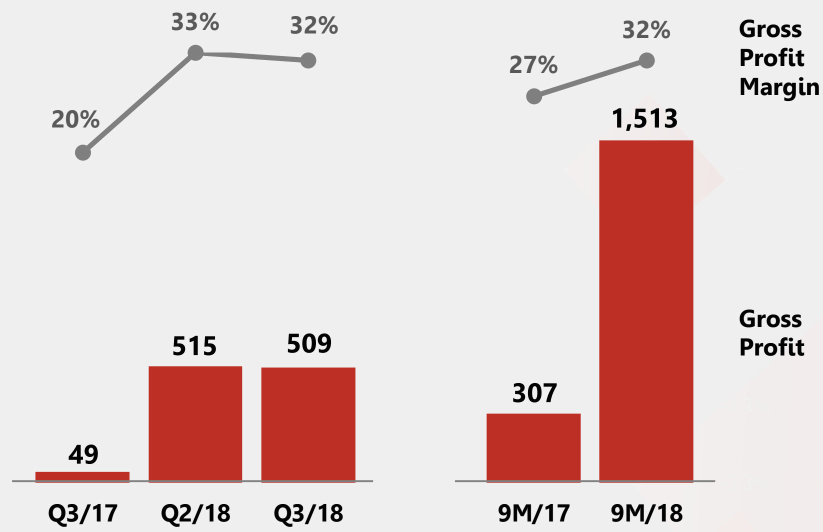
YoY	QoQ	9 months
▲ Rev. +1,375 / n/a	▲ Rev. +37 / +2%	▲ Rev.+3,521 / n/a



- **YoY, 9M: Total revenue increased** from higher electricity sales volume due to the COD of both phases since November 2017 and higher sales price
- **QoQ: Total revenue increased** from higher electricity sales price following the increase in natural gas prices

Quarterly Gross Profit & Gross Profit Margin
(THB Million, %)

YoY	QoQ	9 months
▲ GP +460 / n/a	▼ GP -6 / -1%	▲ GP +1,206 / n/a
▲ GPM +12%	▼ GPM -1%	▲ GPM +5%

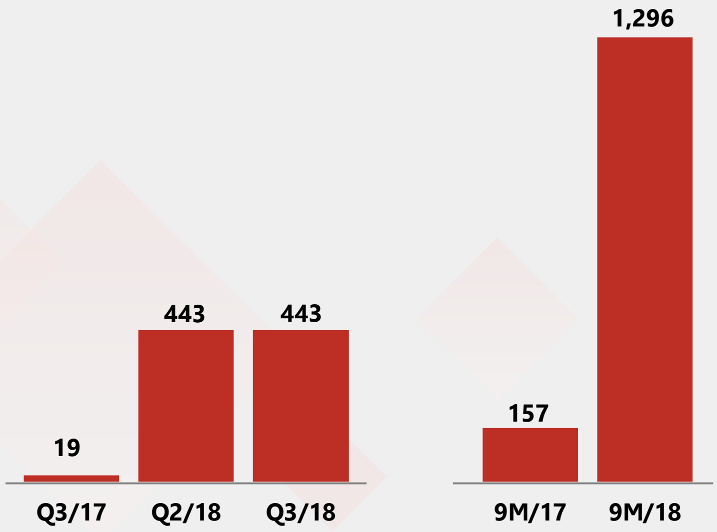


- **YoY, 9M: Gross profit increased** from higher electricity sales volume due to the COD of both phases since November 2017 and higher sales price
- **QoQ: Gross profit slightly decreased** from the increase in natural gas prices while Ft rate remained constant

IRPC-CP Power Plant (SPP) : Power Sales

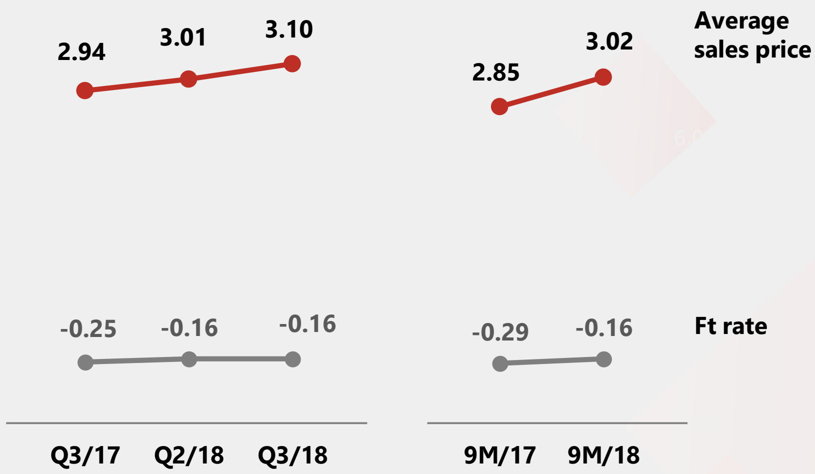
Quarterly power sales volume
(GWh)

YoY	QoQ	9 months
▲ +424 / n/a	Unchanged	▲ +1,139 / n/a



- **YoY, 9M: Power sales volume increased** due to the COD of both phases since November 2017
- **QoQ: Power sales volume remain the same**

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

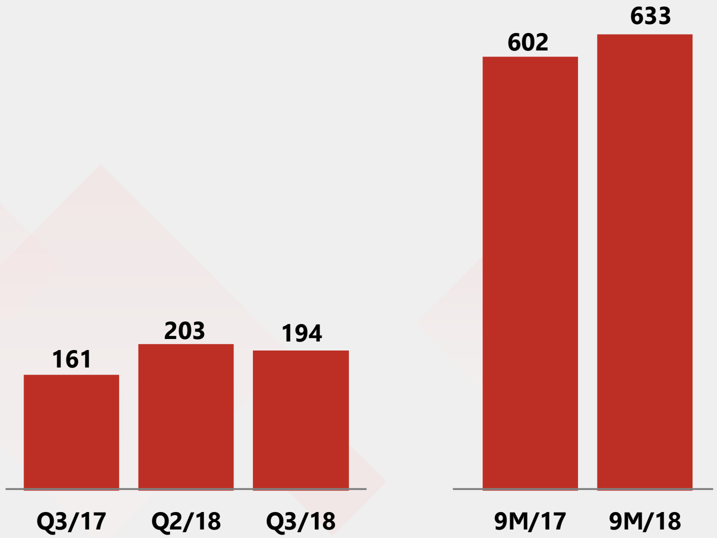


- **QoQ, YoY, 9M: Average sales price increased** following the increasing trend of natural gas prices

IRPC-CP Power Plant (SPP) : Steam Sales

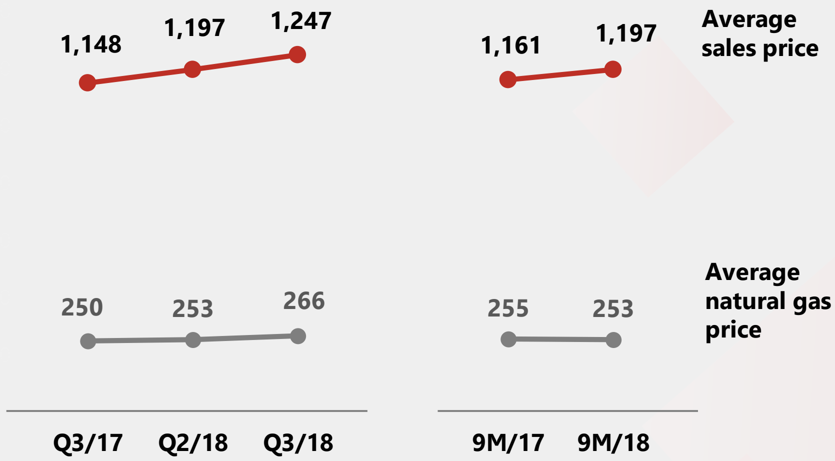
Quarterly steam sales volume
('000 tons)

YoY	QoQ	9 months
▲ +33 / +20%	▼ -9 / -4%	▲ +31 / +5%



- **YoY, 9M: Steam sales volume increased** due to the COD of both phases since November 2017.
- **QoQ: Steam sales volume slightly decreased**

Quarterly average sales price & Average natural gas price
(THB/ton, THB/MMBTU)

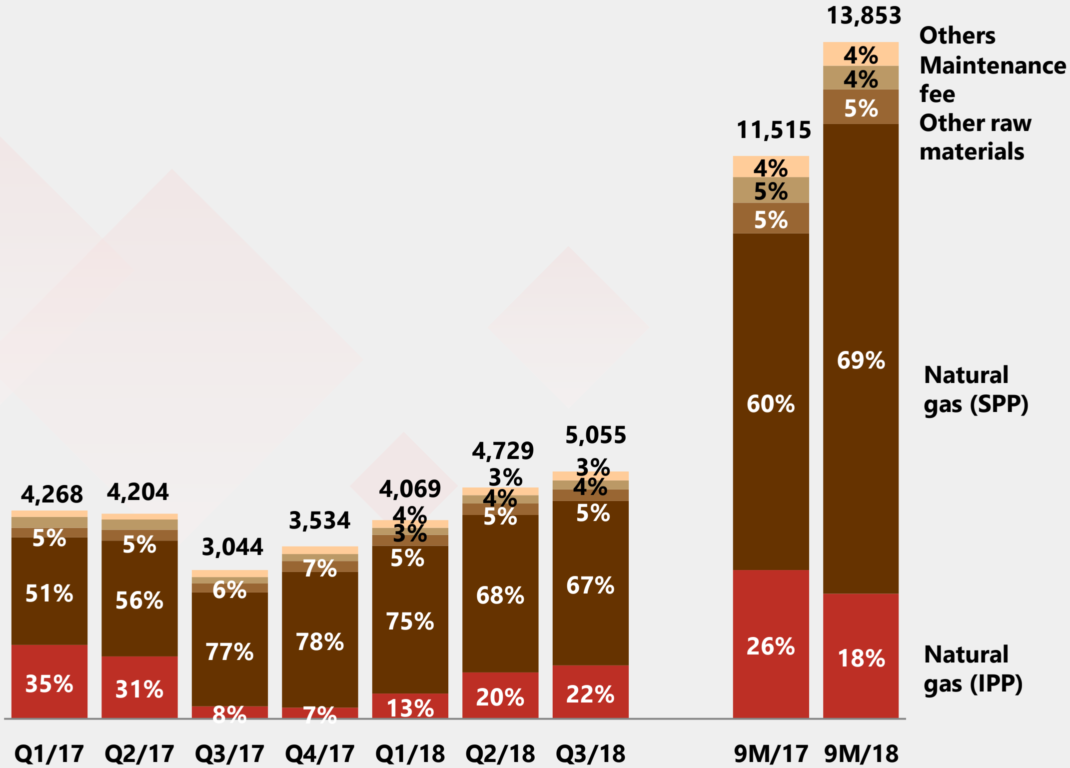


- **QoQ, YoY, 9M: Average sales price increased** following the increasing trend of natural gas prices

Cost of Sales and Services

Quarterly cost of sales and services*

(THB Million)



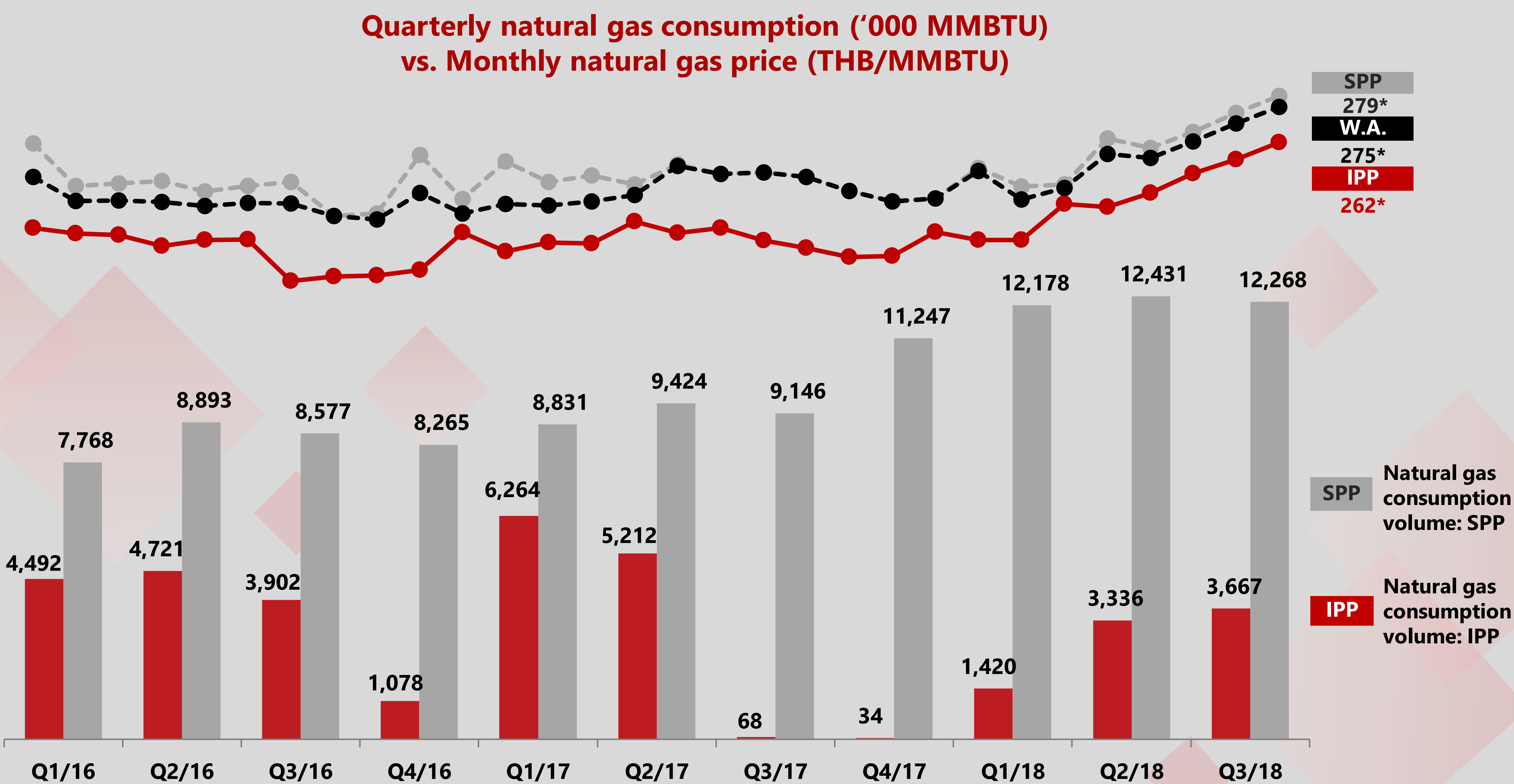
YoY	QoQ	9 Months
▲ +2,011 /+66%	▲ +326 / +7%	▲ +2,338 / +20%

- **YoY, 9M: Cost of sales and service increased** due to higher SPP natural gas consumption from full operation of IRPC-CP and higher natural gas prices

- **QoQ: Cost of sales and service increased** due to higher natural gas prices, with slight increase in natural gas consumption from Sriracha Power Plant

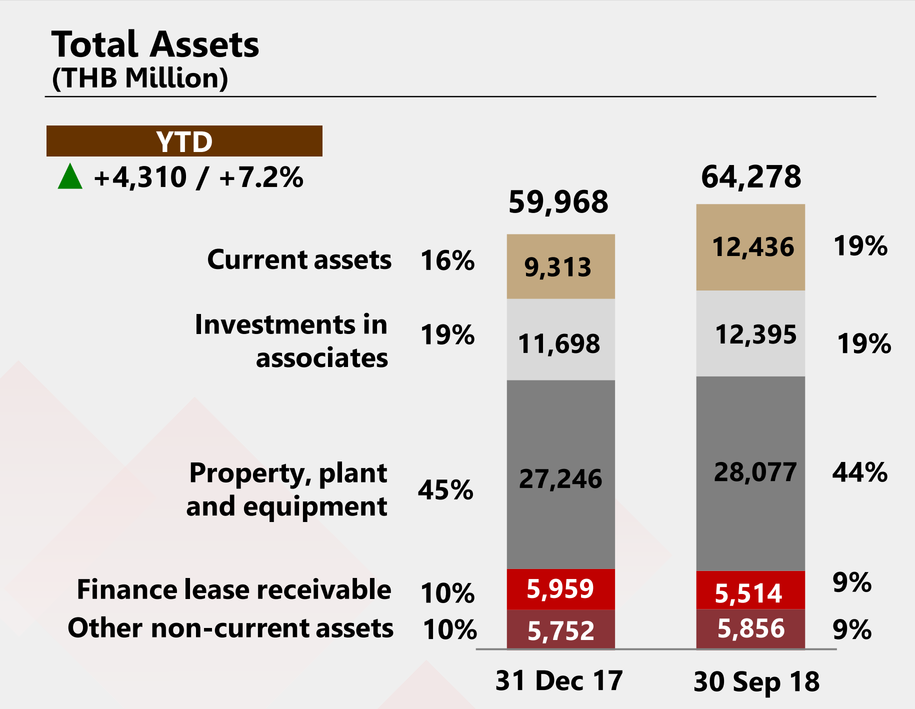
Remark: *Cost of sales and services excludes depreciation and amortization expenses

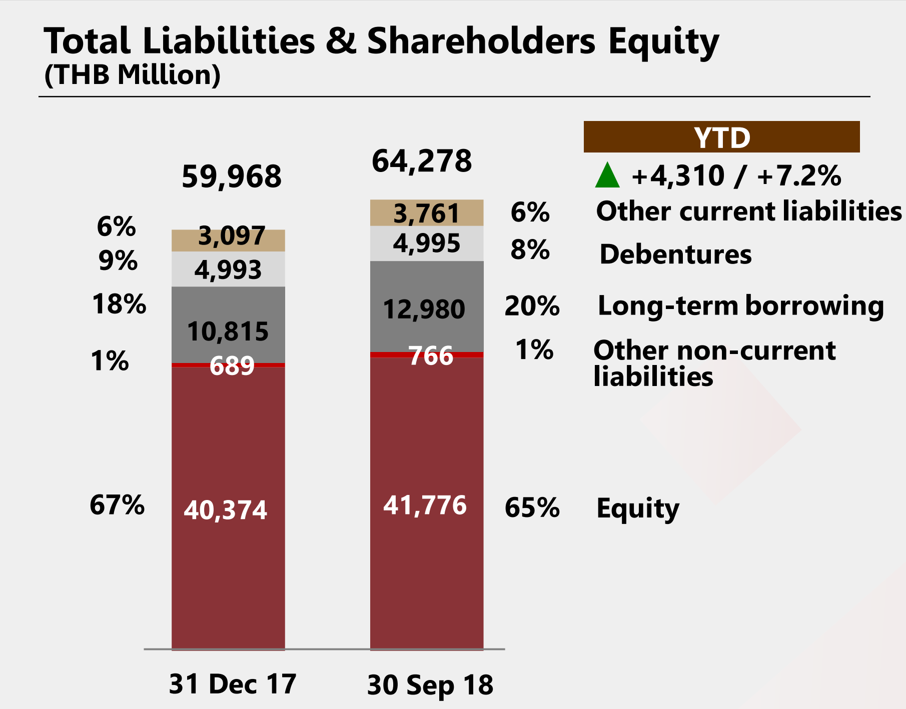
Natural Gas Consumption vs Price Trend



Remark: *Latest prices as of 30 September 2018

Financial position of GPSC and subsidiaries





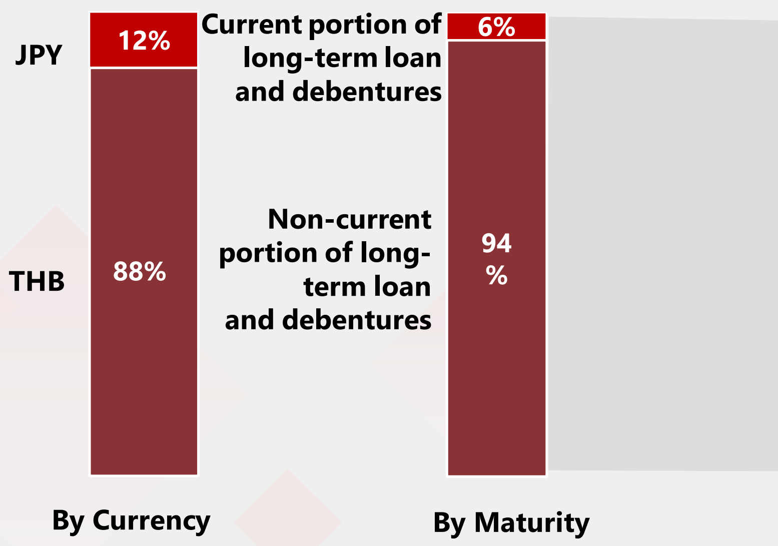
- **Total assets** were Baht 64,278 million, increased by Baht 4,130 million or 7% from 31 December 2017.
- The main increase resulted from the increase in current assets, additional investments in the additional capital paid-up in the associates and the increase in property, plant & equipment that are still under construction.

- **Total liabilities** were Baht 22,502 million, increased by Baht 2,908 million or 15% from 31 December 2017 mainly due to long-term loan from financial institutions and other payables.
- Equity were was Baht 41,776 million, increased by Baht 1,402 million or 3% from 31 December 2017, mainly from increase in the unappropriated retained earnings and increase in non-controlling shareholders equity.

Well-managed debt profile and continuous deleveraging

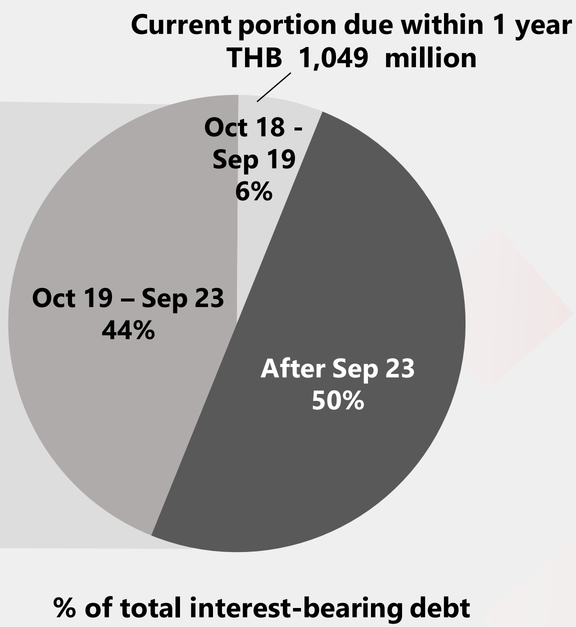
Debt Profile

Total interest-bearing debt : THB 17,974 million



- As of 30 September 2018, total debt at was in THB and JPY currency.
- The interest-bearing debt is comprised of long-term loan and debentures which includes 6% of current portion.

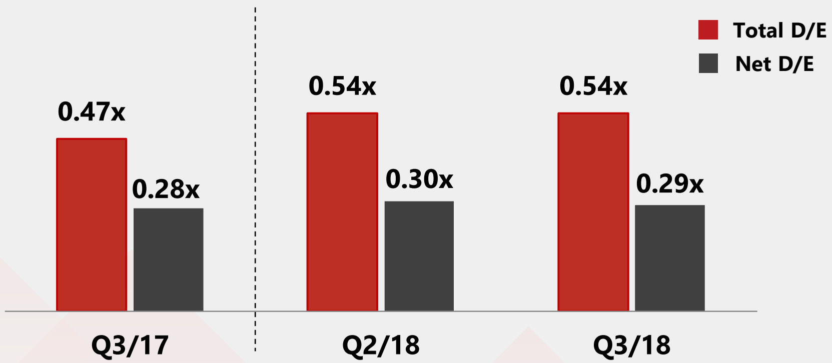
Debt Repayment Plan



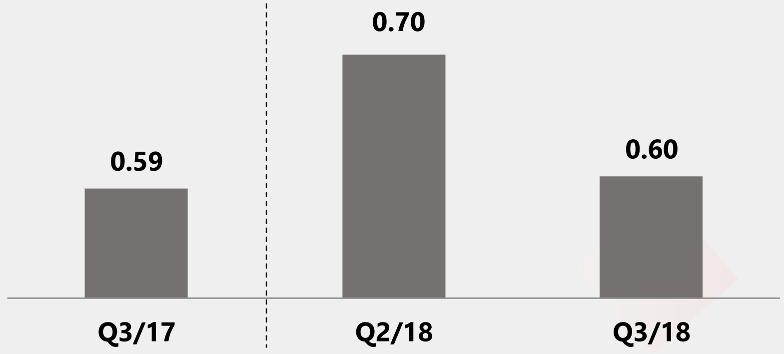
- Non-current portion of interest-bearing debt equals to THB 16,924 million while current portion equals to THB 1,049 million.
- 44% of total interest-bearing debt will be repaid between October 2019 – September 2023.

Key Financial Ratios

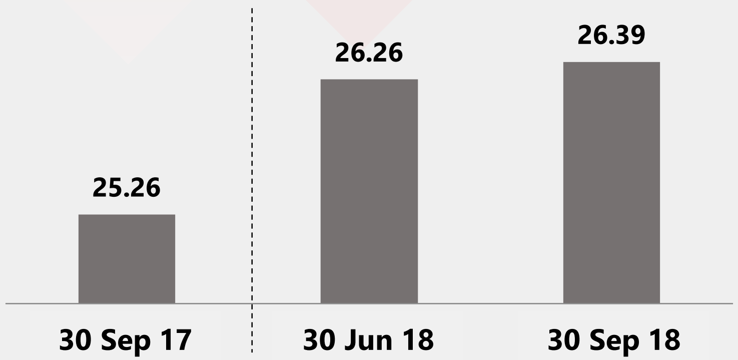
Total D/E and Net Debt/ Equity ratio (Times)



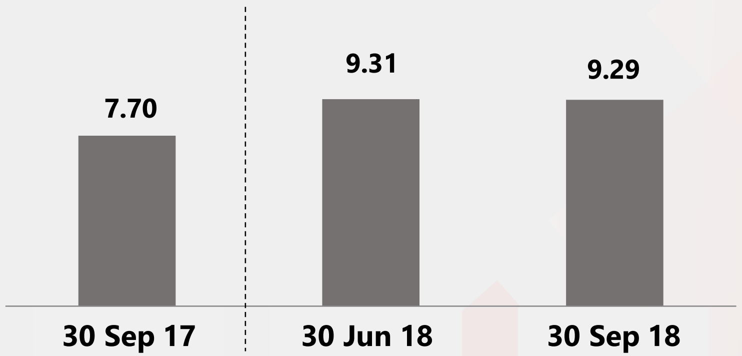
Earning per share (EPS) (Baht/share)



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



ROE (%)



THANK YOU

Please scan to complete the survey

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APPENDIX

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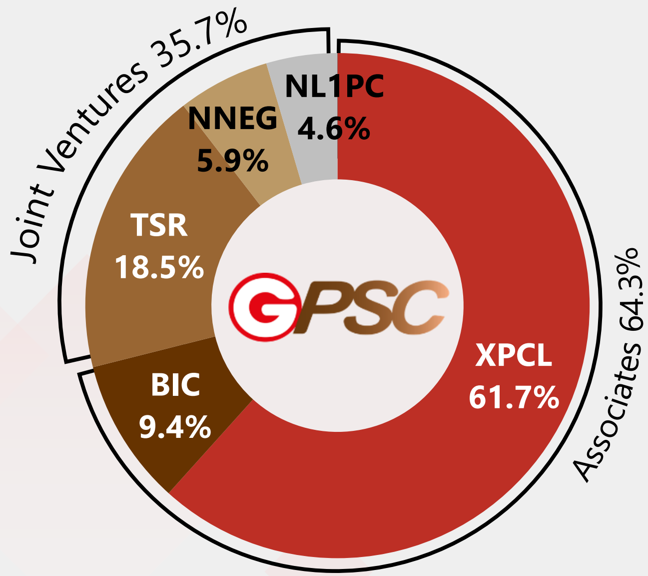
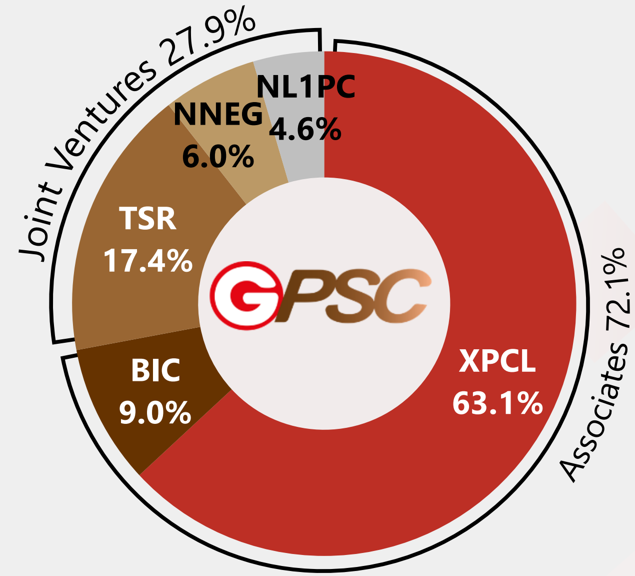
Investment in Associates and joint ventures

Proportion of GPSC's investment in associates and joint ventures at Q2/18 and Q3/18 (THB Million, %)



Q2/2018: Total of THB 9,343 million



Q3/2018: Total of THB 9,472 million

- GPSC's investment in associates and joint ventures increased from THB 9,343 million at Q2/18 to THB 9,472 million at Q3/18 or **approximately THB 129 million or 1.38% increase.**
- The **increase in investment in Q2/18 was mainly from the investment in XPCL which increased by THB 215 million** while the share of profit from associates and joint ventures in Q3/18 contributed to an increase in the investments for THB 131 million.

2018-2019 Maintenance schedule: Sriracha and Rayong plants

Plant	Tag no.	Description	2018						2019					
			Q3			Q4			Q1			Q2		
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CUP-1	H-13701	Aux. Boiler.11									15 3Y 28			
	N-13901	GTG11								12 MI 5				
	H-13702	HRSG11								12 3Y 5				
	N-13902	GTG12												
	H-13703	HRSG12										07 1Y 17		
	N-13903	GTG13	7 HG 20											
	H-13704	HRSG13	7 3Y 20											
	N-13904	GTG14							17 HG 30					
	H-13705	HRSG14							17 3Y 30					
	N-13961	GTG15												
	H-13761	HRSG15				16 1Y 26								
	N-13962	GTG16												
	H-13762	HRSG16							3 1Y 13					
CUP-2	H-23701	Aux. Boiler.21	1 1Y 11											
	N-23901	GTG21												
	H-23701	HRSG21									9 1Y 19			
	N-23902	GTG22												
	H-23702	HRSG22												12 1Y 22
	N-23911	Steam Turbine21												
CUP-3	H-33701	Aux. Boiler 31		4 1Y 14										
	H-33711	Aux. Boiler 32			26/9 1Y 6/10									
	H-33712	Aux. Boiler 33				14 1Y 24	14/10 – 1/12							
SRC	11MB	GT11					MO							
	1-211-SG-101	HRSG#1					3Y							
	12MB	GT12					MO							
	1-211-SG-201	HRSG#2					3Y							
	STG	Steam Turbine 10					MO							

Notes Rayong Site

GTG
HG Hot Gas Path Inspection for Gas Turbine 14 days
MI Major Inspection for Gas Turbine 22 days

STG
Minor Minor Inspection for Steam Turbine 15 days
1MO 2nd Major Overhaul for Steam Turbine 23 days
2MO 2nd Major Overhaul for Steam Turbine 27 days

AB
1Y One Year Inspection Aux. Boiler 11 days
3Y Three Year Inspection Aux. Boiler 13 days

HRSG
1Y One Year Inspection HRSG 11 days
3Y Three Year Inspection HRSG 14 days

Other
1Y One Year Inspection NG Station Test Online
5Y Five Year Inspection NG Station (NDT) Online
FO Forced Outage Depending on physical damage

Notes Sriracha Site

GTG
CI Combustion Inspection for Gas Turbine 8 days
HGPI Hot Gas Path Inspection for Gas Turbine 26 days
MO Major Overhaul for Gas Turbine 33 days
RCIE Rotor and Casting Inspection Evaluation 49 days

HRSG
1Y One Year Inspection HRSG 8 days
3Y Three Year Inspection HRSG 33 days

Other
1Y One Year Inspection NG Station Test Online
5Y Five Year Inspection NG Station (NDT) Online
FO Forced Outage Depending on physical damage

2018-2019 Maintenance schedule: IRPC-CP

Plant	Unit	2018				2019			
		Q1 (A)	Q2 (A)	Q3 (A)	Q4 (F)	Q1 (F)	Q2 (F)	Q3 (F)	Q4 (F)
IRPC-CP	**Block 1**								
	CTG 21	E			A				
	HRSG 21	E			A				
	CTG 22	E			A				
	HRSG 22	E			A				
	STG 23								
	Block 2								
	CTG 31	E			A				
	HRSG 31	E			A				
	CTG 32	B						6	
	HRSG 32	B						6	
	STG 33							3	
	Aux. Boiler		YI				7		

Notes

YI Yearly Inspection 5 days
YI Yearly Inspection Aux Boiler 15 days
A CTG Inspection Level A 5 days
B CTG Inspection Level B 20 days
C CTG Inspection Level C 24 days
E EPC Inspection End of Warranty 3 days

* For 2019: numbers on the table are number of maintenance days