



TPI Polene Power Public Company Limited

Q2 2018 Opportunity Day
12 September 2018



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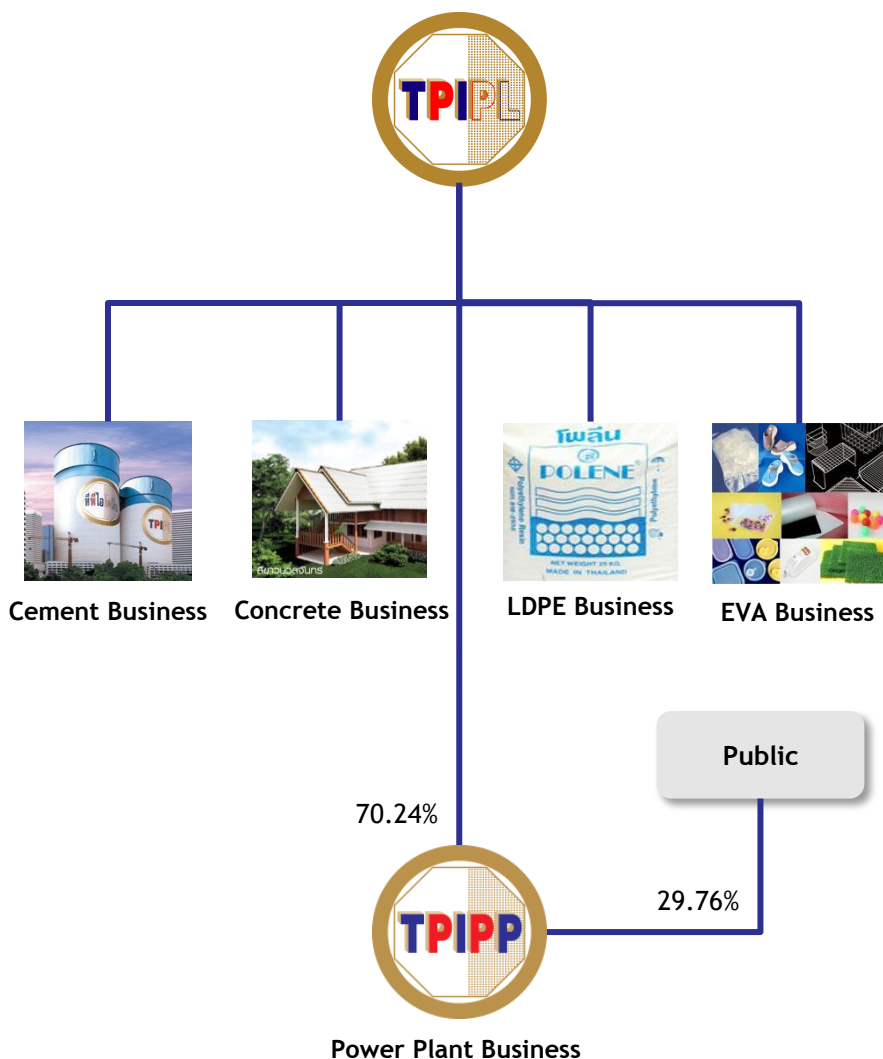
Company & Business Overview



TPIPP as TPIPL's Flagship for Power Business



Unit: THBmm



	TPIPP (Q2 2018)
Main Business	Electricity generation from waste heat and refused derived fuel (RDF) power plants and operation in petrol and gas stations.
Total Asset	27,583
Total Liabilities	2,826
Registered and Paid-up Capital	8,400
Total Equity	24,757
Total Revenue	1,977
Operating EBITDA *	1,163
Net Profit	966
Market Cap as of 29 June 2018	46,200

Remark : Operating EBITDA excluding net foreign exchange loss 109 THBmm and compensation from insurance claims of 71 THBmm.

TPIPP at a Glance



TPIPP is the largest operator of waste-to-energy (“WTE”) power plants in Thailand in terms of installed power generation capacity

Key Business Segments



Energy & Utilities

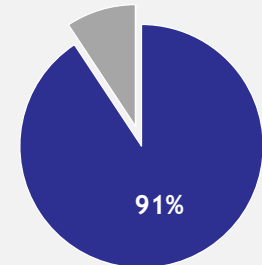
- Operates refuse derived fuel (“RDF”) fired & waste-heat recovery power plants with off-take arrangements with EGAT and TPIPL
 - 7 commercially operating power plants TG1-TG7-290MW.
 - 1 power plants construction completed, TG8-150MW, target to COD within Q3-Q4/2018
 - Peripheral RDF production facilities to support its RDF-fired power plant operations



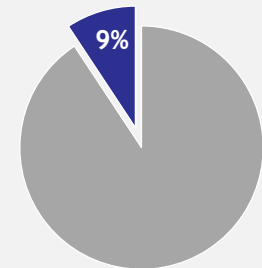
Petrol & Gas Stations

- Operates petrol stations and gas stations in Bangkok and other provinces in Thailand
 - Currently owns and operates 8 petrol stations, 1 gas station and 3 petrol and gas stations
 - Revenue derived from the sale of petrol, gas and convenience store goods

% of Q2 2018 Total Sales Revenue



THB 1,704.7 mm



THB 174.8 mm

Summary of TPIPP's Power Plant Operations



TPIPP's Power Plants (Operational & Under Construction)

Total capacity in operation **290 MW**

Total capacity of **150 MW**, construction completed, target to COD in Q3-Q4/2018

Grand total capacity **440 MW**

Power Plant	COD	Installed Capacity	Expiry Date ⁽²⁾	Off taker
In operation				
WHPP-40MW	Jun 2009	40 MW	Jul 2044	TPIPL
RDFPP-20MW	Jan 2015	20 MW	Jul 2044	EGAT
RDFPP-60MW	Aug 2015	60 MW	Jul 2042	EGAT
WHPP-30MW ⁽¹⁾	Jan 2016/Apr 2018	30 MW	Jul 2042	TPIPL/EGAT
RDFPP-70MW ⁽¹⁾	Apr 2018	70 MW	Dec 2045	EGAT
Coal-RDF-PP-70MW	Aug 2018	70 MW **	Jul 2042	TPIPL
Coal-PP-150MW	Q3-Q4 2018 *	150 MW	Jul 2042	TPIPL

* Target COD date

** Under an approved power generation capacity of 40 MW.

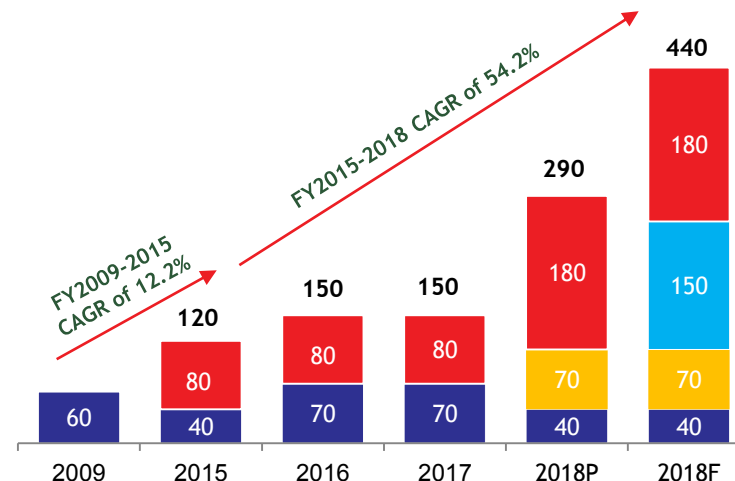
Notes:

- (1) After commencing commercial operations in January 2016, WHPP-30MW initially sold power to TPIPL to be used in TPIPL's cement production process until RDFPP-70MW commences commercial operations. Since RDFPP-70MW commenced commercial operations in April 2018, WHPP-30MW, together with RDFPP-70MW, operated as a 100 MW RDF-fired power plant (RDFPP-100MW) and sold power produced from such plant, using RDF and waste heat, to EGAT.
- (2) PPAs between the Company and EGAT has a term of five years beginning from COD and will be automatically extended for additional five-year terms, subject to at least 30 days' prior written notice from the Company to EGAT. RDFPP-20MW and RDFPP-60MW are situated on properties leased from TPIPL for a 30-year period, which expire in July 2044 and July 2042, respectively. The Company intends to extend the lease agreements.
- (3) Generates power by burning RDF and partially utilizing waste heat

TPIPP's Installed Capacity Breakdown by Fuel

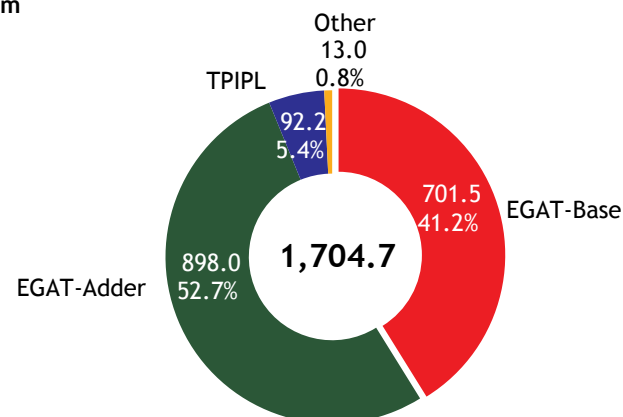
MW

■ Waste Heat ■ RDF⁽³⁾ ■ Coal/RDF ■ Coal



TPIPP's Q2 2018 Energy & Utilities Revenue Breakdown

THB mm



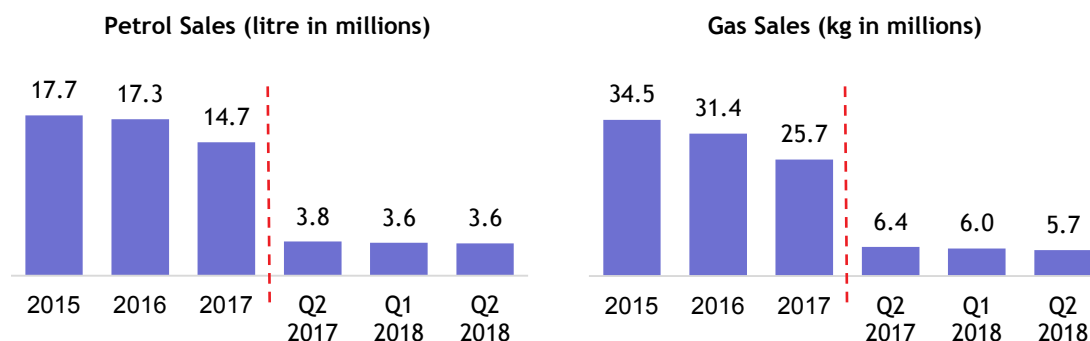
Summary of TPIPP's Petrol & Gas Station Operations

- TPIPP primarily sells petrol and gas to retail customers under the "TPIPL" brand
- The Company was granted the license to use the trademark of TPIPL in accordance with a 10-year trademark licensing agreement dated March 7, 2016 between the Company and TPIPL (the "TPIPL Trademark Agreement") in connection with the Company's sales of certain petrol and gas products

Breakdown of TPIPP's Petrol & Gas Stations by Type and Location

Location	Number of petrol stations	Number of gas stations	Number of petrol and gas stations	Total
Bangkok	2	-	1	3
Saraburi province	4	1	1	6
Nakornsawan province	1	-	-	1
Ubonrajthani province	-	-	1	1
Samutprakan province	1	-	-	1
Total	8	1	3	12

Historical Sales Volume



Supply of Petrol and Gas

Procurement of Petrol

- From oil companies at market price on a spot basis

Procurement of Petrol for Petrol Stations in the Saraburi province

- Also purchases from TPIPL at cost. TPIPL regularly purchases petrol at large volumes and at discounted prices in the open market

Procurement of Gas

- Agrees to purchase a minimum amount of gas from PTT Public Company Limited every month, ranging from 700,000 kilograms to 1,200,000 kilograms per month

Board of Investment Privileges

- One of the gas stations has been granted promotion certificates from BOI, which entitles it to a number of benefits including tax exemptions from certain taxes
 - Expiration of Full Income Tax Exemption:
 - July 2017
 - Expiration of 50% Income Tax Reduction:
 - July 2022

Mutually Beneficial Support Framework with TPIPL

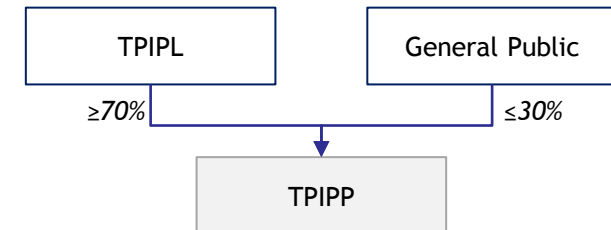


Complementary Sale & Purchase Relationship with TPIPL Supports Continuing Development of Both Companies

Backing and Continuing Support from Recognized Shareholder, TPIPL

- One of the leading cement manufacturers in the country founded in 1987 and is listed on the Stock Exchange of Thailand since 1990
- Primarily engages in the business of manufacturing and selling cement & low-density polyethylene/ethylene vinyl acetate plastic resin as well as selling construction materials

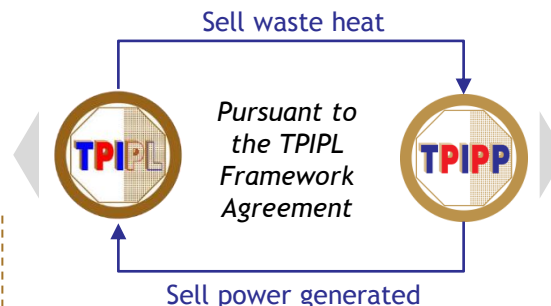
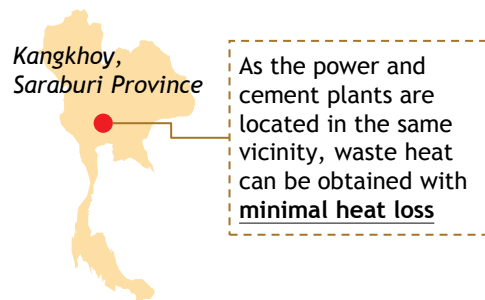
Shareholding
Structure
Post IPO



Waste Heat Supply & Power Sales Arrangements with TPIPL

TPIPL sells waste heat to TPIPP

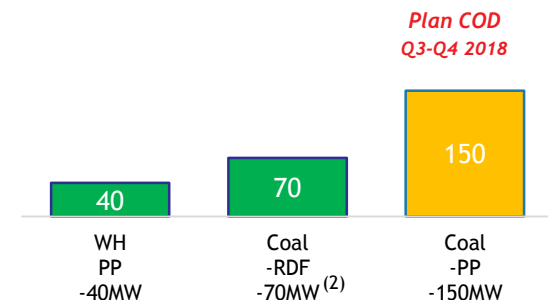
TPIPP Utilizes Waste Heat Emitted from TPIPL's Cement Production Process



TPIPP sells power to TPIPL

Pursuant to the respective PPAs⁽¹⁾

Installed Power Generation Capacity (MW) with TPIPL as Offtaker



Notes :

(1) PPAs do not specify a contracted power generation capacity

(2) TG7 COD in Aug 2018. (under an approved power generation capacity of 40 MW)



Financial Highlights

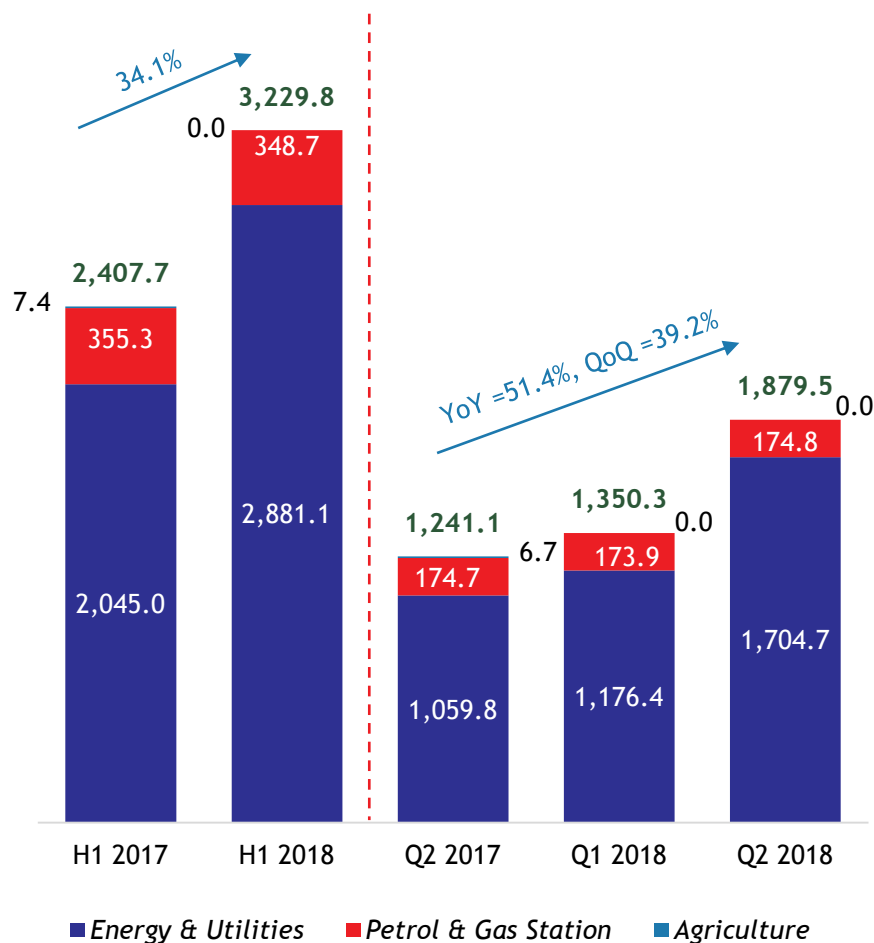


Revenue

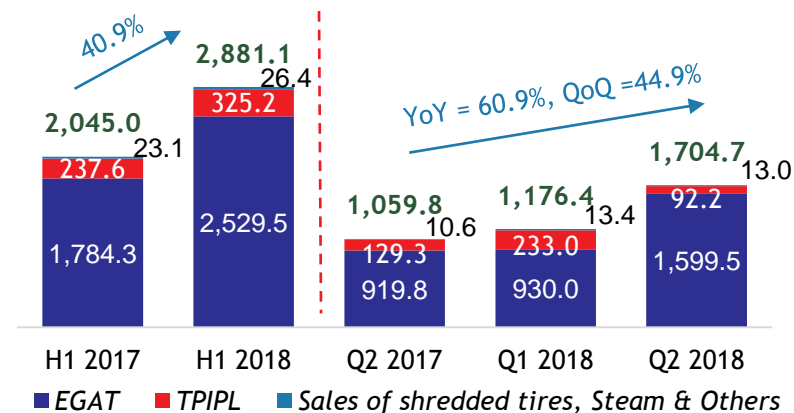
Diversified Revenue Streams Led by Growing Revenues from Energy & Utilities Division



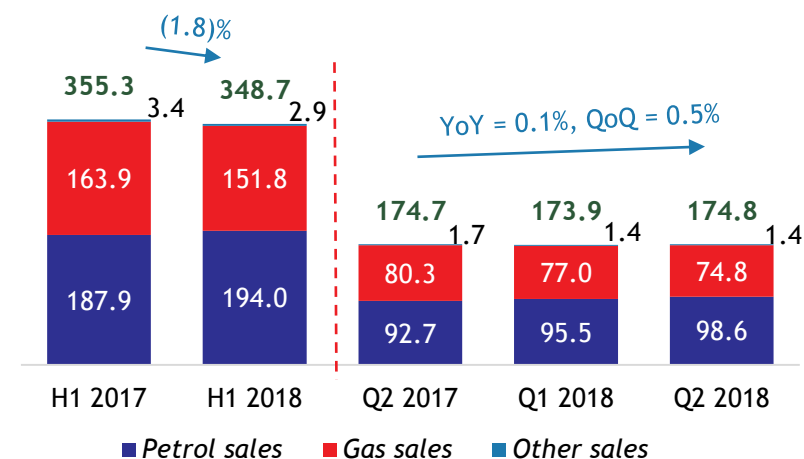
Total Revenue from Sales of Goods (THBmm)



Revenue from Energy & Utilities (THBmm)



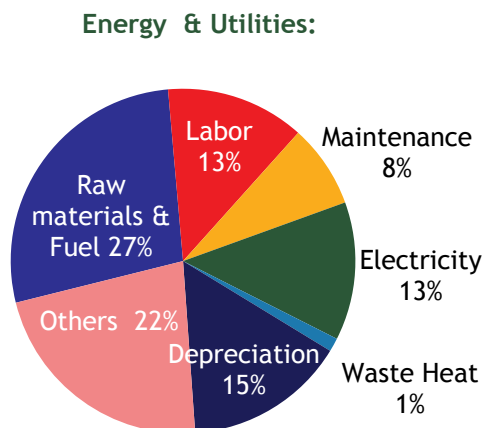
Revenue from Petrol & Gas Station (THBmm)



Cost of Sales & Gross Profit

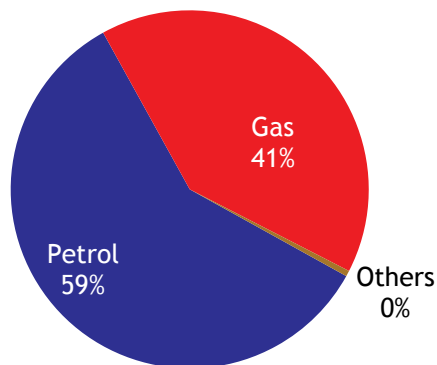


Q2 Y2018 Cost of Sales Breakdown (THBmm)



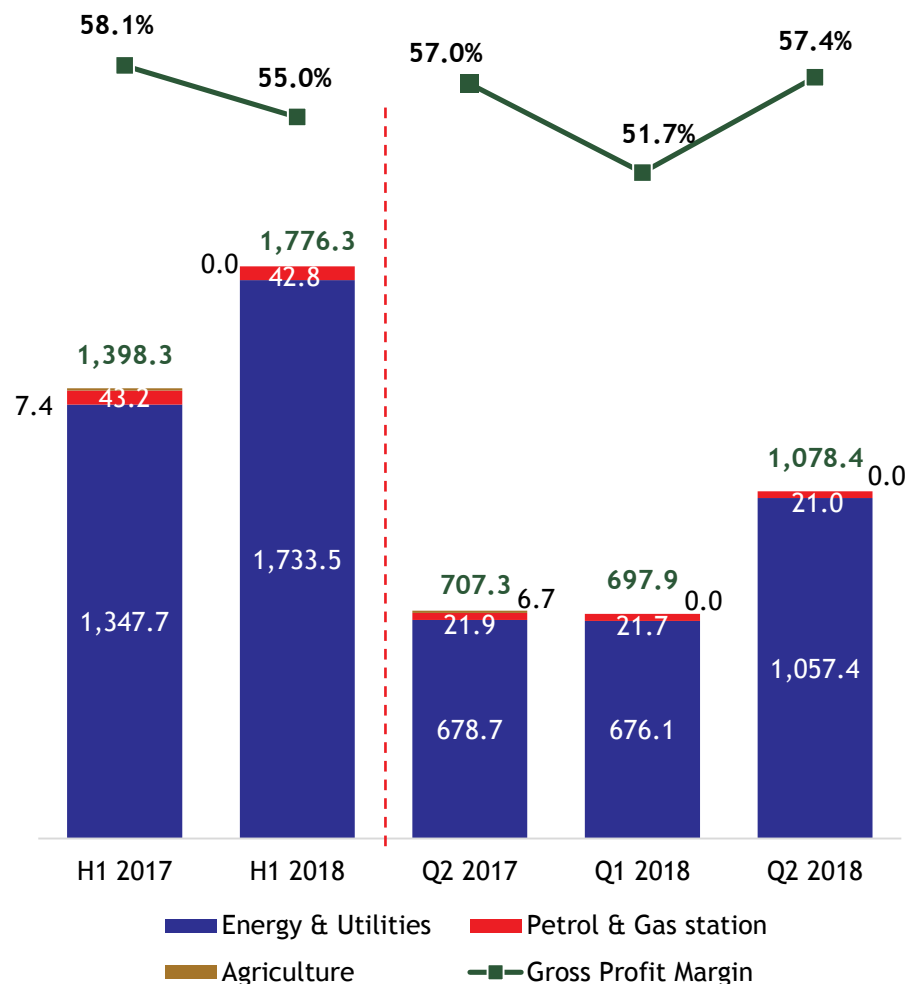
Total: THB 647.3 mm

Petrol & Gas Station:



Total: THB 153.8 mm

Gross Profit (THBmm) and Gross Profit Margin⁽¹⁾ (%)



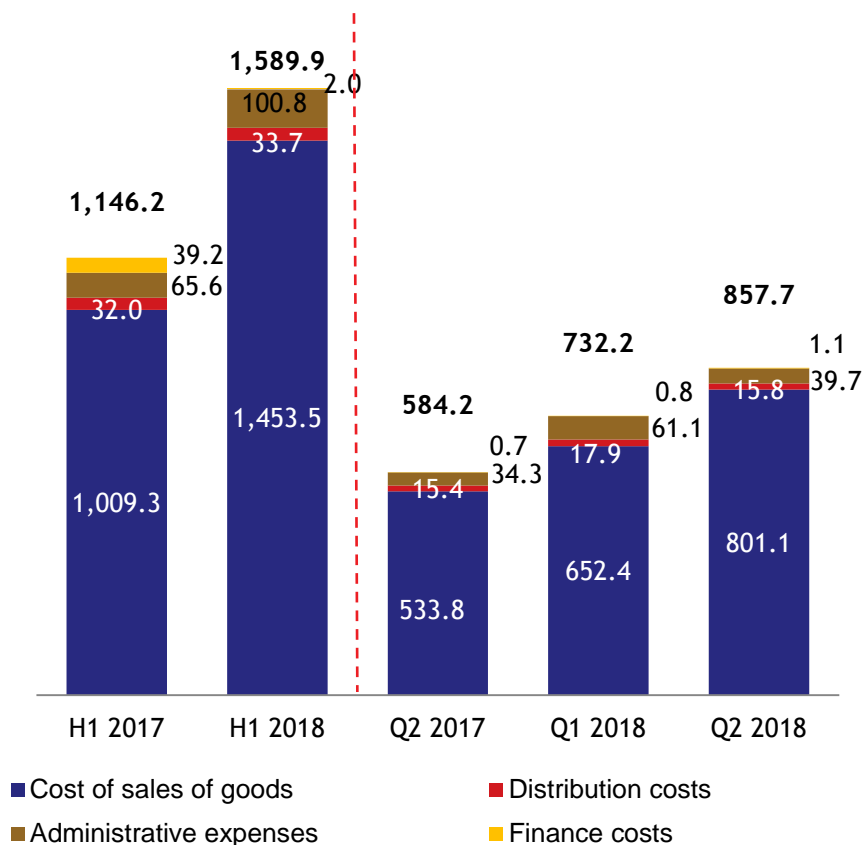
Note:

(1) Gross profit margin = Gross profit (loss) / Revenue from sales of goods x 100

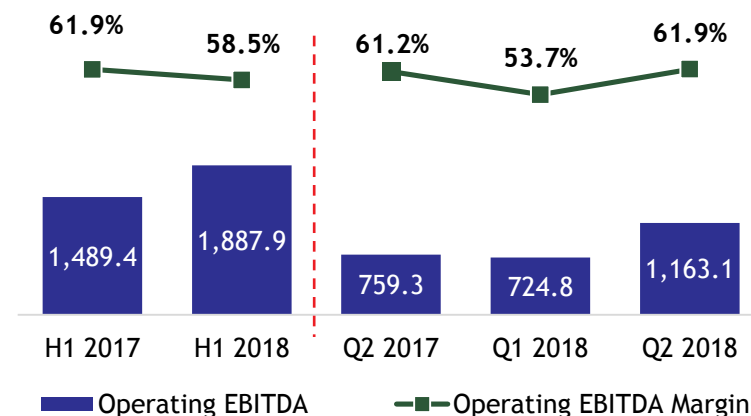
Cost & Expenses vs. EBITDA & NPAT



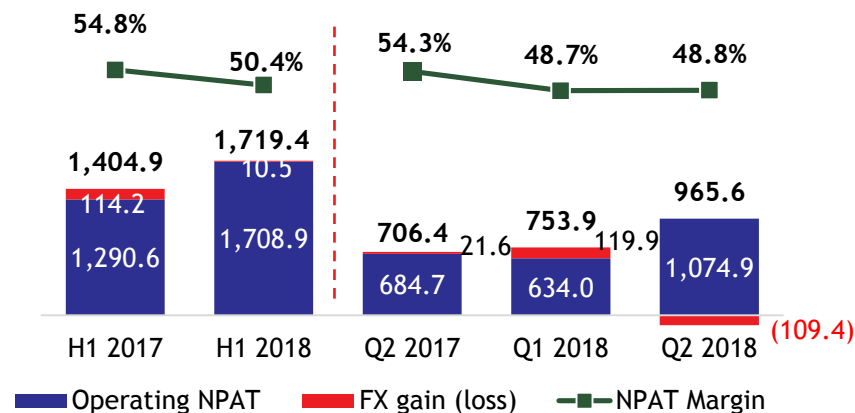
Cost & Expenses Items (THBmm)



Operating EBITDA⁽¹⁾ (THBmm) and Operating EBITDA margin⁽²⁾ (%)



NPAT (THBmm) and NPAT margin⁽³⁾ (%)



Notes:

(1) Operating EBITDA exclude net foreign exchange gain(loss) and compensation from insurance claims. The Company considers EBITDA to be an important performance measure and the Company believes that EBITDA is used by many industries and investors as one measure of cash flow from operations. EBITDA should not be considered by an investor as an alternative to actual cash flow from operations as determined in accordance with TFRS, and is not a standard measure under TFRS. The Company's calculation of EBITDA may differ from similarly titled computations of other companies.

(2) Operating EBITDA margin = operating EBITDA / Revenue from sales of goods and services x 100

(3) Net profit margin = Profit (loss) for the year / Total Revenues x 100

Comparing Profit and Loss Statement - YoY and QoQ

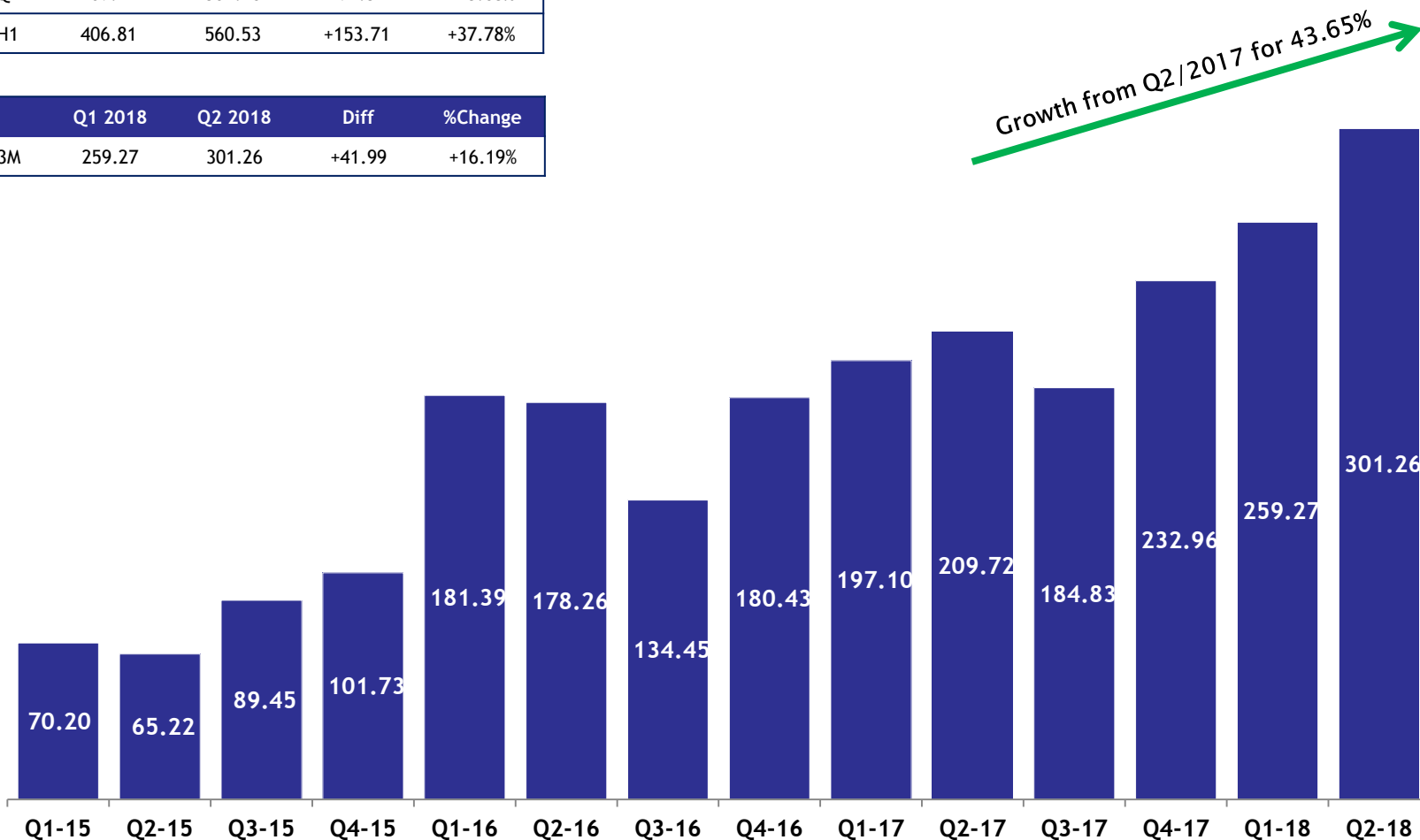
Unit : THBmm

	2017 6M	2018 6M	2017 Q2	2018 Q1	2018 Q2	Compare (%)		
						YoY (6M)	YoY (Q)	QoQ
Income								
Revenue from base tariff	1,000.2	1,435.0	523.5	641.3	793.7	43.5%	51.6%	23.8%
Revenue from power adder	1,021.7	1,419.7	525.6	521.6	898.0	38.9%	70.8%	72.2%
Other Sales Revenue	385.8	375.1	192.0	187.3	187.8	-2.8%	-2.2%	0.2%
Other income	12.9	32.9	10.3	14.5	18.4	155.5%	77.9%	27.0%
Operating Revenues	2,420.5	3,262.6	1,251.5	1,364.8	1,897.9	34.8%	51.7%	39.1%
Expenses								
Cost of sales of goods	1,009.3	1,453.5	533.8	652.4	801.1	44.0%	50.1%	22.8%
Selling & administrative expenses	97.6	134.4	49.7	79.0	55.5	37.7%	11.6%	-29.8%
Operating expenses	1,107.0	1,587.9	583.6	731.4	856.5	43.5%	46.8%	17.1%
Plus Depreciation & Amortization	175.8	213.2	91.4	91.5	121.8	21.3%	33.3%	33.1%
Operating EBITDA	1,489.4	1,887.9	759.3	724.8	1,163.1	26.8%	53.2%	60.5%
Compensation from insurance claims	0.1	115.7	0.0	45.1	70.6	200,572.4%	179,847.3%	56.5%
Net foreign exchange gain (loss)	114.2	10.5	21.6	119.9	(109.4)	-90.8%	-605.7%	-191.2%
Total EBITDA	1,603.7	2,014.1	780.9	889.8	1,124.3	25.6%	44.0%	26.4%
Investment income	28.8	25.7	27.4	17.4	8.3	-10.7%	-69.5%	-51.9%
Finance costs	39.2	2.0	0.7	0.8	1.1	-95.0%	70.5%	35.7%
Income tax expense	(12.5)	(105.2)	(9.9)	(61.0)	(44.2)	739.4%	345.7%	-27.5%
Less Depreciation & Amortization	175.8	213.2	91.4	91.5	121.8	21.3%	33.3%	33.1%
Net Profit (loss) for the year	1,404.9	1,719.4	706.4	753.9	965.6	22.4%	36.7%	28.1%

Generated Amount of Electricity (M.KWh)

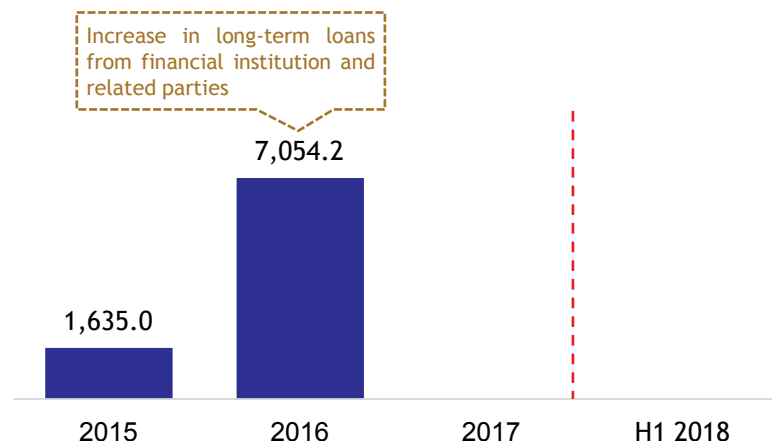
	2017	2018	Diff	%Change
Q2	209.72	301.26	+91.54	+43.65%
H1	406.81	560.53	+153.71	+37.78%

	Q1 2018	Q2 2018	Diff	%Change
3M	259.27	301.26	+41.99	+16.19%

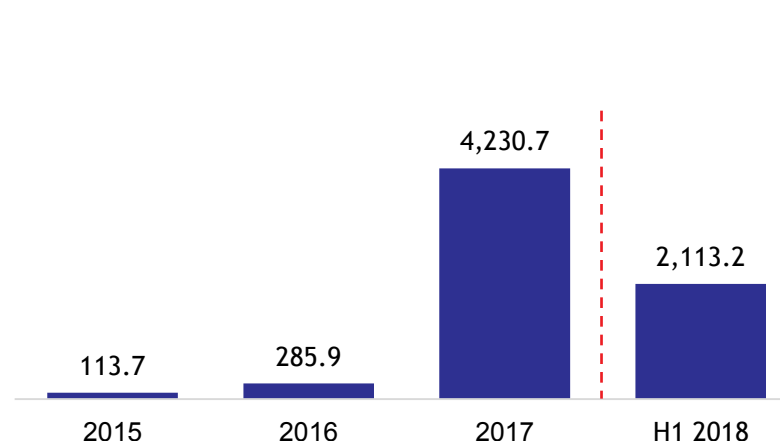


Debt Profile and Leverage Ratios

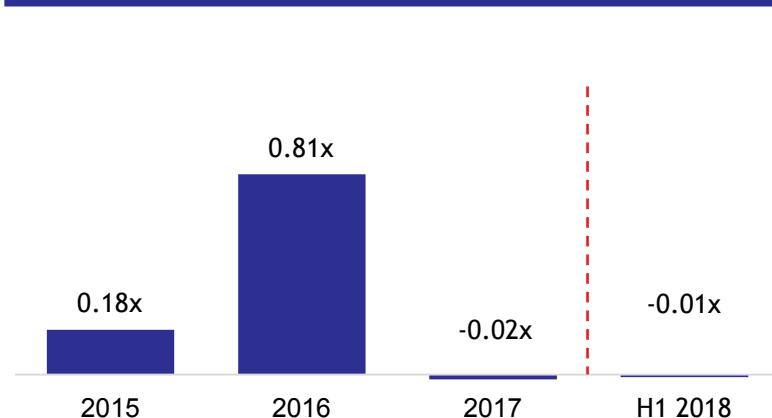
Interest Bearing Liabilities (THBmm)



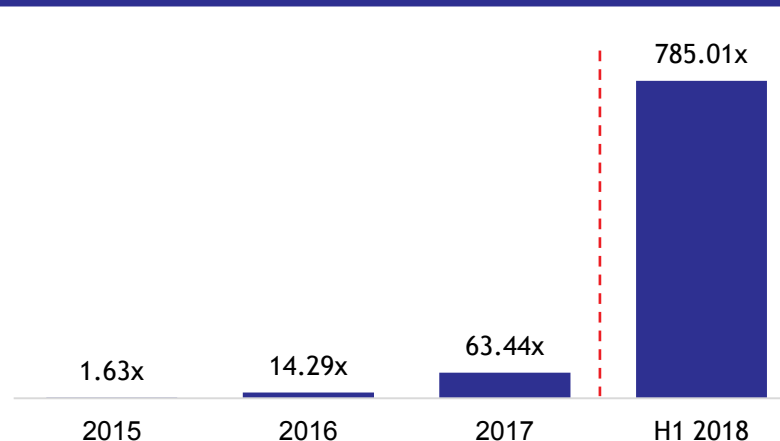
Cash / Cash Equivalents and Current Investment (THBmm)



Net Debt⁽¹⁾ to Equity (x)



Interest Coverage Ratio⁽²⁾ (x)



Notes:

(1) Net debt = Short-term loan from financial institutions + Short-term loan from related parties + Current portion of long-term loan from financial institutions + Long-term loan from financial institutions + Long-term loan from related parties - Cash and cash equivalents

(2) Interest coverage ratio = Cash generated from operating activities / finance cost paid



Key Investment Highlights



Summary of Key Investment Highlights



1 *Expertise in Waste Management & WTE Renewable Technologies*

2 *Strong Relationships with Key Players in the Upstream & Downstream Industry Value Chain*

3 *Supportive Government Policies for Renewable Energy (“RE”) Power Generation in Thailand*

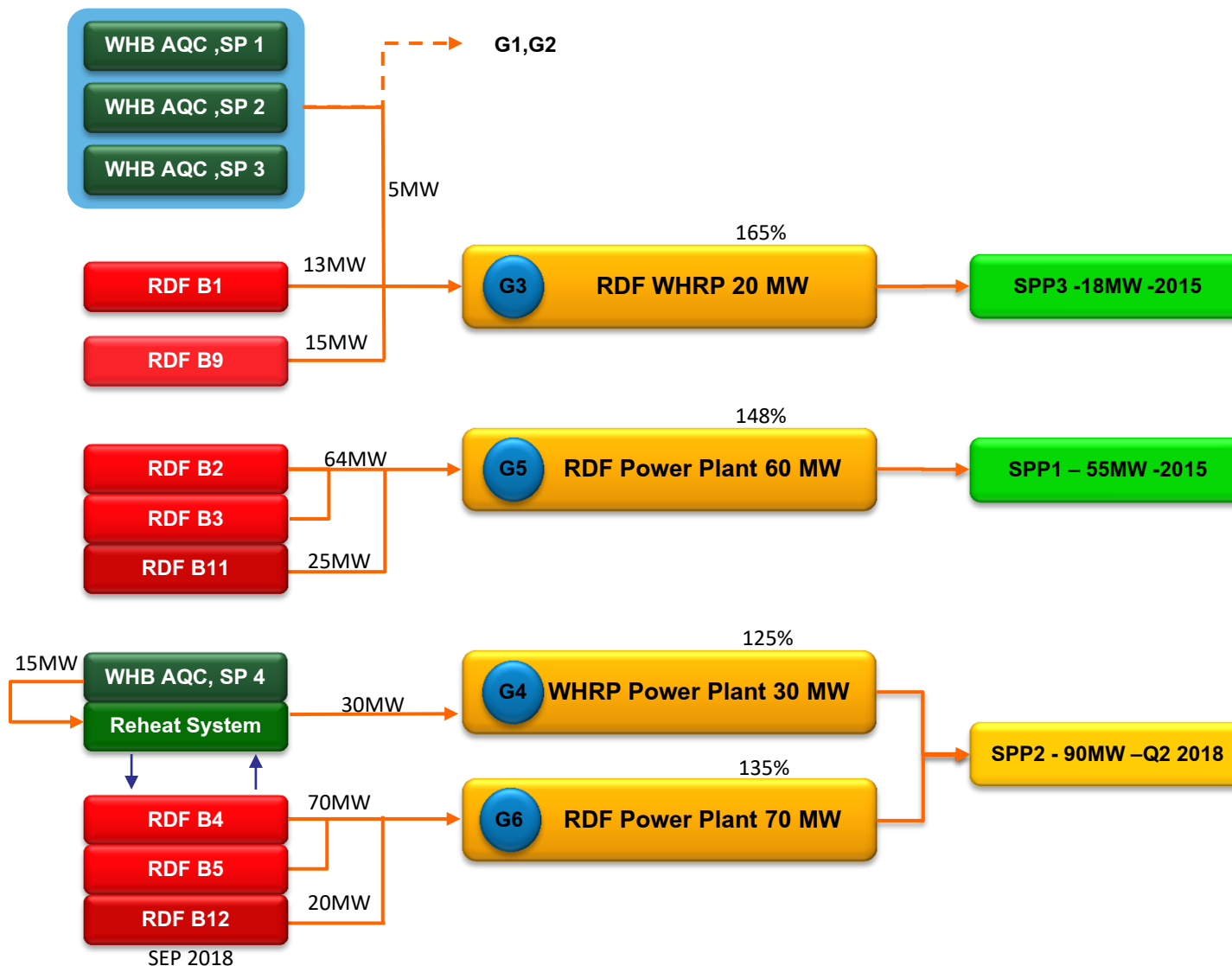
Capacity	2009	2016 & 2017	2018P	2018F
Power Plants with Electricity Sales to TPIPL	60 MW	70 MW	110 MW	260 MW
	Note (1)			
	TG1 20 MW	TG1 20 MW	TG1 20 MW	TG1 20 MW
	TG2 20 MW	TG2 20 MW	TG2 20 MW	TG2 20 MW
	TG3 20 MW	TG4 30 MW	TG7 (3) 70 MW ⁽²⁾	TG7 (3) 70 MW ⁽²⁾
				TG8 (4) 150 MW
Power Plants with Electricity Sales to EGAT	-	80 MW (PPA 73 MW)	180 MW (PPA 163 MW)	180 MW (PPA 163 MW)
		Capacity PPA	Capacity PPA	Capacity PPA
		TG3 20 MW 18 MW	TG3 20 MW 18 MW	TG3 20 MW 18 MW
		TG5 60 MW 55 MW	TG5 60 MW 55 MW	TG5 60 MW 55 MW
			TG4 30 MW 90MW	TG4 30 MW 90MW
			TG6 70 MW	TG6 70 MW
Total Power Capacity	60 MW	150 MW	290 MW	440 MW

Notes:

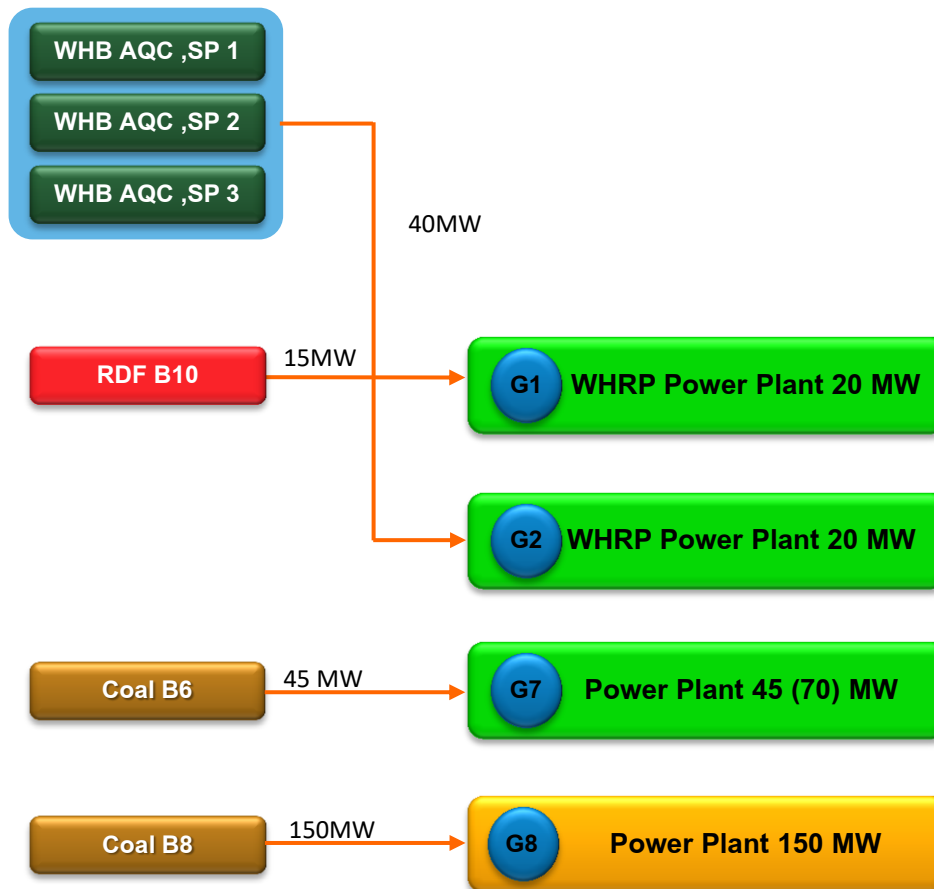
- (1) TPIPP completed the installation of additional boilers at RDFPP-20MW and WHPP-40MW in December 2016 and January 2017, respectively
 (2) Can be a backup for sales to EGAT during maintenance period of TG5 and TG6
 (3) TG7 COD in Aug 2018. (under an approved power generation capacity of 40 MW)
 (4) TG8 is targeted to COD in Q3-Q4 / 2018.

WH	Coal
RDF/WH	Coal/RDF

Overview of Power Plants (with PPA with EGAT)



Overview of Power Plants (with PPA with TPIPL)



2 Strong Relationships with Key Players in the Upstream & Downstream Industry Value Chain



Extensive network of waste suppliers provides TPIPP with a steady supply of waste for the operation of its WTE power plants while good relationship with EGAT creates revenue visibility

Extensive Network of Suppliers for Waste delivered to Saraburi Plant

	<i>municipal governments and Waste companies</i>	<i>Provinces</i>	<i>Contracted Ton per Day</i>
✓ MSW deposit and Un-sorted Land fill waste purchase agreements	110	6	2,000
✓ Pre-Sorted Land Filled	53	10	2,500

Plants are invested by TPIPP

	<i>In Operation</i>	<i>Under Installation</i>	<i>Capacity ton per day</i>
✓ RDF Plant	4 <i>Na Dee-Samut Sakhon Ban Bueng-Chonburi Bang Sai-Ayutthaya Rayong</i>	-	800
✓ Semi Mobile Presorting Plant	5 <i>Nakhon Ratchasima (2) Rayong Ayutthaya Kanchanaburi</i>	-	1,000

Supportive Government Policies for Renewable Energy (“RE”) Power Generation in Thailand



Thai government's policies to promote power generation from renewable fuel sources remain favorable, which provides significant growth opportunities for TPIPP

Thai WTE Industry Outlook from Potential Waste Processing

Based on Thailand's capability to improve MSW processing, potential WTE capacity could reach 850-2,000 MW in the next 20 years

Parameter	Short-term Scenario (1-5 years)	Long-term Scenario (20 years)
MSW Generation	25 million tonnes/year	35-40 million tonnes/year
MSW used for WTE	25-35%	35-50%
Average LHV	1,793 kcal/kg	1,972 - 2,151 kcal/kg
Potential WTE Capacity	400 - 800 MW	850 - 2,000 MW
Load Factor	65-75%	70-75%
Potential Generation	2,600 - 4,560 GWh	5,600 - 12,500 GWh

Source: AWR Lloyd

Government Provide Significant Tariff Adders to TPIPP's RDF Power Plants

$$\text{Tariff} = \text{Energy Payment} + \text{THB3.5/kWh Adder}$$

In selling WTE power to EGAT, TPIPP is entitled to an adder⁽¹⁾ of THB3.5/kWh, payable in addition to the base price of power under the PPAs

TPIPP power plants currently receiving Tariff Adders:

1

RDFPP-20MW
Commenced operations

2

RDFPP-60MW
Commenced operations

3

RDFPP-100MW
Commenced operations

Note:

(1) Thai government is in the process of replacing the adder payment structure with a feed-in tariff scheme after the current adder payments expire. In this regard, the Thai government is currently in discussions with power producers who will be affected by such transition, including the Company

Strictly Private & Confidential



Progress Update



COD and BOI Schedule for each plant in 2018

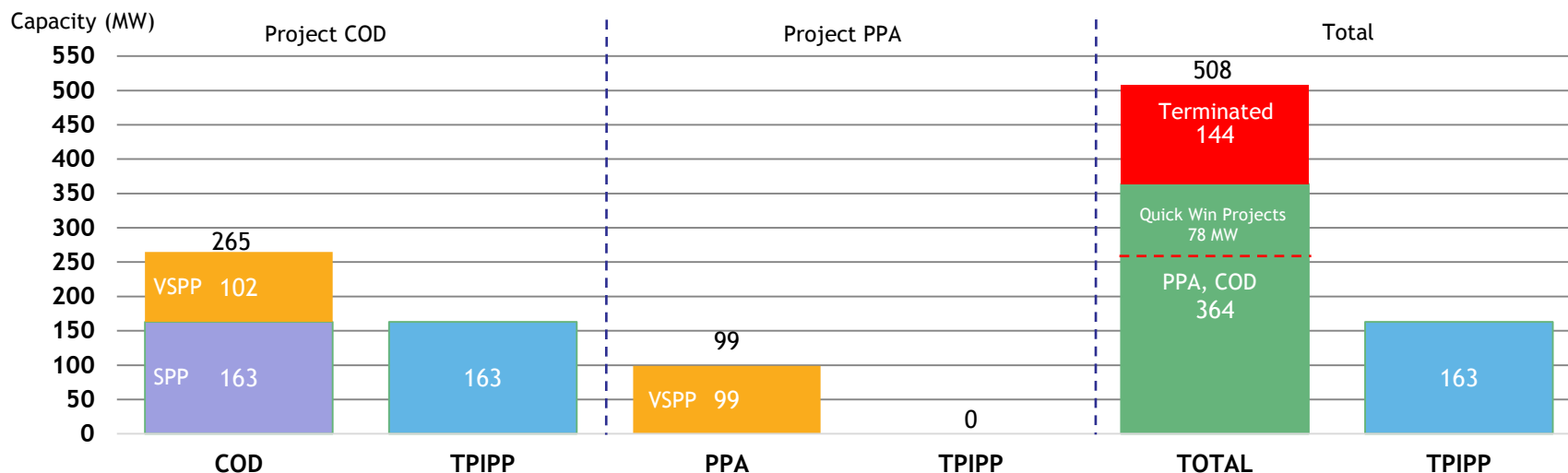


TG	Type	Off taker	BOI Approval	TAX INCENTIVE	COD
TG 1-2	WH	TPIPL	OCT 2007	8 Y	Jun 2009
TG 3	RDF	EGAT	OCT 2007	8 Y	Jan 2015
TG 4	WH	TPIPL/EGAT	JUL 2013	8Y	Jan 2016/Apr 2018
TG 5	RDF	EGAT	JUN 2013	8/5 Y	Aug 2015
TG 6	RDF	EGAT	MAR 2015	8 Y	Apr 2018
TG 7	RDF/Coal	TPIPL	-	-	Aug 2018
TG 8	Coal	TPIPL	DEC 2016	8Y	Q3 - Q4 2018 (E)

Thailand's Largest WTE Power Plant Operator



Thai government's policies to promote power generation from renewable fuel sources remain favorable, which provides significant growth opportunities for TPIPP



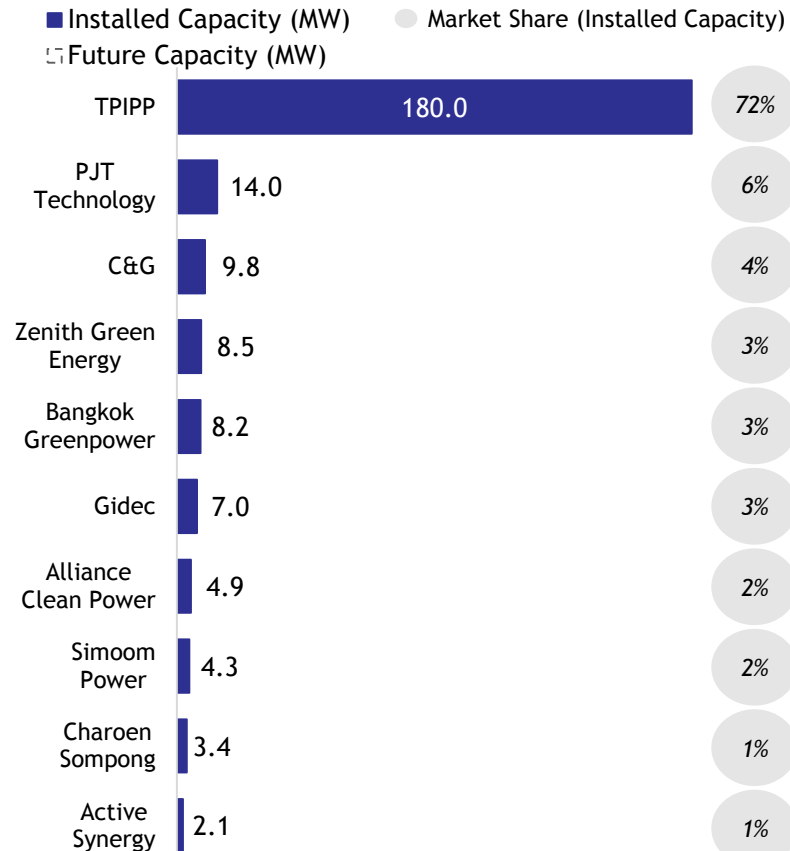
Status	SPP			VSPP			Total		
	No.	Install Capacity (MW)	PPA (MW)	No.	Install Capacity (MW)	PPA (MW)	No.	Install Capacity (MW)	PPA (MW)
1. COD	3	180	163	30	111	102	33	291	265
2. PPA	0	0	0	16	116	99	16	116	99
3. Agreement	1	20	20	0	0	0	1	20	20
4. Terminated Contract	0	0	0	28	144	121	28	144	121
5. Terminated Agreement	0	0	0	6	3	3	6	3	3
total	4	200	183	80	374	325	84	574	508

Thailand's Largest WTE Power Plant Operator



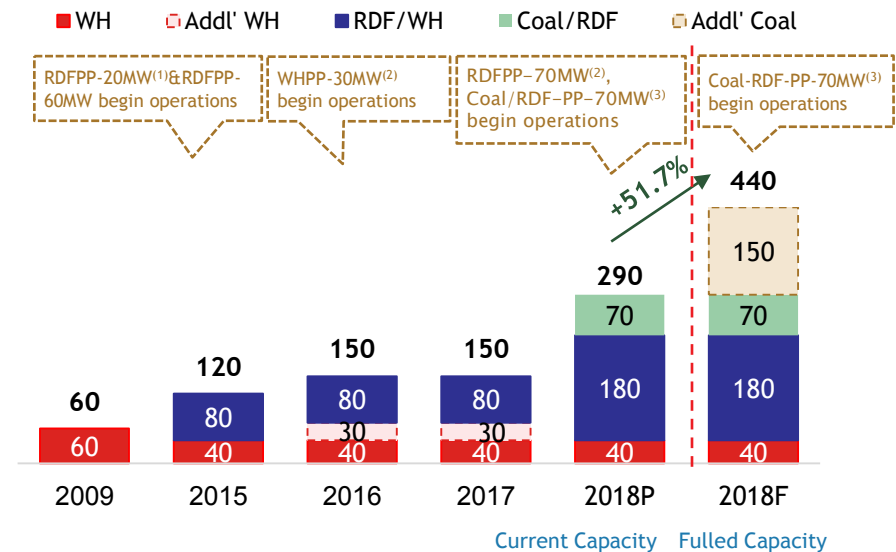
Thailand's Dominant WTE Player by Installed Capacity with Significant Future Capacity Growth in Progress

Largest Installed WTE Renewable Power Generation Capacity

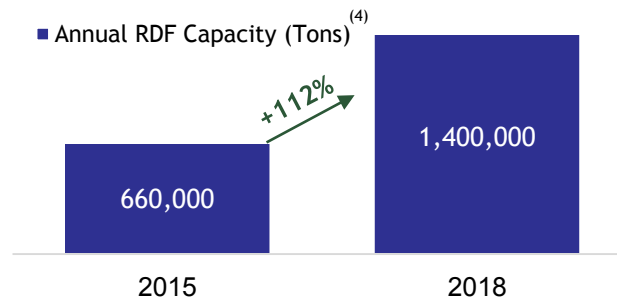


New entrants capacity limited to 10MW or less

Significant Expansion Underway (MW)



Process Largest Volume of RDF in Thailand



Notes:

Source: AWR Lloyd, ERC

- (1) In 2015, company transferred one of the three 20MW power generation unit from its waste heat recovery plant to RDFPP-20MW as it becomes commercially operational selling power to EGAT
- (2) Once RDFPP-70MW commences commercial operations, WHPP-30MW, together with RDFPP-70MW, will operate as a 100 MW RDF-fired power plant
- (3) Coal-RDF-PP-70MW is designed and constructed to enhance the Company's operational flexibility Coal-RDF-PP-70MW can be used as a backup power plant for the RDF-fired power plants (under an approved power generation capacity of 40 MW)
- (4) The annual RDF production capacity is calculated based on 330 working days per year

Quick win 78 MW.



Project	Province	Company	MW.	FIT (B/ton)	Tripping Fee (B/ton)	Technology
PAO Ayutthaya	Ayutthaya	PEA-encom	5	5.78	150	RDF
NakhonLuang	Ayutthaya	Synova	5	5.78	150	Gasification
NakhonLuang	Ayutthaya	Synova	8	5.78	150	Gasification
PAO Nonthaburi	Nonthaburi	Siam Power	8	5.78	-35	LF RDF-CFB
PAO Nonthaburi	Nonthaburi	-	5	3.76	-	BIO Gas
PAO Rayong	Rayong	GPSC	8	5.78	100	RDF-CFB
PAO Nong Khai	Nong Khai	-	6	5.78	-	
Krabi	Krabi	-	4.4	5.78	-	
Tak	Tak	-	5.5	5.78	-	
Udon Thani	Udon Thani	Metro mc	8	5.78	370	Gasification
Nong Khaem	Bangkok	A2	3	3.76	500	BIO Gas
On nut	Bangkok	A2	3	3.76	500	BIO Gas

Future WTE Project Schedule



Project	MSW QTY (Ton/day)	MW.	FIT (B/ton)	Tripping Fee (B/ton)	TOR	COD	Remarks
On Nut	> 1,000	> 20	3.66	< 900	SEP 18	2020	
Nong Khaem	> 1,000	> 20	3.66	< 900	SEP 18	2020	
Korat	500	10	5.78	<500	SEP 18	2020	
Songkhla	700	10	5.78	<500	Oct 18	2020	
Chon buri	700	10	5.78	<700	2019	2021	

Q & A