

# RATCH



RATCHABURI  
ELECTRICITY GENERATING  
HOLDING PCL.

## *J.P. Morgan Asia Yield 1x1 Forum*

*17-18 September 2015  
Tokyo, Japan*

# Agenda

Industry Overview

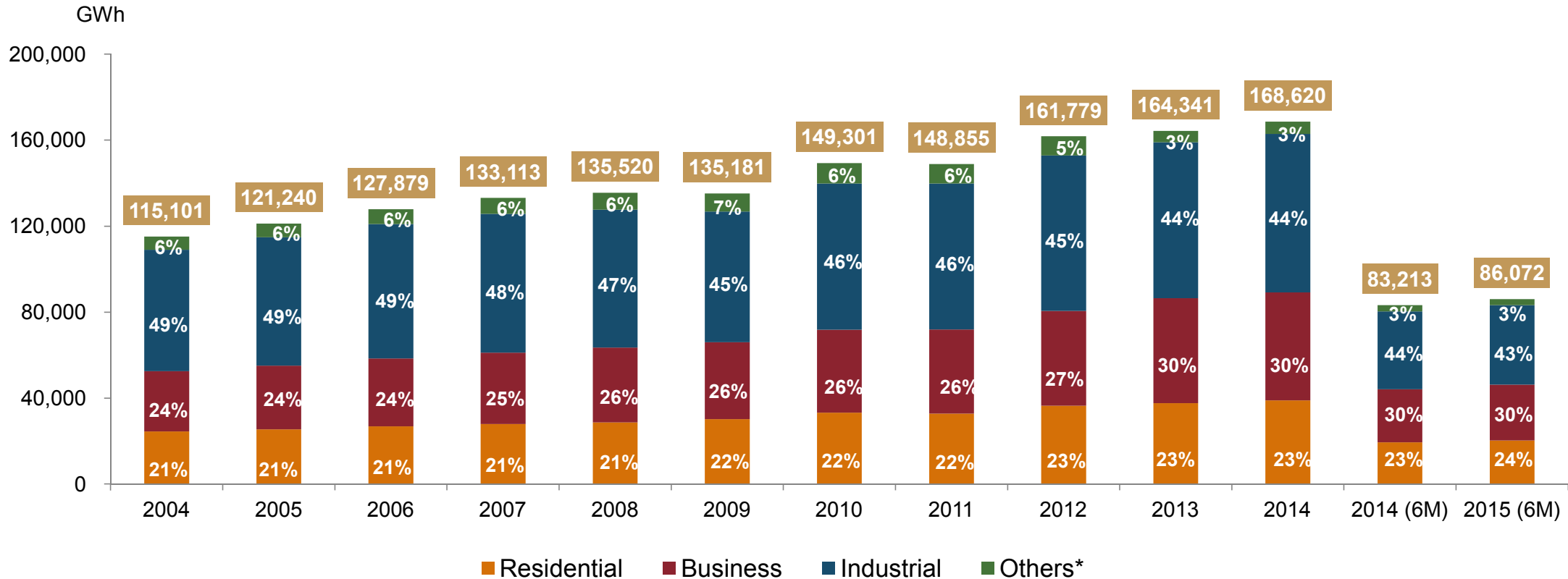
Company Overview

Financial Performance

Annexure

# Electricity Consumption

*Electricity Consumption for the Whole Country  
(Classified by Sector)*



- Total Installed Capacity is 36,171 MW (as of June 2015)
- Peak Demand was 27,346 MW on 11 June 2015, increased 1.5% from the previous record of 26,942 MW in April 2014
- CAGR 2004-2014 = 4%

# Thailand's Electricity Structure

## EGAT Overview

- Thailand's state-owned power utility under the Ministry of Energy
- Responsible for electric power generation and transmission for the whole country as well as bulk electric energy sales
- EGAT is the single buyer that purchases bulk electricity from private power producers and neighboring countries
- Sells electricity to Provincial Electricity Authority ("PEA"), Metropolitan Electricity Authority ("MEA"), neighboring countries and others
- Owns and operates a high voltage transmission network which covers all parts of Thailand

## Key Customers



Provincial Electricity Authority "PEA"

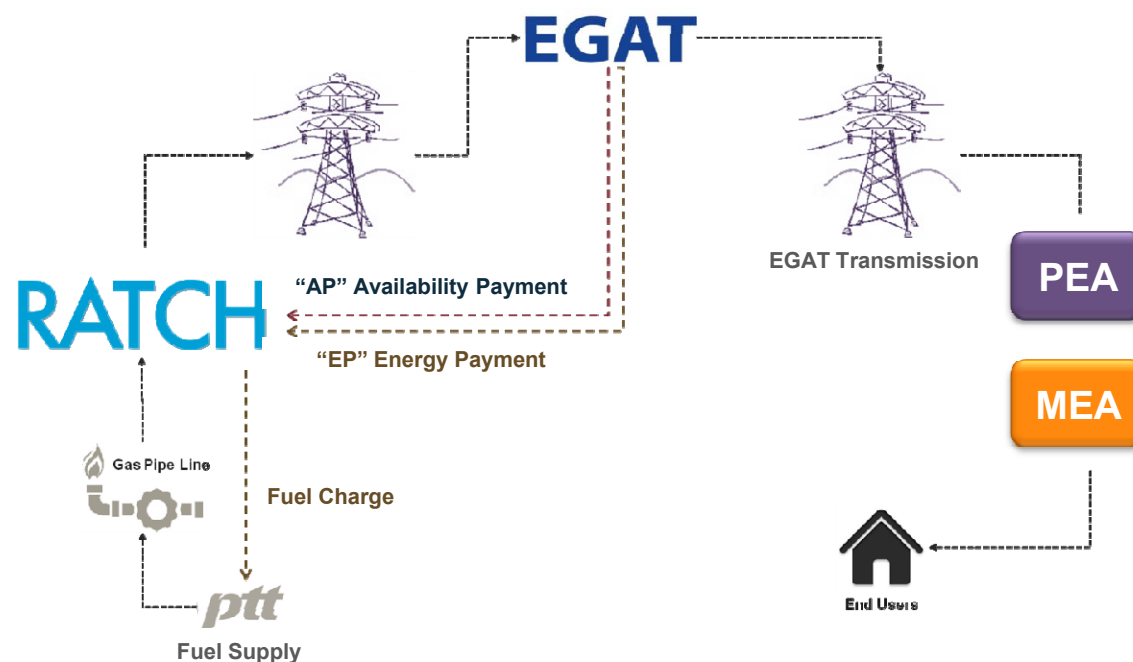
- ✓ Thai government enterprise
- ✓ Generation, procurement, distribution and sale of electricity
- ✓ Covers approximately 99.4% of Thailand, with the exception of Bangkok, Nonthaburi and Samut Prakarn provinces



Metropolitan Electricity Authority "MEA"

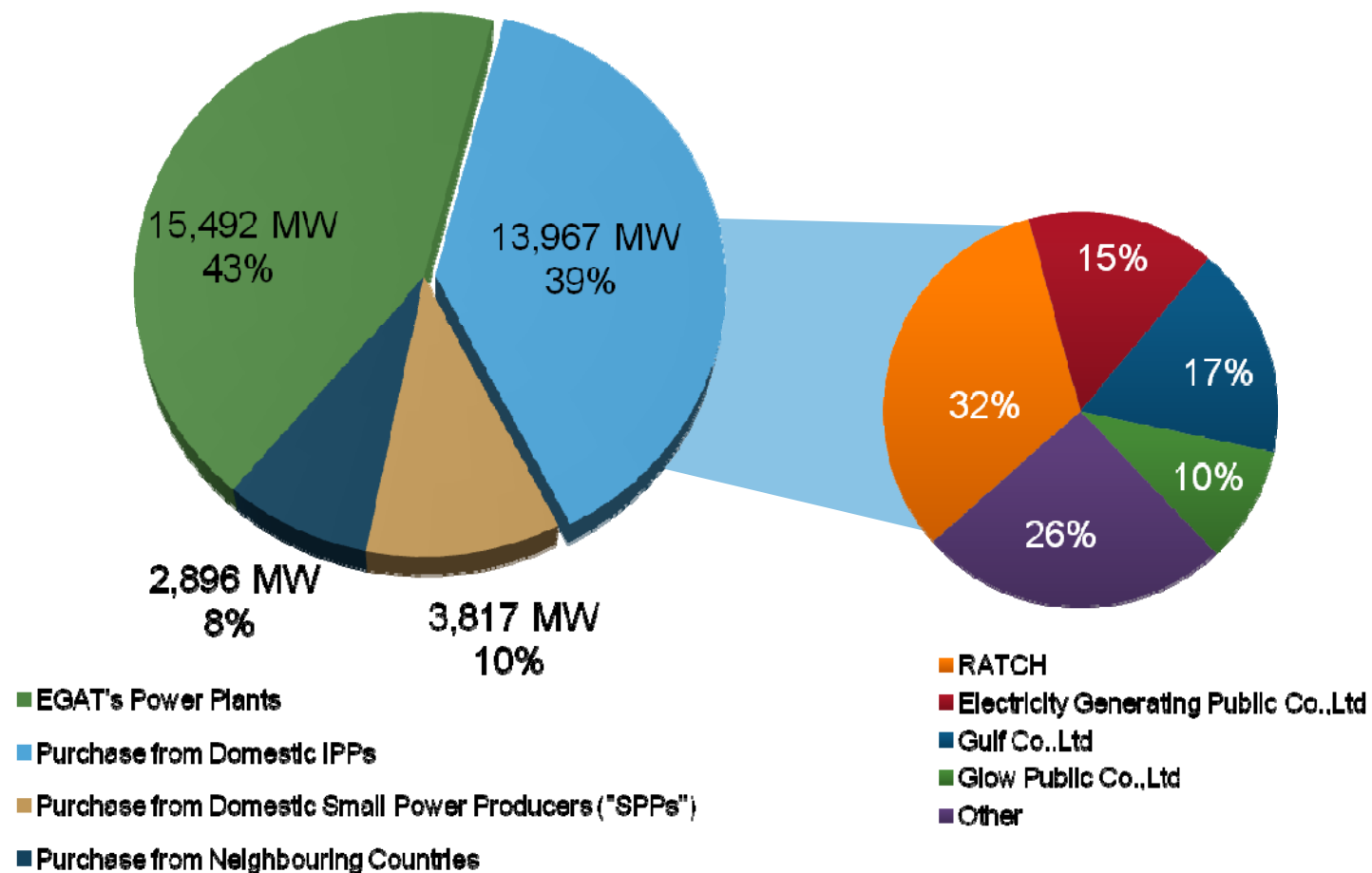
- ✓ Thai state enterprise under the Ministry of Interior
- ✓ Distribution of electricity in Bangkok, Nonthaburi, and Samut-Prakarn Provinces

## Thailand's Electricity Structure



# Total Installed Capacity

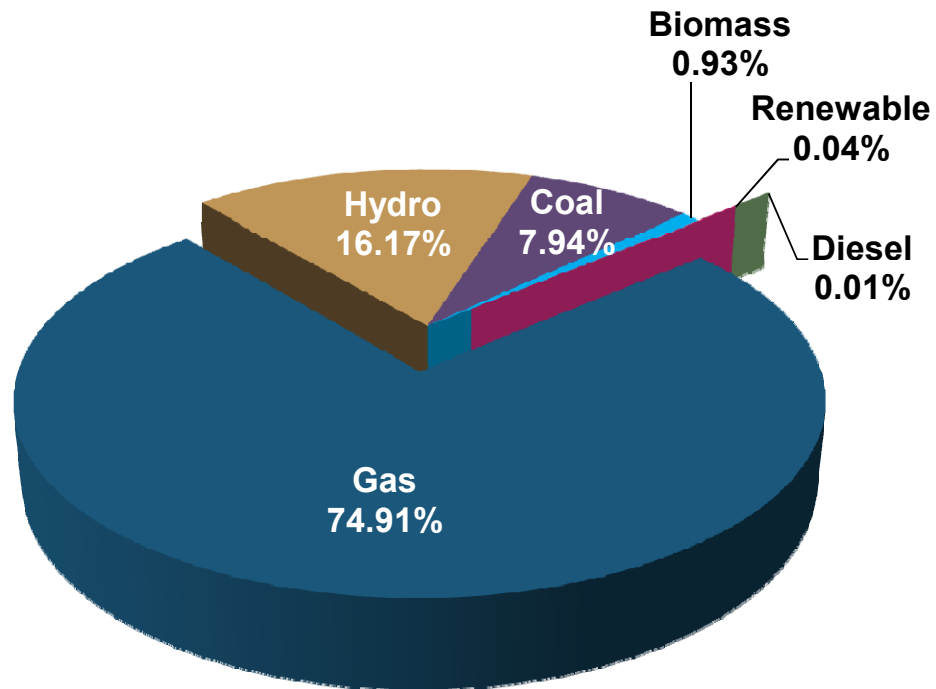
*Thailand : Power Generation*  
*Total Installed Capacity "36,171 MW."*



# Total Installed Capacity

## Breakdown by Fuel

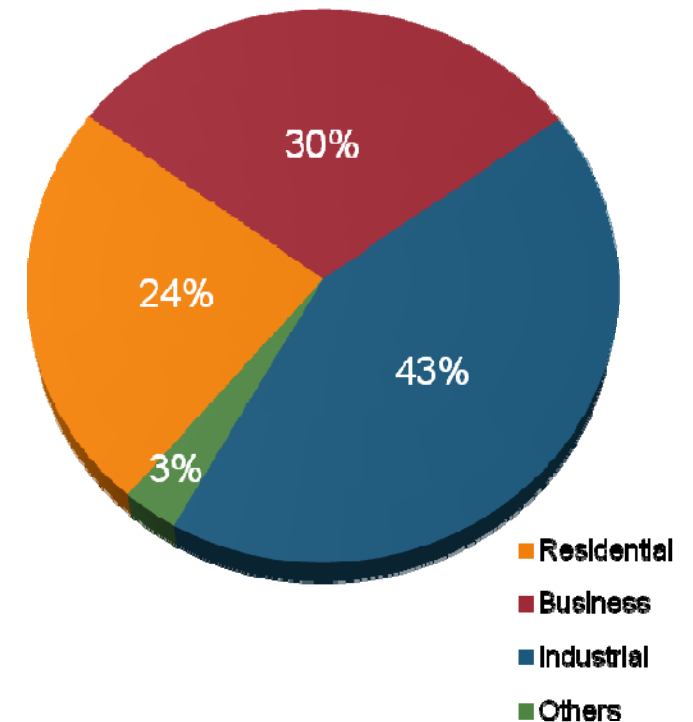
As of June 2015



## Breakdown by Consumer Type

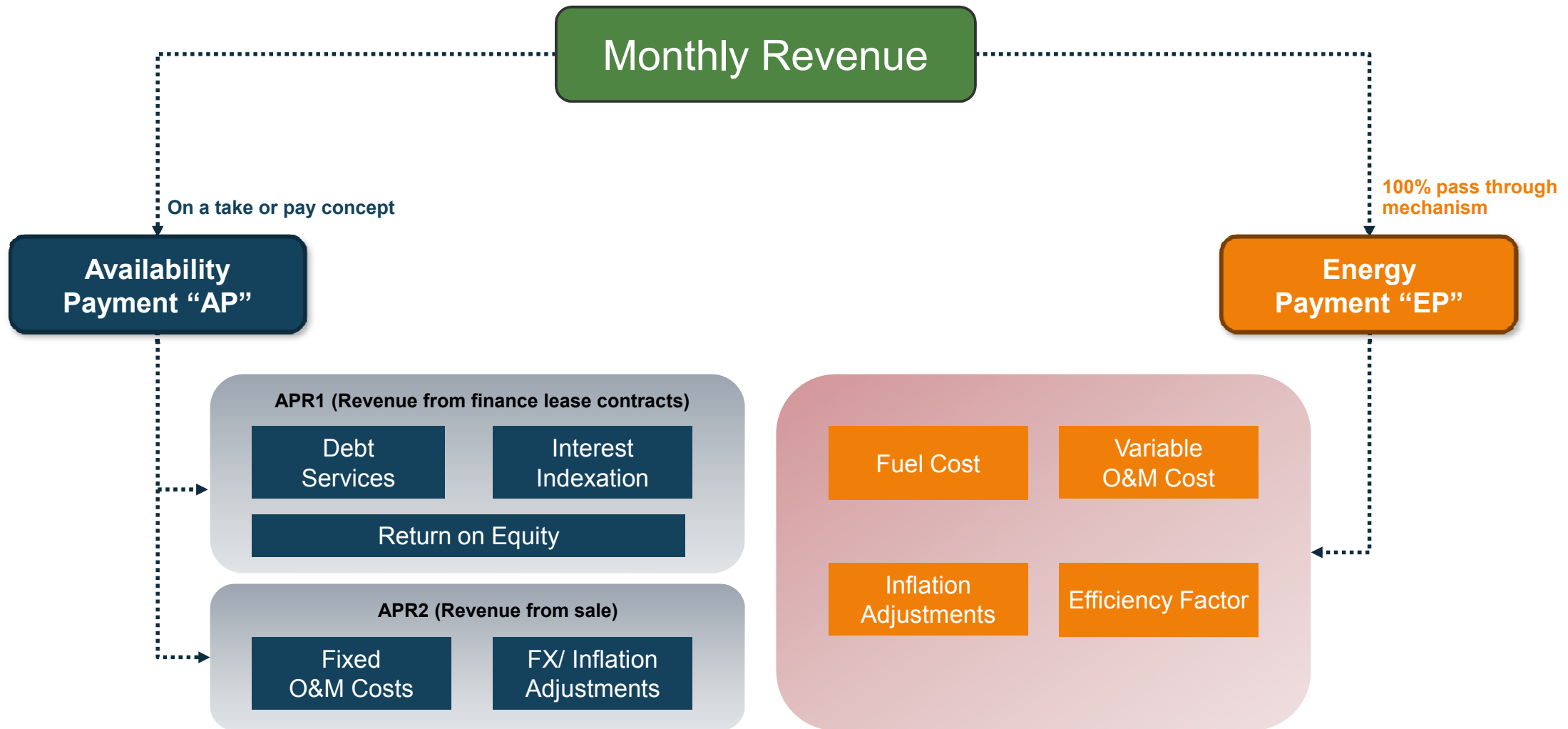
As of June 2015

Total: 86,072 GWh



Sources: EGAT

# PPA Tariff Structure



# Agenda

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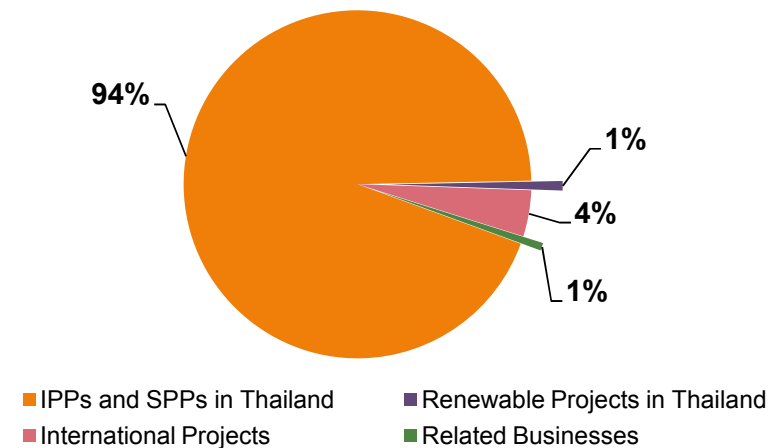
# Company Overview

## Overview

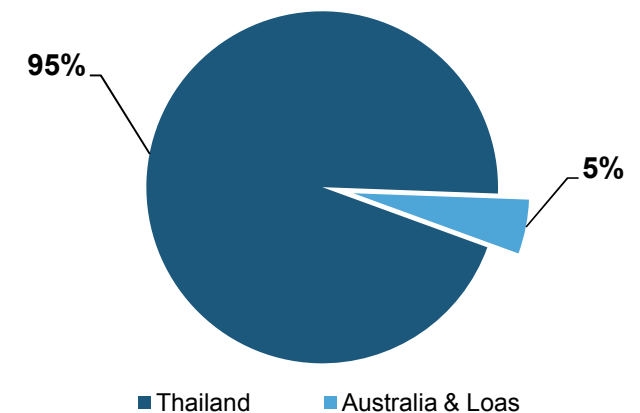
- Investment company in the electricity generation business based in Thailand
- Largest independent power producer (“IPP”) based in Thailand by total capacity
- Primarily involved in the construction, development and operation of power plants in Thailand, Laos and Australia
- 4 core businesses: (1) *IPPs and SPPs in Thailand* (2) *Renewable Projects in Thailand* (3) *International Projects* (4) *Related businesses*
- Listed on the Stock Exchange of Thailand since 2 November 2000
- Market cap of USD 2,097 million<sup>1</sup> (THB 75,400 million) as at 3 September 2015
- Total current capacity (domestic and overseas): 5,862.95 Megawatts (“MW”) from 16 power plants
- Projects under construction (for completion between 2015 – 2019): 715.16 MW from 7 projects

Note: <sup>1</sup> Foreign Exchange Rate as at 3 September 2015 = 35.9620 Baht/USD

Revenue breakdown By Business Segments  
as of June 2015



Revenue breakdown By Geography  
as of June 2015



# Company Rating

**STANDARD  
& POOR'S**

**MOODY'S**

On par with  
Kingdom of  
Thailand's rating

**RATCH**

**Thailand**

**Philippines**

**Indonesia**

**Vietnam**

**Cambodia**

**S&P:BBB+**

**Moody's:Baa1**

**S&P:BBB+**

**Moody's:Baa1**

S&P: BBB

Moody's: Baa2

S&P: BB+

Moody's: Baa3

S&P: BB-

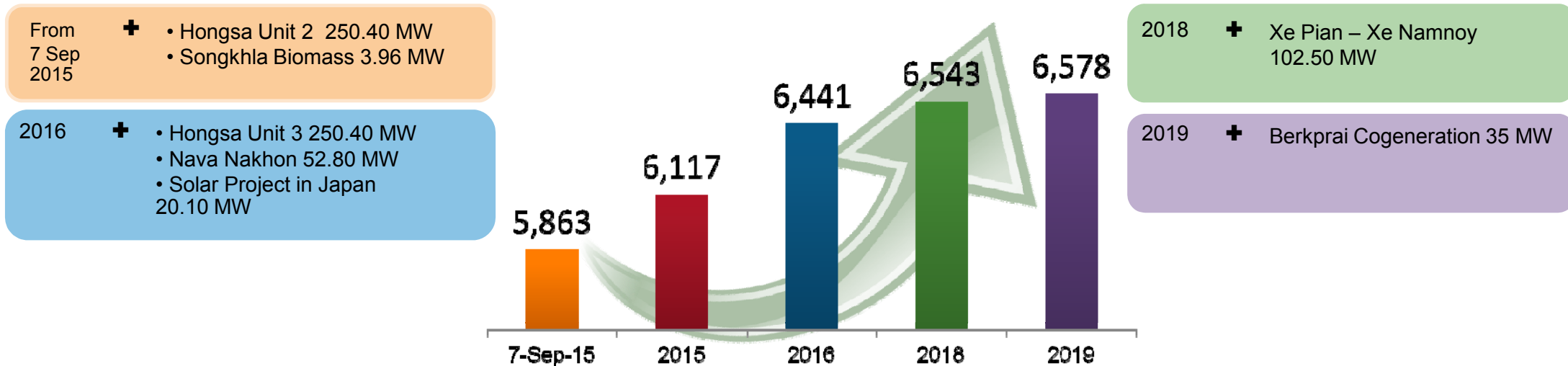
Moody's: B1

S&P: B

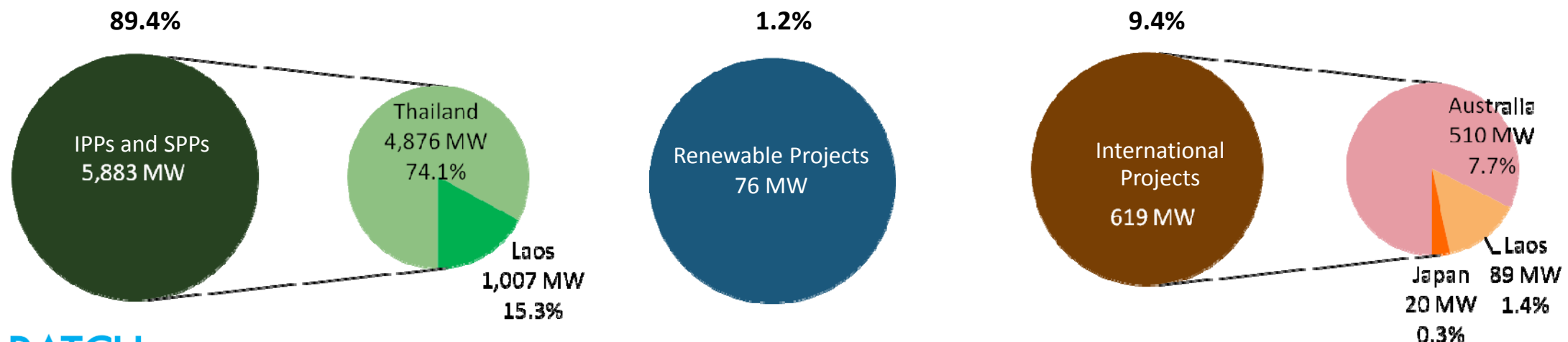
Moody's: B2

# Overview of RATCH projects

## Capacity until 2019 (Committed Projects)



## Current Breakdown of Capacity till 2019



# Portfolio by Types of Fuels and Locations

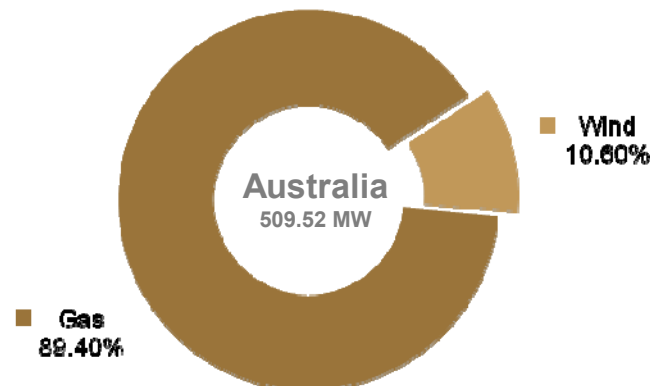
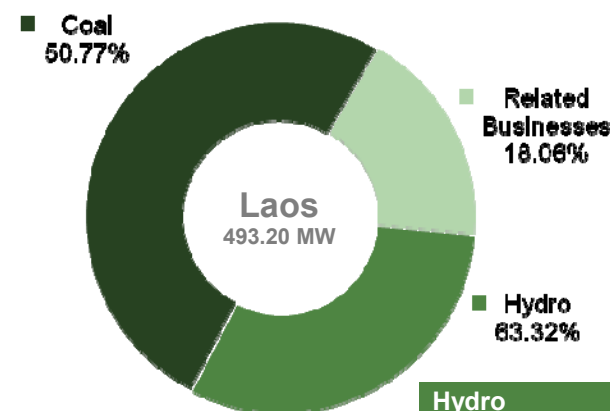
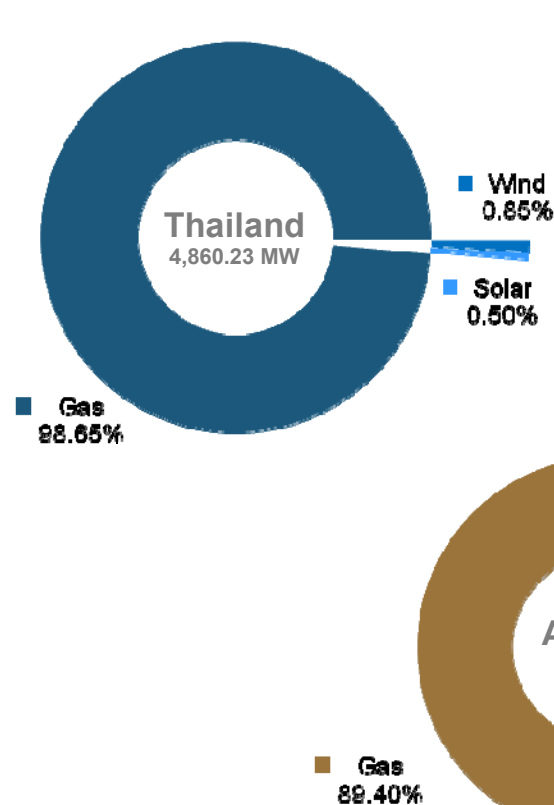
**Current Projects ( As of 7 September 2015)**

**Grand Total : 5,862.95 MW**

Gas	
Power Plant	Capacity Contributed (MW)
RATCHGEN	3,645 (100%)
TECO	700 (100%)
RPCL	350 (25%)
RW Cogen	93.60 (40%)
Pratu Tao-A	2.65 (10%)
Sao Thian-A	3.60 (100%)
<b>Total</b>	<b>4,794.85</b>

Wind	
Power Plant	Capacity Contributed (MW)
Huay Bong 2	20.70 (20%)
Huay Bong 3	20.70 (20%)
<b>Total</b>	<b>41.40</b>

Solar	
Power Plant	Capacity Contributed (MW)
Solar Power	7.20 (40%)
Solarta Power	16.78 (49%)
<b>Total</b>	<b>23.98</b>



Gas	
Power Plant	Capacity Contributed (MW)
Townsville	187.20 (80%)
Kemerton	240 (80%)
BP Kwinana	28.32 (80%)
<b>Total</b>	<b>455.52</b>

Wind	
Power Plant	Capacity Contributed (MW)
Starfish Hill	27.60 (80%)
Toora	16.80 (80%)
Windy Hill	9.60 (80%)
<b>Total</b>	<b>54.00</b>

Hydro	
Power Plant	Capacity Contributed (MW)
Num Ngum 2	153.75 (25%)
<b>Total</b>	<b>153.75</b>

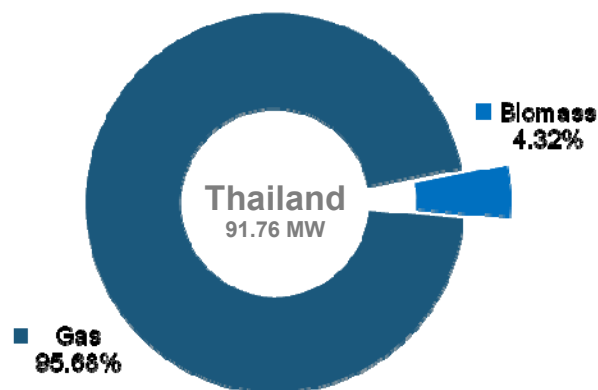
Coal	
Power Plant	Capacity Contributed (MW)
Hongsa Unit 1	250.40 (40%)
<b>Total</b>	<b>250.40</b>

Related Businesses	
Power Plant	Capacity Contributed (MW)
Shares Purchase of EDL-Gen	89.05 (10.108%)
<b>Total</b>	<b>89.05</b>

# Portfolio by Types of Fuels and Locations

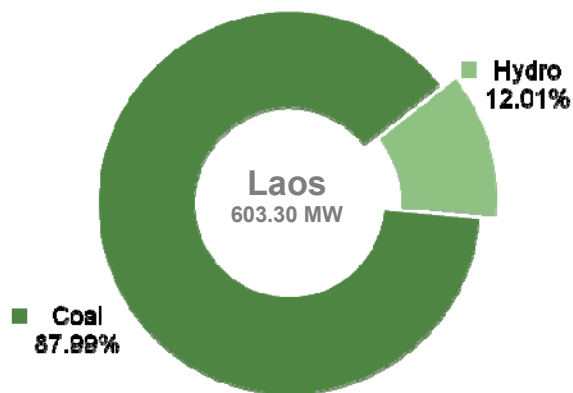
**Projects from 7 September to December 2019**

**Grand Total : 715.16 MW**



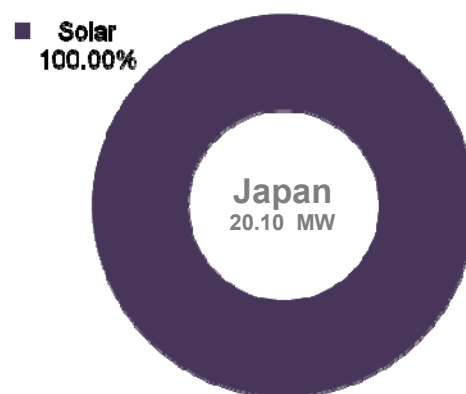
Gas		
Power Plant	Capacity Contributed (MW)	Status
Nava Nakhon	52.80 (40%)	Under Construction COD: In 2016
Berkprai Cogeneration	35 (35%)	Under Development COD: In 2019
<b>Total</b>	<b>87.80</b>	

Biomass		
Power Plant	Capacity Contributed (MW)	Status
Songkhla Biomass	3.96 (40%)	Under Construction COD: In 2015
<b>Total</b>	<b>3.96</b>	



Coal		
Power Plant	Capacity Contributed (MW)	Status
Hongsa Unit 2&3	500.80 (40%)	Under Construction COD: In 2015-2016
<b>Total</b>	<b>500.80</b>	

Hydro		
Power Plant	Capacity Contributed (MW)	Status
Xe Pian-Xe Namnoy	102.50 (25%)	Under Construction COD: In 2018
<b>Total</b>	<b>102.50</b>	



Solar		
Power Plant	Capacity Contributed (MW)	Status
Ueda Solar Farm	6.50 (60%)	Under Development COD: In 2016
Iwaki Solar Farm	13.60 (60%)	Under Development COD: In 2016
<b>Total</b>	<b>20.10</b>	

# Portfolio by Core Business

## IPPs and SPPs in Thailand

Name of Power Plant/Project	Location	Technology	Total Capacity (MW)	Capacity contributed to the Group (MW)	Terms of the PPA		
					PPA Party	Tenure/ Expiry Year	Renewal/ Option to Extend
In Operation							
Ratchaburi Power Plant	Ratchaburi Province	Thermal	1,470	1,470 (100%)	EGAT	25 years/ 2025	Not Applicable
		Combined Cycle	2,175	2,175 (100%)	EGAT	25 years/ 2027	Not Applicable
Tri Energy Power Plant	Ratchaburi Province	Combined Cycle	700	700 (100%)	EGAT	20 years/ 2020	Not Applicable
Ratchaburi Power Power Plant	Ratchaburi Province	Combined Cycle	1,400	350 (25%)	EGAT	25 years/ 2033	Not Applicable
Pratu Tao-A Power Plant	Sukhothai Province	Gas Engine	1.68	1.68 (100%)	EGAT	5 years/ 2018	Automatic renewal for a further 5 years every 5 years
Pratu Tao-A Power Plant (Expansion)		Gas Engine (Expansion)	0.97	0.97 (100%)	PEA	5 years/ 2015	Automatic renewal for a further 5 years every 5 years
Sao Thian-A Power Plant	Sukhothai Province	Gas Engine	3.60	3.60 (100%)	PEA	5 years/ 2016	Automatic renewal for a further 5 years every 5 years
Ratchaburi World Cogeneration Project	Ratchaburi Industrial Estate, Ratchaburi Province	Cogeneration	234	93.60 (40%)	EGAT	Block 1: 25 years/ 2039 Block 2: 25 years/ 2040	Not Applicable
Total			5,985.25	4,794.85			

# Portfolio by Core Business

## IPPs and SPPs in Thailand (Cont.)

Name of Power Plant/Project	Location	Technology	Total Capacity (MW)	Capacity contributed to the Group (MW)	Terms of the PPA		
					PPA Party	Tenure/ Expiry Year	Renewal/ Option to Extend
Under Construction							
Nava Nakorn Electricity Generating Project	Nava Nakorn Industrial Promotion Zone, Pathumthani Province	Cogeneration	132	52.80 (40%)	EGAT	25 years/ 2041 (Expected COD: 2016)	Not Applicable
		Total	132	52.80			
Under Development							
Berkprai Cogeneration	Ratchaburi Province	Cogeneration	100	35 (35%)	EGAT	25 years/2044 (Expected COD: 2019)	Not Applicable
		Total	100	35			
		Grand Total	6,217.25	4,882.65			

# Portfolio by Core Business

## Renewable Projects in Thailand

Name of Power Plant/Project	Location	Technology	Total Capacity (MW)	Capacity contributed to the Group (MW)	Terms of the PPA		
					PPA Party	Tenure/ Expiry Year	Renewal/ Option to Extend
In Operation							
Huay Bong 2 Wind-Turbine Power Plant	Nakorn Ratchasima Province, Thailand	Wind-Turbine	103.50	20.70 (20%)	EGAT	5 years/ 2018	Automatic renewal for a further 5 years every 5 years
Huay Bong 3 Wind-Turbine Power Plant	Nakorn Ratchasima Province, Thailand	Wind-Turbine	103.50	20.70 (20%)	EGAT	5 years/ 2017	Automatic renewal for a further 5 years every 5 years
Solar Power Projects (Korat 3, Korat 4, Korat 7)	Nakorn Ratchasima Province, Thailand	Solar Power	18	7.2 (40%)	PEA	5 years/ 2017	Automatic renewal for a further 5 years every 5 years
Solarta Power Projects	Nakhon Sri Ayutthaya, Nakhon Pathom, and Supanburi Provinces, Thailand	Solar Power	34.25	16.78 (49%)	PEA	Ayutthaya Province : 5 years / 2016 Suphan and Nakhon Pathom Provinces : 5 years / 2017	Automatic renewal for a further 5 years every 5 years
		Total	259.25	65.38			
Under Construction							
Songkhla Biomass Power Project	Songkhla Province, Thailand	Thermal	9.90	3.96 (40%)	PEA	5 years/ 2017 (Expected COD: 2015)	Automatic renewal for a further 5 years every 5 years
		Total	9.90	3.96			
		Grand Total	269.15	69.34			



# Portfolio by Core Business

## International Projects

Note:

(1) RAC sells the output of the Starfish Hill Wind-Turbine Power Plant and the Toora Wind-Turbine Power Plant under merchant operation contracts with spot or market prices.

Name of Power Plant/Project	Location	Technology	Total Capacity (MW)	Capacity contributed to the Group (MW)	Terms of the PPA		
					PPA Party	Tenure/ Expiry Year	Renewal/ Option to Extend
In Operation							
Nam Ngum 2 Hydroelectric Power Plant	Laos	Hydro Power Plant	615	153.75 (25%)	EGAT	27 years/ 2038	Not Applicable
Hongsa Thermal Project Unit 1	Laos	Lignite-Fired Power Plant	626	250.40 (40%)	EGAT & EDL	25 years/ 2040	Not Applicable
Townsville Power Plant	North Queensland, Australia	Combined Cycle Gas Turbine	234	187.20 (80%)	North Queensland Energy Joint Venture	20 years/ 2025	Not Applicable
Kemerton Power Plant	Western Australia, Australia	Open Cycle Gas/Diesel Turbine	300	240 (80%)	Verve Energy	25 years/ 2030	Not Applicable
BP Kwinana Power Plant	Western Australia, Australia	Cogeneration	35.40	28.32 (80%)	Verve Energy	25 years/ 2021	Subject to negotiations
Starfish Hill Wind-Turbine Power Plant	South Australia, Australia	Wind-Turbine	34.50	27.60 (80%)	Not Applicable <sup>(1)</sup>	Not Applicable <sup>(1)</sup>	Not Applicable <sup>(1)</sup>
Toora Wind-Turbine Power Plant	Victoria, Australia	Wind-Turbine	21	16.80 (80%)	Not Applicable <sup>(1)</sup>	Not Applicable <sup>(1)</sup>	Not Applicable <sup>(1)</sup>
Windy Hill Wind-Turbine Power Plant	Queensland, Australia	Wind-Turbine	12	9.60 (80%)	Ergon Energy	8 years/ 2015	Not Applicable
		Total	1,877.90	913.67			

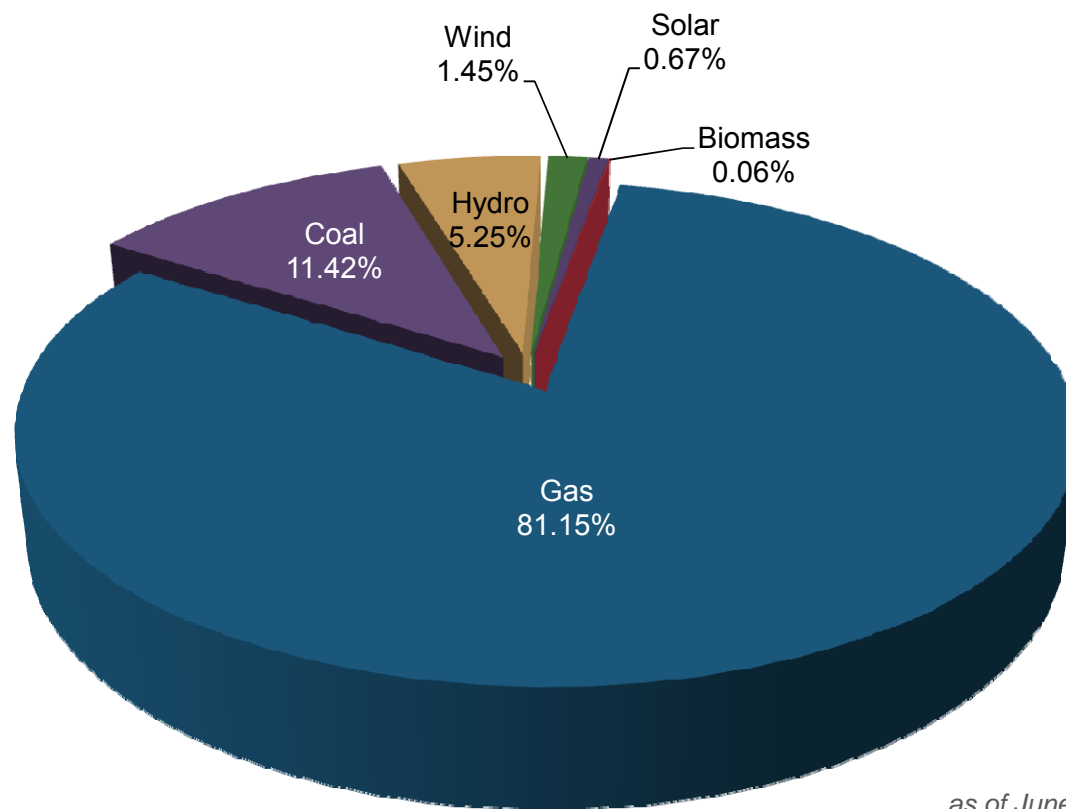
# Portfolio by Core Business

## International Projects (Cont.)

Name of Power Plant/Project	Location	Technology	Total Capacity (MW)	Capacity contributed to the Group (MW)	Terms of the PPA		
					PPA Party	Tenure/ Expiry Year	Renewal/ Option to Extend
Under Construction							
Hongsa Thermal Project Unit 2 & 3	Laos	Lignite-Fired Power Plant	1,252	500.80 (40%)	EGAT & EDL	25 years/ 2040 (Expected COD: 2015-2016)	Not Applicable
Xe Pian - Xe Namnoy Project	Laos	Hydro Power Plant	410	102.50 (25%)	EGAT	27 years/ 2045 (Expected COD: 2018)	Not Applicable
		Total	1,662	603.30			
Under Development							
Ueda Solar Farm	Nagano, Japan	Solar Power	10.83	6.50 (60%)		20 year (Expected COD: 2016)	
Iwaki Solar Farm	Fukushima, Japan	Solar Power	22.68	13.60 (60%)		20 year (Expected COD: 2016)	
		Total	33.51	20.10			
Related Businesses							
EDL-Generation	Laos	Hydro Power Plant	881	89.05 (10.108%)			
		Total	881	89.05			
		Grand Total	4,454.41	1,626.12			

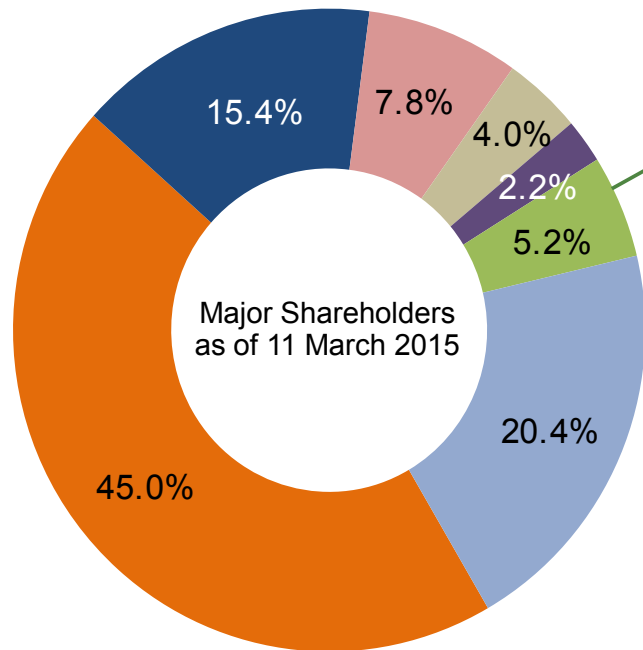
# Power Generation by Fuel

**RATCH : Power Generation**  
*Capacity until 2019 (Committed Projects)*  
"6,578 MW."



as of June 2015

# Shareholder Information



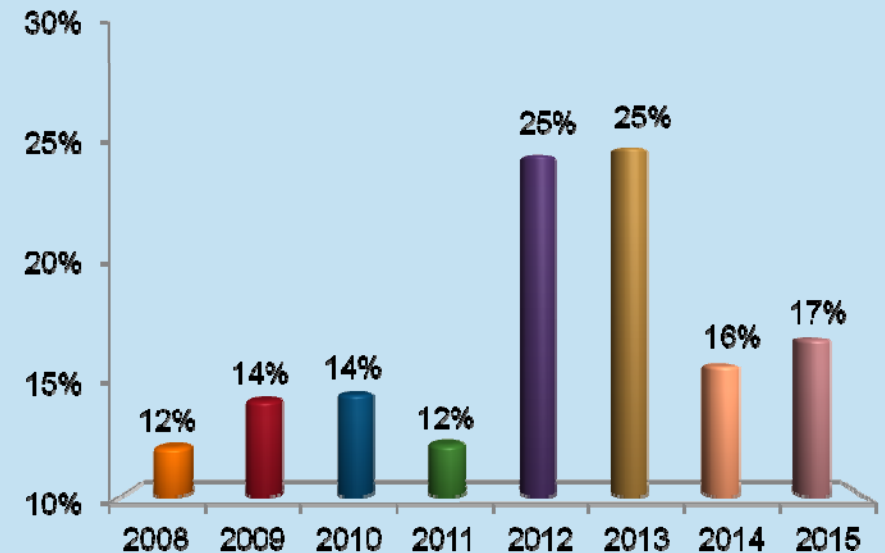
## Other Major Shareholder consisted of

- STATE STREET BANK AND TRUST COMPANY (Groups) 2.2%
- Krungsri Dividend Stock LTF 0.8%
- Mr.Min Tieworn 0.8%
- AIA Company Limited-APEX 0.7%
- HSBC (Singapore) Nominees Pte Ltd 0.7%

- EGAT
- LITTLEDOWN NOMINEES LIMITED
- AIA (Grouped)
- Minor Shareholders
- Thai NVDR Company Limited
- Social Security Office (Grouped)
- Other Major Shareholders

## % Foreign Shareholders

Data are as of AGM closing date in each respective year



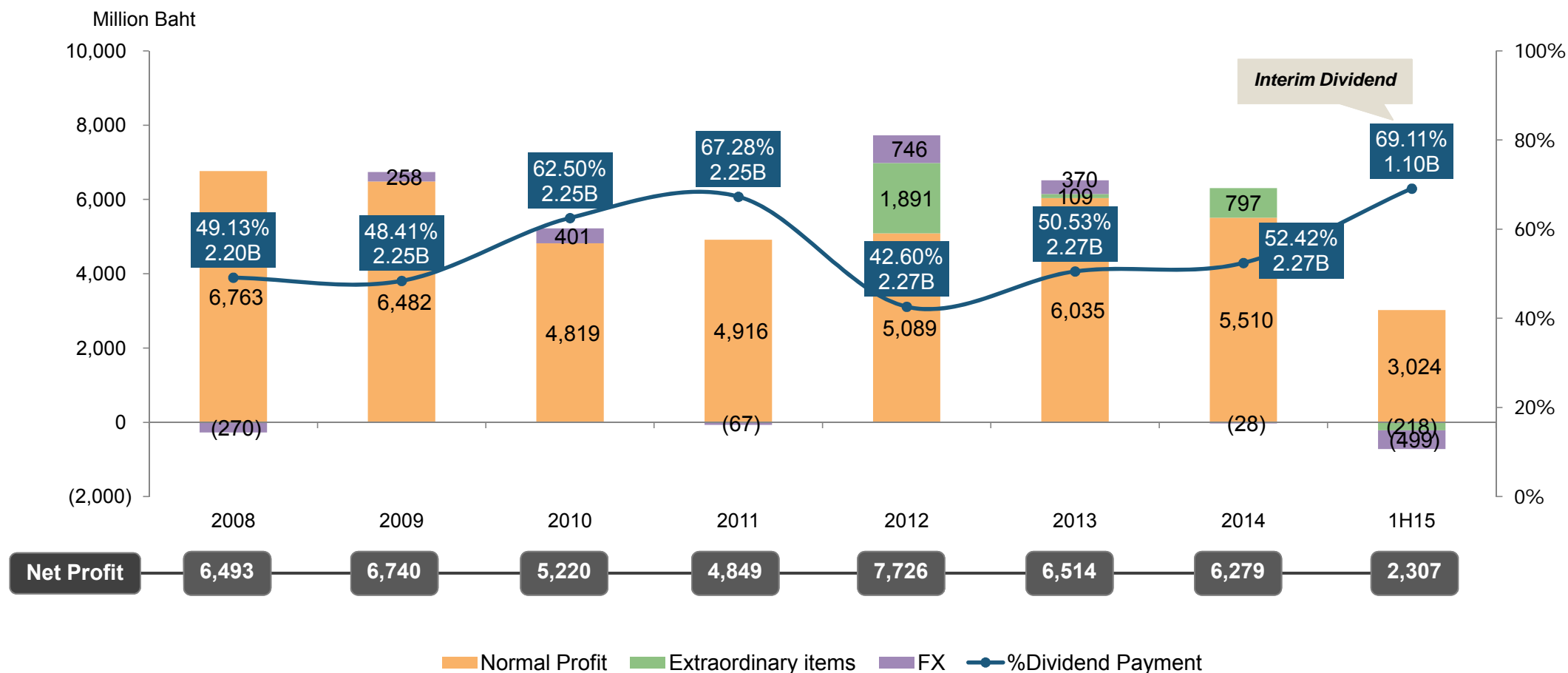
## Remark:

On 17 July 2014, the SILCHESTER INTERNATIONAL INVESTORS LLP transferred its common shares of RATCH by the amount of 157,297,300 shares (equivalent to 10.85% of the Company's common shares) to Thai NVDR Company Limited.

# Dividend Policy

*RATCH has a dividend payout policy of no less than 40% of the net profit*

*Avg. %Dividend Payment (2008-2014) = 53.27%*



# Agenda

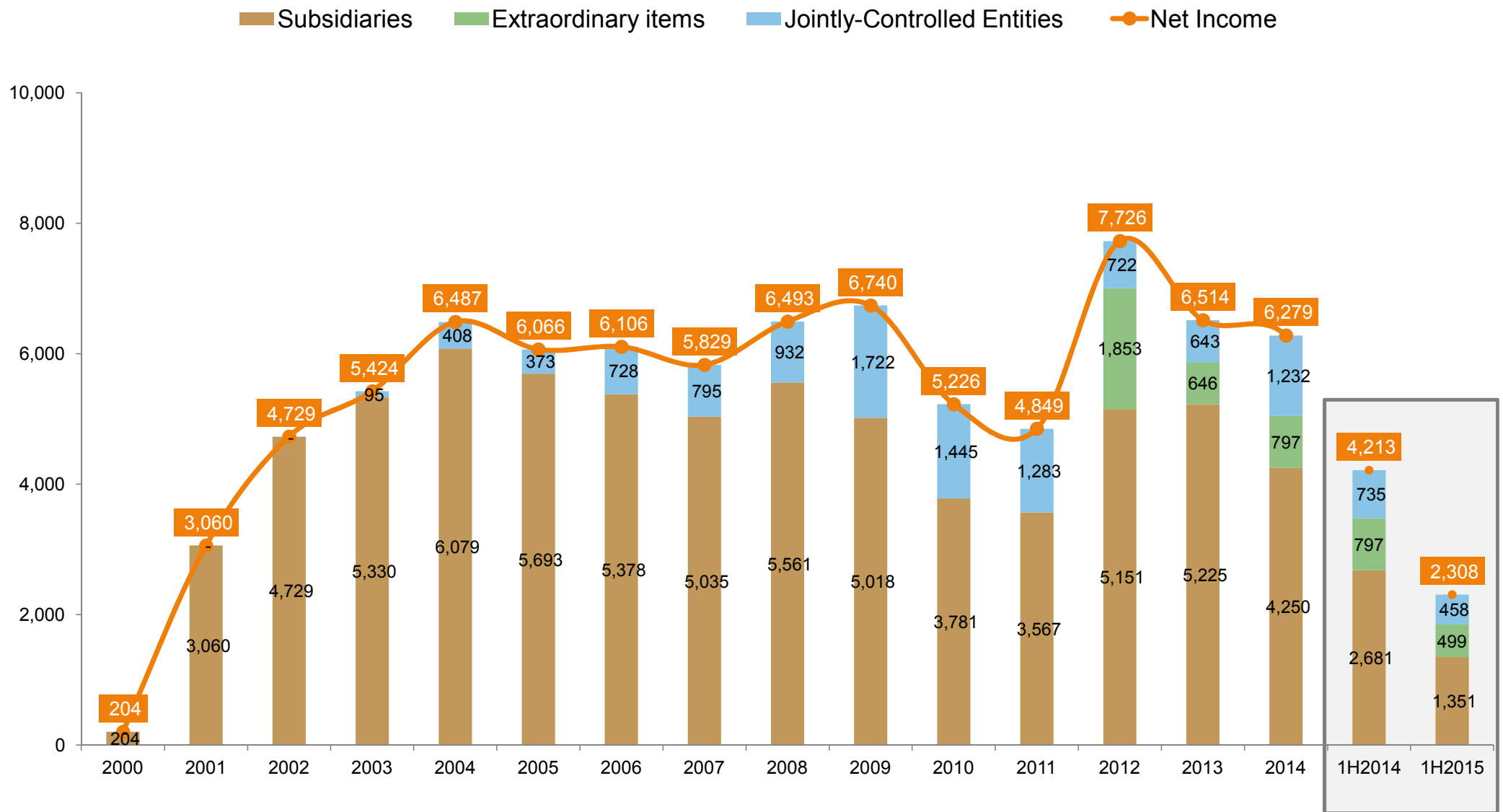
Industry Overview

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# Net Income Breakdown



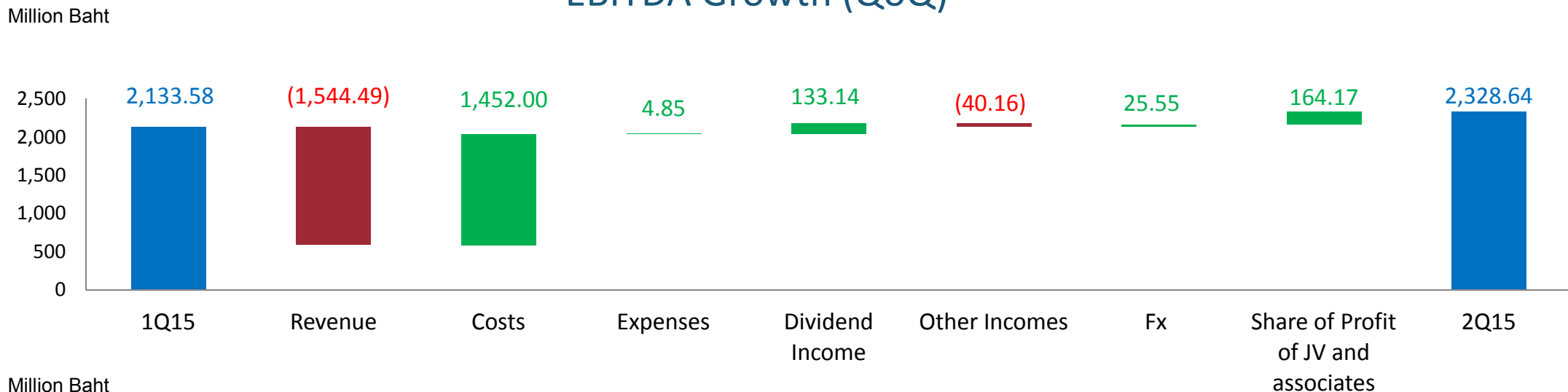
# Income Statement

Unit : in Million Baht	2Q15	1Q15	4Q14	3Q14	2Q14	1Q14
Revenues	14,381.97	15,833.48	15,336.07	15,753.81	13,733.37	11,488.91
Cost & Expenses	(12,208.25)	(13,665.10)	(14,138.54)	(13,199.04)	(11,264.19)	(9,282.81)
EBITDA before Share of Profit and FX	2,173.72	2,168.38	1,197.53	2,554.77	2,469.18	2,206.10
Gain (Loss) on exchange rate of subsidiaries	(207.44)	(232.99)	287.75	252.45	(98.35)	(93.87)
EBITDA	1,966.28	1,935.39	1,485.28	2,807.22	2,370.83	2,112.23
Share of profit of jointly-controlled entities and associates excluding gain (loss) on exchange rate	459.42	159.68	276.86	319.02	156.86	370.02
Gain (Loss) on exchange rate of JV	(97.06)	38.51	(22.41)	20.73	117.83	45.91
EBITDA included share profit of JV and FX	2,328.64	2,133.58	1,739.73	3,146.97	2,645.52	2,528.16
Accounting gains on a business combination	-	-	-	-	-	797.29
Reversal of a project development provision	-	-	-	-	306.06	-
Impairment loss of goodwill and intangible assets	-	-	(509.54)	-	-	-
Disposal of Investment SE/SEC	-	-	-	(131.17)	-	-
Depreciation & Amortization	(358.15)	(318.01)	(508.70)	(363.14)	(363.06)	(360.14)
EBIT	1,970.49	1,815.57	721.49	2,652.66	2,588.52	2,965.31
Finance costs	(331.34)	(342.73)	(342.90)	(407.68)	(407.78)	(360.09)
Income tax expense	(570.03)	(348.82)	(358.27)	(327.17)	(314.98)	(268.96)
Profit for the period	1,069.12	1,124.02	20.32	1,917.81	1,865.76	2,336.26
Non-controlling interests	75.60	38.90	91.42	36.29	(18.06)	29.23
Equity holders of the Company	1,144.72	1,162.92	111.74	1,954.10	1,847.70	2,365.49

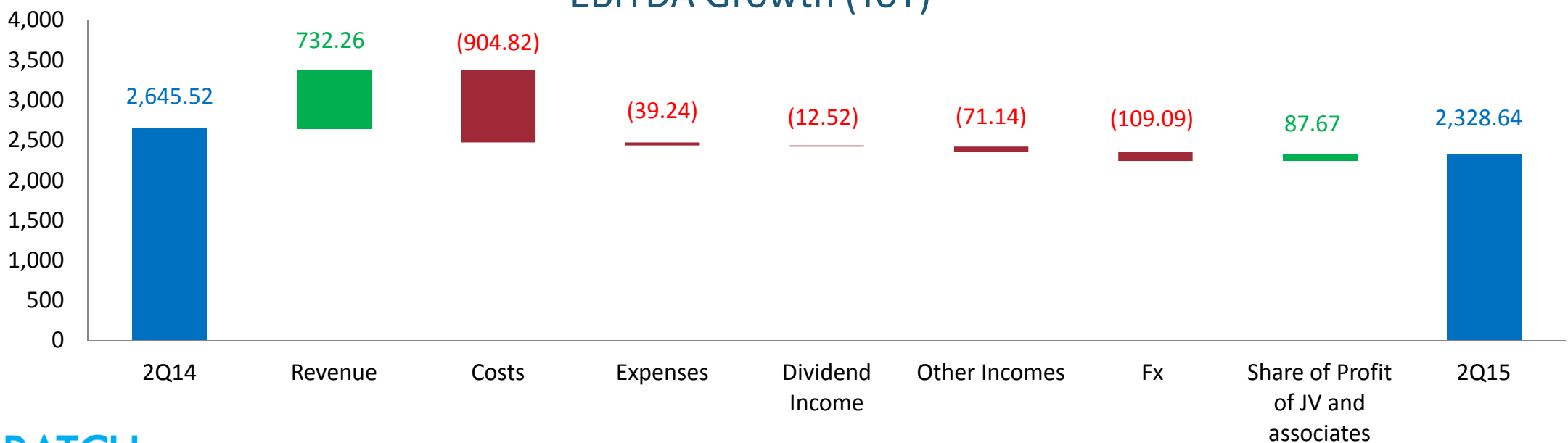


# EBITDA Growth QoQ & YoY

## EBITDA Growth (QoQ)

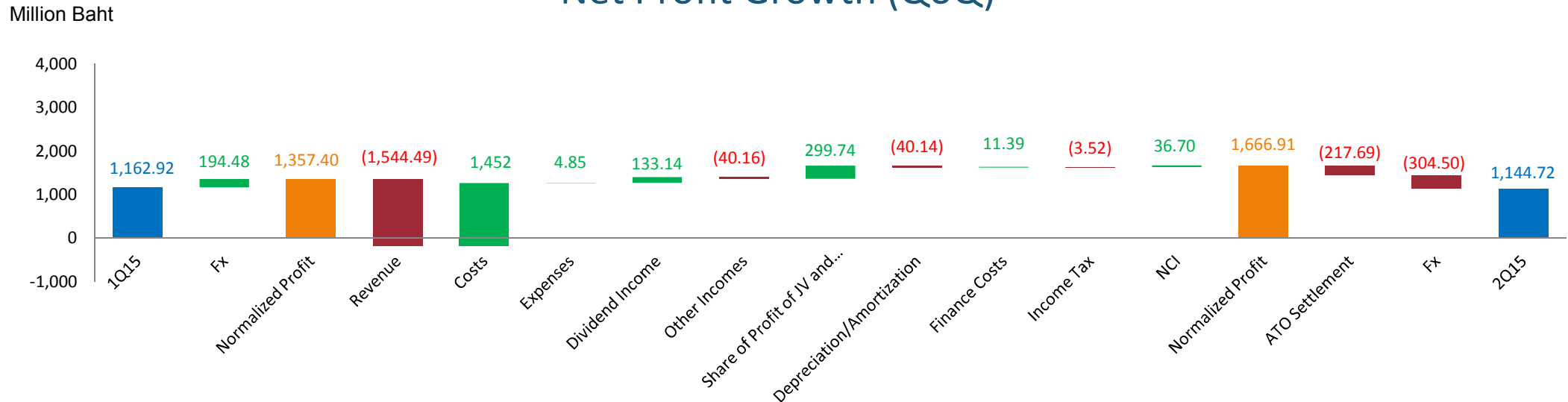


## EBITDA Growth (YoY)

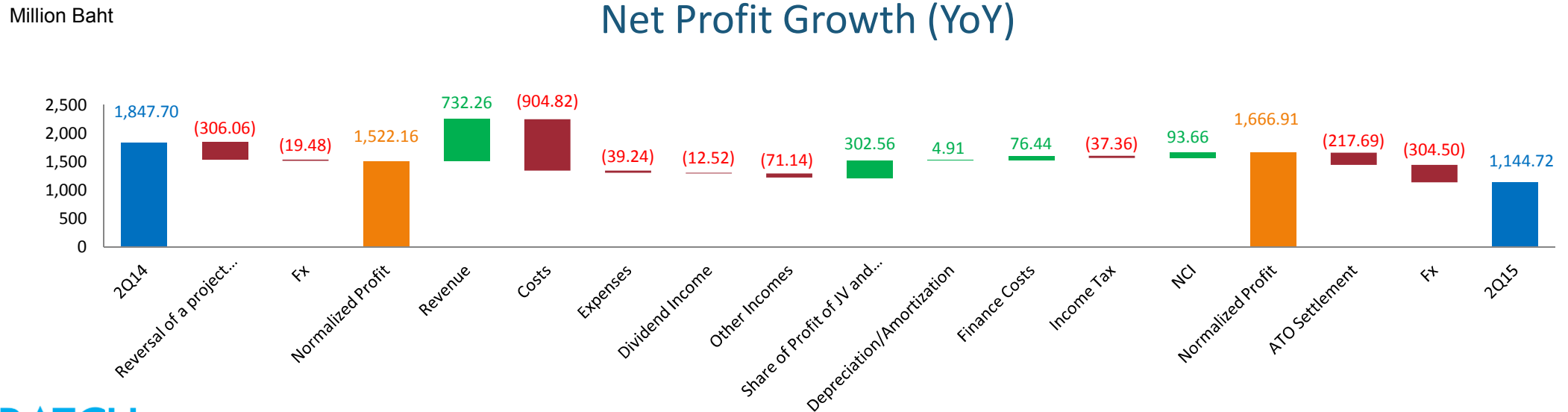


# Net Profit Growth QoQ & YoY

## Net Profit Growth (QoQ)



## Net Profit Growth (YoY)

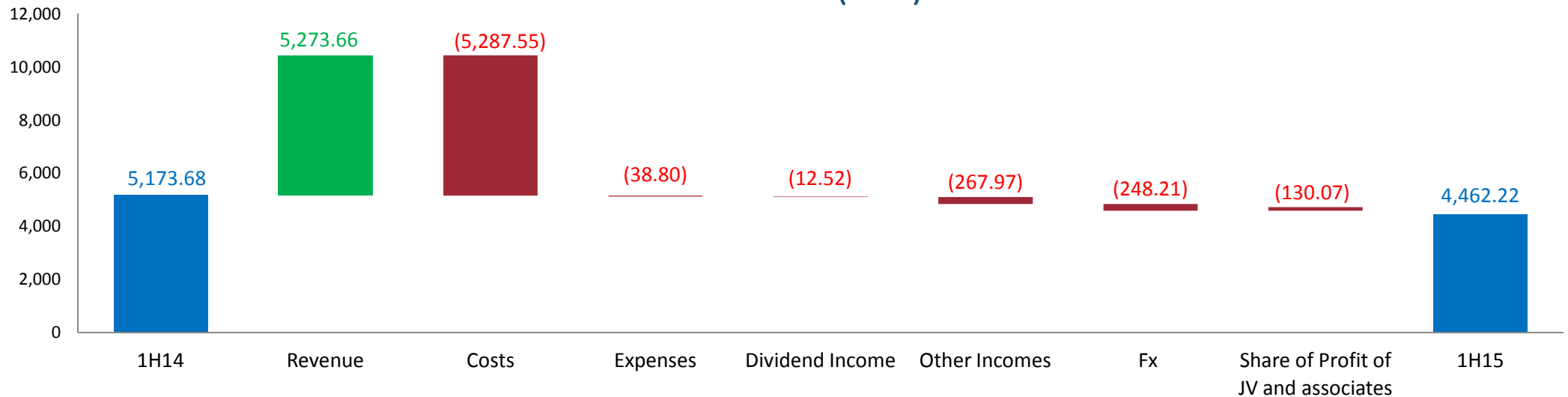


# Income Statement

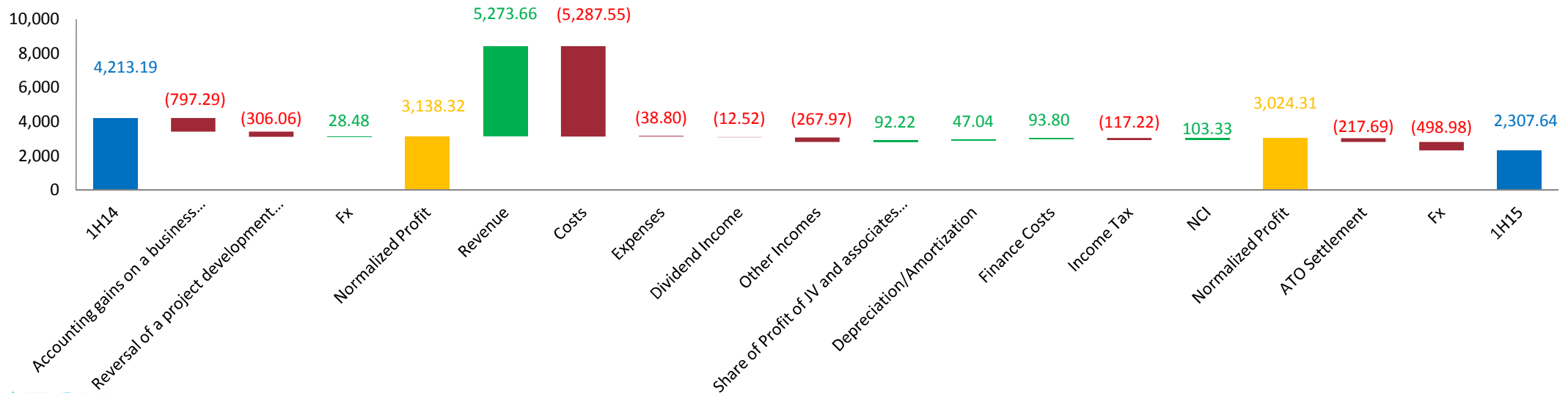
Unit : in Million Baht	1HQ15	1HQ14
Revenues	30,215.45	25,222.28
Cost & Expenses	(25,873.35)	(20,547.00)
EBITDA before Share of Profit and FX	4,342.10	4,675.28
Gain (Loss) on exchange rate of subsidiaries	(440.43)	(192.22)
EBITDA	3,901.67	4,483.06
Share of profit of jointly-controlled entities and associates excluding gain (loss) on exchange rate	619.10	526.88
Gain (Loss) on exchange rate of JV	(58.55)	163.74
EBITDA included share profit of JV and FX	4,462.22	5,173.68
Accounting gains on a business combination	-	797.29
Reversal of a project development provision	-	306.06
Impairment loss of goodwill and intangible assets	-	-
Disposal of Investment SE/SEC	-	-
Depreciation & Amortization	(676.16)	(723.20)
EBIT	3,786.06	5,553.83
Finance costs	(674.07)	(767.87)
Income tax expense	(918.85)	(583.94)
Profit for the period	2,193.14	4,202.02
Non-controlling interests	114.50	11.17
<b>Equity holders of the Company</b>	<b>2,307.64</b>	<b>4,213.19</b>

# EBITDA & Net Profit Growth YOY

## EBITDA Growth (YoY)



## Net Profit Growth (YoY)



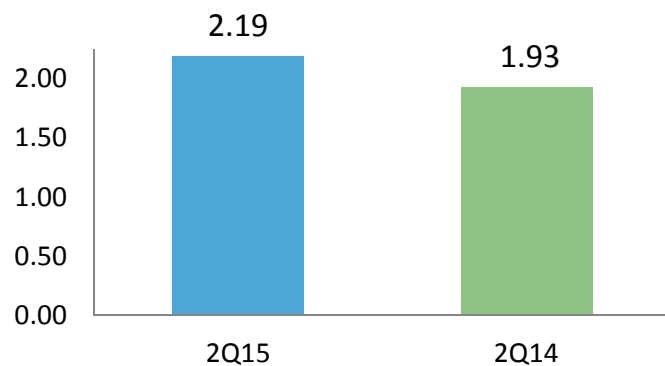
# Statements of Financial Position

As of 30 June 2015

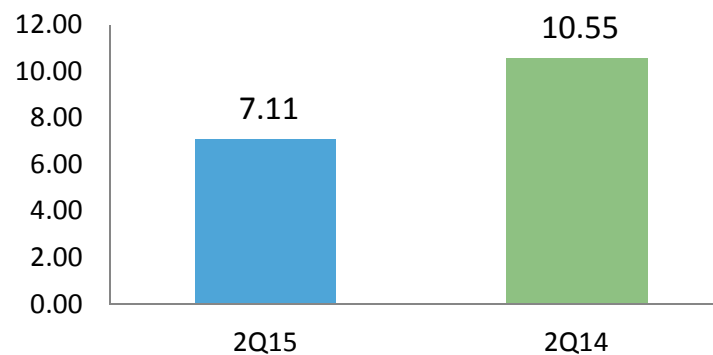
Total Assets	Million Baht	Total Liabilities & Equity	Million Baht
<b><u>Assets</u></b>		<b><u>Liabilities</u></b>	
Current Assets	31,184.60	Loans from Related party, Financial Institutions & Debentures	23,264.07
Investment in Jointly-controlled entities/Associates/Others	16,813.36	Other Liabilities	13,053.86
Financial lease receivables	29,784.69		
Property, plant & equipments	14,144.54		
Other Assets	5,792.00	<b>Total Liabilities</b>	<b>36,317.93</b>
		<b><u>Equity</u></b>	
		Issued and paid-up share capital	16,031.78
		Other components of equity	(1,588.48)
		Retained earnings	46,665.70
		<b>Total equity attributable to owners of the Company</b>	<b>61,109.00</b>
		Non-controlling interests	292.26
<b>Total Assets</b>	<b>97,719.19</b>	<b>Total Liabilities &amp; Equity</b>	<b>97,719.19</b>

# Financial Ratios

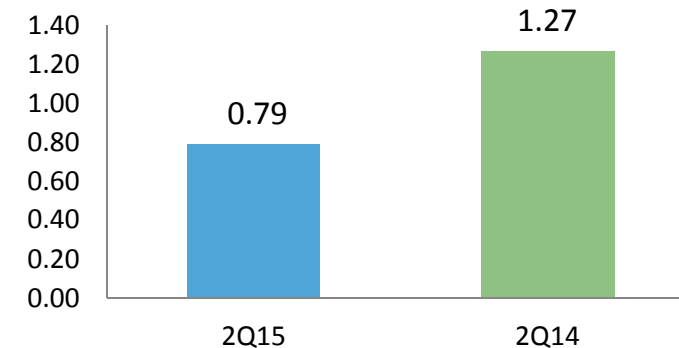
**Current ratio (times)**



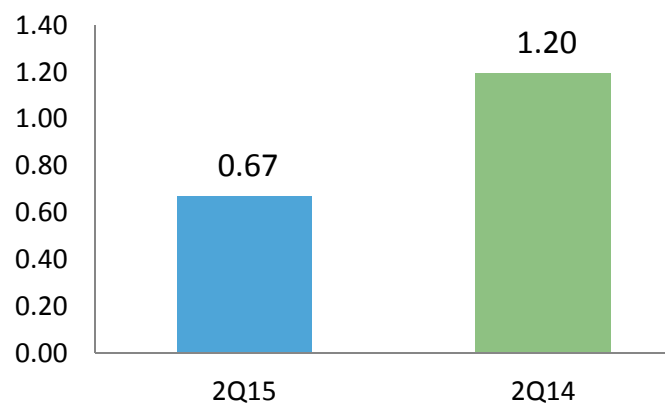
**ROE (%)**



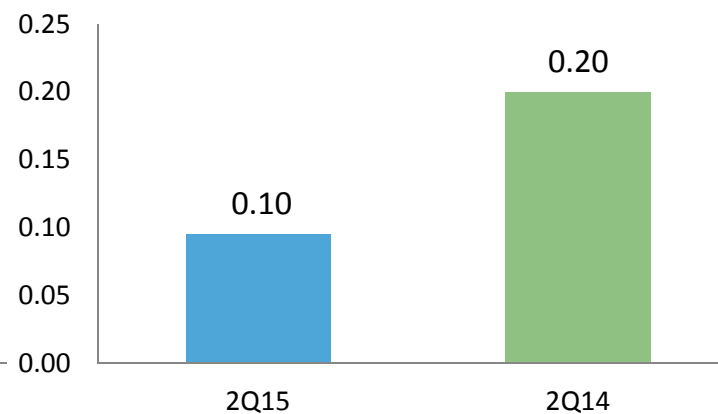
**EPS (Baht per share)**



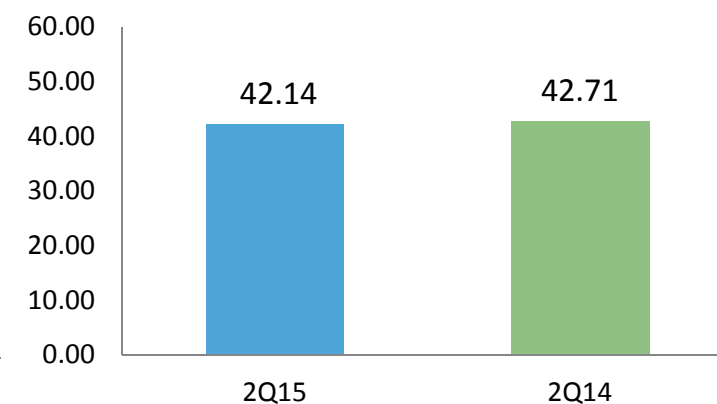
**Net Debt to EBITDA (times)**



**Net debt/Equity (times)**

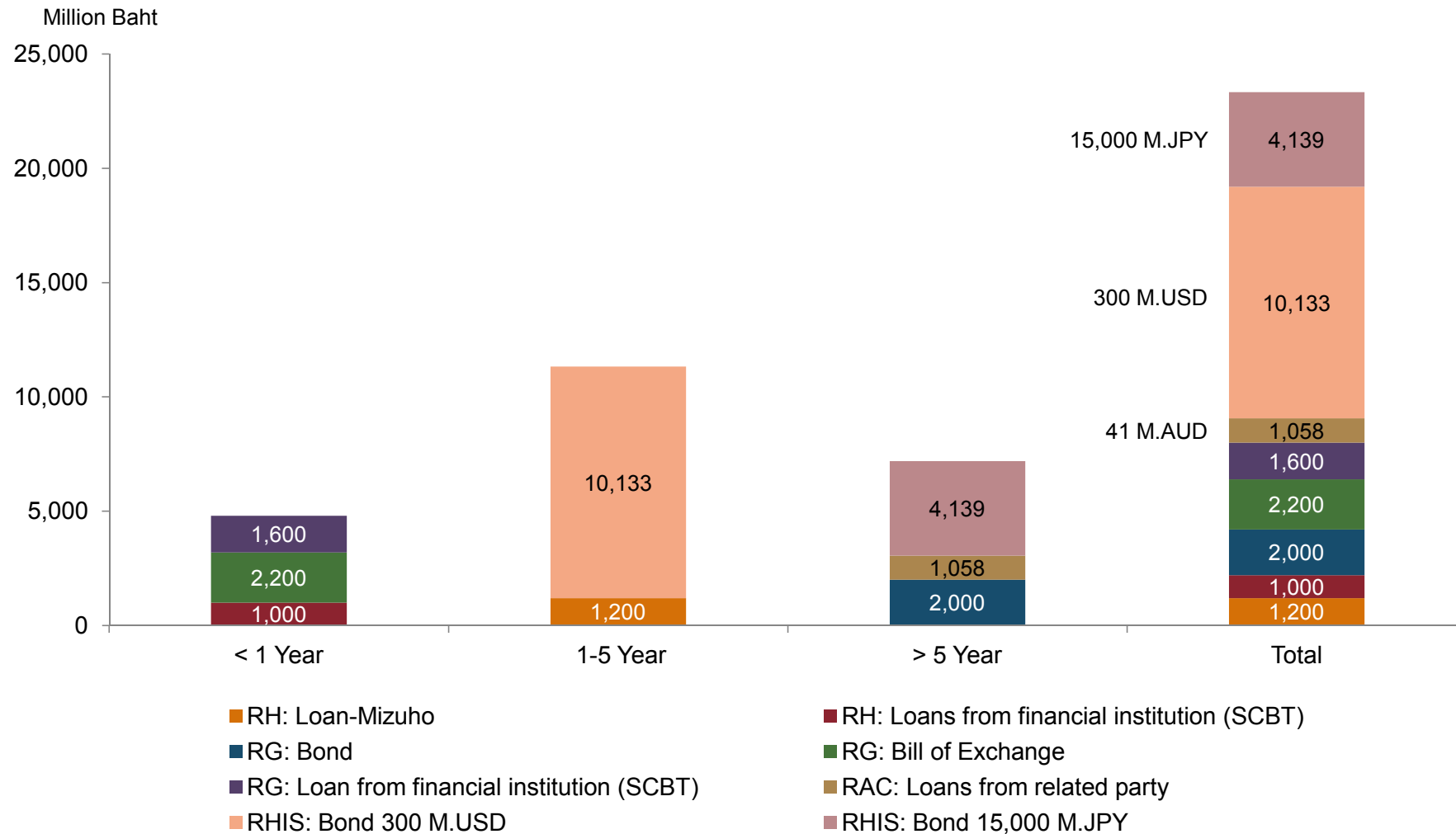


**Book value per share (Baht)**



# Debt Profile

## Debt Profile as of June 2015



# Agenda

Industry Overview

Company Overview

Financial Performance

## Annexure

*Financial Performance*



# Revenues: 2Q15 & 2Q14

Unit : in Million Baht		2Q15	2Q14	Diff	%
<b>Sales</b>		<b>12,745.87</b>	11,865.06	880.81	7.42
AP	- RG/TECO	<b>1,131.67</b>	1,239.73	(108.06)	(8.72)
	- RAC	<b>370.21</b>	430.60	(60.39)	(14.02)
EP (Fuel)	- RG/TECO	<b>11,004.99</b>	10,020.52	984.47	9.82
	- RAC	<b>221.73</b>	155.24	66.49	42.83
	- Flared Gas	<b>17.27</b>	18.97	(1.70)	(8.96)
<b>Revenue from financial leases - RG/TECO</b>		<b>1,271.66</b>	1,431.77	(160.11)	(11.18)
<b>Revenue from Rendering of services</b>		<b>63.26</b>	51.70	11.56	22.36
<b>Management service income</b>		<b>61.83</b>	74.54	(12.71)	(17.05)
<b>Dividend Income</b>		<b>133.14</b>	145.66	(12.52)	(8.60)
<b>Interest Income</b>		<b>90.51</b>	59.61	30.90	51.84
<b>Other Incomes (exc. Extraordinary items)</b>		<b>15.70</b>	105.03	(89.33)	(85.05)
<b>Total Revenues</b>		<b>14,381.97</b>	13,733.37	648.60	4.72

# Revenues: 1H15 & 1H14

Unit : in Million Baht		1H15	1H14	Diff	%
<b>Sales</b>		<b>27,007.04</b>	21,486.44	5,520.60	25.69
AP	- RG/TECO	<b>2,356.67</b>	2,083.75	272.92	13.10
	- RAC	<b>770.68</b>	892.18	(121.50)	(13.62)
EP (Fuel)	- RG/TECO	<b>23,515.70</b>	18,165.53	5,350.17	29.45
	- RAC	<b>330.96</b>	307.31	23.65	7.70
	- Flared Gas	<b>33.03</b>	37.67	(4.64)	(12.32)
<b>Revenue from financial leases - RG/TECO</b>		<b>2,576.12</b>	2,842.81	(266.69)	(9.38)
<b>Revenue from Rendering of services</b>		<b>122.91</b>	103.16	19.75	19.15
<b>Management service income</b>		<b>123.52</b>	162.02	(38.50)	(23.76)
<b>Dividend Income</b>		<b>133.14</b>	145.66	(12.52)	(8.60)
<b>Interest Income</b>		<b>183.33</b>	120.22	63.11	52.50
<b>Other Incomes (exc. Extraordinary items)</b>		<b>69.39</b>	361.97	(292.58)	(80.83)
<b>Total Revenues</b>		<b>30,215.45</b>	<b>25,222.28</b>	<b>4,993.17</b>	<b>19.80</b>

# Share of profit from jointly-controlled entities: 2Q15 & 2Q14

Unit : in Million Baht	2Q15	2Q14	Diff	%
RPCL	156.52	240.74	(84.22)	(34.98)
SEAN	27.93	19.82	8.11	40.92
HPC	(56.60)	(52.27)	(4.33)	(8.28)
CRESCO	(1.42)	6.57	(7.99)	(121.61)
SOLARTA	48.78	43.81	4.97	11.34
KORAT 3,4,7	21.89	14.31	7.58	52.97
FKW	33.05	18.77	14.28	76.08
KR2	26.84	13.40	13.44	100.30
KWINANA	19.96	8.75	11.21	128.11
PNPC	19.83	(28.11)	47.94	170.54
RW COGEN	51.82	(6.35)	58.17	916.06
NNEG	2.96	(3.76)	6.72	178.72
Others	10.80	(0.99)	11.79	1,190.91
<b>Total Share of profit from jointly-controlled entities</b>	<b>362.36</b>	<b>274.69</b>	<b>87.67</b>	<b>31.92</b>

# Share of profit from jointly-controlled entities: 2Q15 & 2Q14

**EXCL.FX**

Unit : in Million Baht	2Q15	2Q14	Diff	%
RPCL	<b>199.27</b>	242.56	(43.29)	(17.85)
SEAN	<b>75.87</b>	20.52	55.35	269.74
HPC	<b>(7.84)</b>	(176.36)	168.52	95.55
CRESCO	<b>(2.23)</b>	5.83	(8.06)	138.25
SOLARTA	<b>48.78</b>	43.81	4.97	11.34
KORAT 3,4,7	<b>21.89</b>	14.31	7.58	52.97
FKW	<b>33.05</b>	18.77	14.28	76.08
KR2	<b>26.87</b>	13.38	13.49	100.82
KWINANA	<b>19.96</b>	8.75	11.21	128.11
PNPC	<b>(6.38)</b>	(25.88)	19.50	75.35
RW COGEN	<b>51.86</b>	(4.40)	56.26	1,278.64
NNEG	<b>(4.98)</b>	(3.44)	(1.54)	44.77
Others	<b>3.30</b>	(0.99)	4.29	433.33
<b>Total Share of profit from jointly-controlled entities</b>	<b>459.42</b>	<b>156.86</b>	<b>302.56</b>	<b>192.89</b>

# Share of profit from jointly-controlled entities: 1H15 & 1H14

Unit : in Million Baht	1H15	1H14	Diff	%
RPCL	<b>353.45</b>	433.79	(80.34)	(18.52)
SEAN	<b>90.41</b>	102.42	(12.01)	(11.73)
HPC	<b>(227.16)</b>	(52.27)	(174.89)	(334.59)
CRESCO	<b>3.04</b>	12.26	(9.22)	(75.20)
SOLARTA	<b>94.93</b>	87.85	7.08	8.06
KORAT 3,4,7	<b>42.02</b>	31.13	10.89	34.98
FKW	<b>61.00</b>	49.88	11.12	22.29
KR2	<b>49.41</b>	37.38	12.03	32.18
KWINANA	<b>37.00</b>	29.95	7.05	23.54
PNPC	<b>7.68</b>	(18.69)	26.37	141.09
RW COGEN	<b>50.05</b>	(12.85)	62.90	489.49
NNEG	<b>(8.92)</b>	(6.61)	(2.31)	34.95
Others	<b>7.63</b>	(3.62)	11.25	310.77
<b>Total Share of profit from jointly-controlled entities</b>	<b>560.54</b>	<b>690.62</b>	<b>(130.08)</b>	<b>(18.84)</b>

# Share of profit from jointly-controlled entities: 1H15 & 1H14

**EXCL.FX**

Unit : in Million Baht	1H15	1H14	Diff	%
RPCL	<b>378.25</b>	415.83	(37.58)	(9.04)
SEAN	<b>119.38</b>	87.04	32.34	37.16
HPC	<b>(184.73)</b>	(176.36)	(8.37)	(4.75)
CRESCO	<b>0.56</b>	9.70	(9.14)	(94.23)
SOLARTA	<b>94.93</b>	87.85	7.08	8.06
KORAT 3,4,7	<b>42.02</b>	31.13	10.89	34.98
FKW	<b>60.99</b>	49.87	11.12	22.30
KR2	<b>49.40</b>	37.33	12.07	32.33
KWINANA	<b>37.00</b>	29.95	7.05	23.54
PNPC	<b>(14.69)</b>	(27.55)	12.86	46.68
RW COGEN	<b>50.08</b>	(8.00)	58.08	726.00
NNEG	<b>(14.23)</b>	(6.29)	(7.94)	(126.23)
Others	<b>0.14</b>	(3.62)	3.76	103.87
<b>Total Share of profit from jointly-controlled entities</b>	<b>619.10</b>	<b>526.88</b>	<b>92.22</b>	<b>17.50</b>

# Cost and Expenses: 2Q15 & 2Q14

Unit : in Million Baht	2Q15	2Q14	Diff	%
<b>Cost of Sale and rendering of services</b>	<b>11,851.20</b>	10,946.39	904.81	8.27
– Fuel Cost : RG/ TECO	<b>10,927.56</b>	9,939.62	987.94	9.94
– Fuel Cost : RAC	-	10.08	(10.08)	(100.00)
– Fuel Cost : Flared Gas	<b>2.79</b>	2.90	(0.11)	(3.79)
– Operation & Maintenance	<b>392.02</b>	448.28	(56.26)	(12.55)
– Repairing Expense (CSA)	<b>233.93</b>	191.22	42.71	22.34
– Spare parts	<b>94.28</b>	179.08	(84.80)	(47.35)
– Insurance Premium	<b>94.19</b>	73.55	20.64	28.06
– Standby Charge	<b>62.73</b>	58.54	4.19	7.16
– Others	<b>43.70</b>	43.12	0.58	1.35
<b>Selling and Admin- Expenses</b>	<b>357.05</b>	317.80	39.25	12.35
<b>Total Cost and Expenses (excluded depreciation &amp; amortization)</b>	<b>12,208.25</b>	<b>11,264.19</b>	<b>994.06</b>	<b>8.38</b>

# Cost and Expenses: 1H15 & 1H14

Unit : in Million Baht	1H15	1H14	Diff	%
<b>Cost of Sale and rendering of services</b>	<b>25,154.46</b>	19,866.88	5,287.58	26.62
– Fuel Cost : RG/ TECO	<b>23,303.66</b>	18,009.49	5,294.17	29.40
– Fuel Cost : RAC	<b>7.80</b>	20.00	(12.20)	(61.00)
– Fuel Cost : Flared Gas	<b>5.30</b>	5.81	(0.51)	(8.78)
– Operation & Maintenance	<b>799.65</b>	858.54	(58.89)	(6.86)
– Repairing Expense (CSA)	<b>475.97</b>	375.22	100.75	26.85
– Spare parts	<b>183.54</b>	249.96	(66.42)	(26.57)
– Insurance Premium	<b>187.39</b>	141.96	45.43	32.00
– Standby Charge	<b>104.33</b>	120.57	(16.24)	(13.47)
– Others	<b>86.82</b>	85.33	1.49	1.75
<b>Selling and Admin- Expenses</b>	<b>718.89</b>	680.12	38.77	5.70
<b>Total Cost and Expenses (excluded depreciation &amp; amortization)</b>	<b>25,873.35</b>	<b>20,547.00</b>	<b>5,326.35</b>	<b>25.92</b>



# Gain (Loss) From Foreign Exchange Rate

Unit : in Million Baht	2Q15	2Q14	1H15	1H14
Gain from Foreign Exchange Rate	(304.50)	19.48	(498.98)	(28.48)
<b>The Company and Subsidiaries</b>	<b>(207.44)</b>	<b>(98.35)</b>	<b>(440.43)</b>	<b>(192.22)</b>
- RH	46.37	1.23	30.36	(12.84)
- RH Inter	(223.80)	(97.40)	(449.33)	(200.22)
- RG / RE / RL	(30.01)	(2.23)	(21.46)	16.85
- TECO (100% from February 2014)	-	0.05	-	3.99
<b>Jointly-controlled entities and Associates</b>	<b>(97.06)</b>	<b>117.83</b>	<b>(58.55)</b>	<b>163.74</b>
- SEAN (33.33%)	(47.94)	(0.70)	(28.97)	15.38
- RPCL (25%)	(42.75)	(1.82)	(24.80)	17.96
- TECO (50%)	(48.76)	124.09	(42.43)	124.09
- HPC (40%)	26.21	(2.23)	22.37	8.86
- Others (RW Cogen, FKW, KR2, PNPC, CRESCO, NNEG, Solarta)	16.18	(1.51)	15.28	(2.55)

Foreign Exchange Rate as at 30 June 2015 = 33.773 Baht/USD and as at 30 June 2014 = 32.448 Baht/USD

# Agenda

Industry Overview

Company Overview

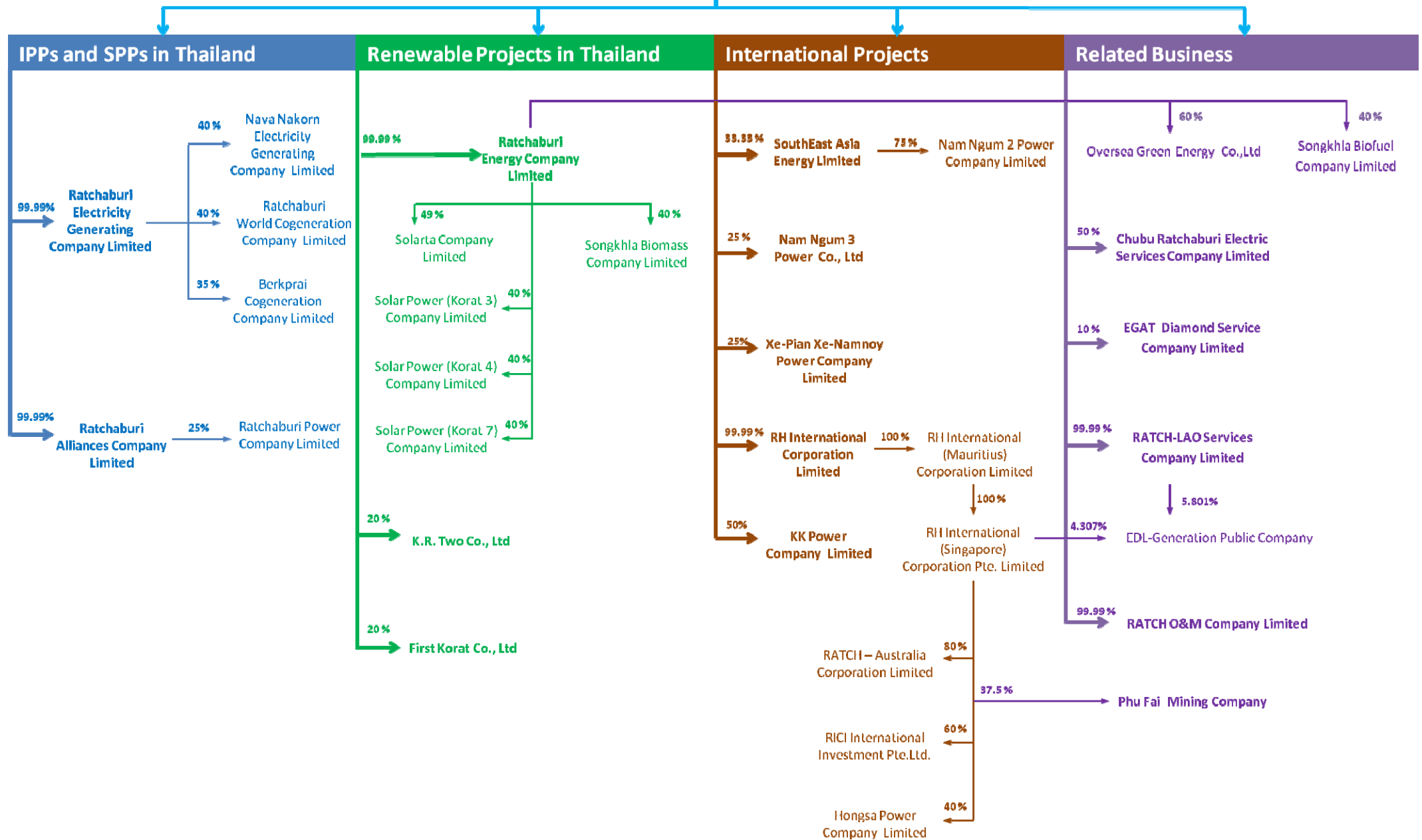
Financial Performance

Annexure

*RATCH Projects*

# New Company Structure

as of June 2015



# IPPs and SPPs in Thailand: Gas

*In Operation*



**Ratchaburi Power Plant (RATCHGEN)**

Location	Ratchaburi Province
Technology	Thermal & Combined Cycle
Total Capacity	3,645 MW (holds 100%)
PPA	25-Year
COD	<ul style="list-style-type: none"> <li>• TH#1-2 : 31 Oct 2000</li> <li>• CCGT #1-2 : 18 Apr 2002</li> <li>• CCGT#3 : 1 Nov 2002</li> </ul>
Partner	Ratchaburi Electricity Generating Company Limited holds 100%

**Tri Energy Power Plant (TECO)**

Location	Ratchaburi Province
Technology	Combined Cycle
Total Capacity	700 MW (holds 100%)
PPA	20-Year
COD	1 July 2000
Partner	Ratchaburi Electricity Generating Company Limited holds 100%

**Ratchaburi Power Plant (RPCL)**

Location	Ratchaburi Province
Technology	Combined Cycle
Total Capacity	1,400 MW (350 MW holds 25 %)
PPA	25-Year
COD	Block 1: 1 March 2008 Block 2: 1 June 2008
Partner	<ul style="list-style-type: none"> <li>• Ratchaburi Alliances Company Limited holds 25%</li> <li>• Power Assets holds 25%</li> <li>• Chubu Electric Power Company International B.V. holds 15%</li> <li>• PTT PCL holds 15%</li> <li>• Union Energy Company Limited holds 10%</li> <li>• Toyota Tsusho Corporation holds 10%</li> </ul>

# IPPs and SPPs in Thailand: Gas

*In Operation*



## Pratu Tao-A & Pratu Tao-A (Expansion)

Location	Sukhothai Province
Technology	Gas Engine
Total Capacity	2.65 MW (holds 100%)
PPA	5 years with automatic renewal for a further 5 years every 5 years
COD	Pratu Tao-A : 27 June 2007 Pratu Tao-A (Expansion) : In 2010
Partner	Ratchaburi Energy Company Limited holds 100%

## Sao Thian-A Project

Location	Sukhothai Province
Technology	Gas Engine
Total Capacity	3.6 MW (holds 100%)
PPA	5 years with automatic renewal for a further 5 years every 5 years
COD	26 January 2012
Partner	Ratchaburi Energy Company Limited holds 100%

## Ratchaburi World Cogeneration (RW Cogen)

Location	Ratchaburi Province
Technology	Cogeneration
Total Capacity	234 MW (93.60 MW holds 40%)
PPA	25-Year
COD	Unit 1: November 2014, Unit 2: March 2015
Partner	<ul style="list-style-type: none"> <li>Ratchaburi Electricity Generating Company Limited holds 40%</li> <li>Major Shareholder Group of Thai Agri Food PCL holds 60%</li> </ul>

# IPPs and SPPs in Thailand: Gas



*Under Construction*



## Nava Nakhon Electricity Generating (NNEG)

Location	Pathum Thani Province
Technology	Cogeneration
Total Capacity	132 MW (52.80 MW holds 40%)
PPA	25-Year
Progress	72% as of July 2015
Expected COD	In 2016
Project Cost	THB 6,000 Million
Debt to Equity	75 : 25
Partner	<ul style="list-style-type: none"> <li>Ratchaburi Electricity Generating Company Limited holds 40%</li> <li>PTT holds 30%</li> <li>Nava Nakhon holds 30%</li> </ul>

*Under Development*

## Berkprai Cogeneration (Former name: Ratchaburi Cogeneration)

Location	Ratchaburi Province
Technology	Cogeneration
Total Capacity	100 MW (35 MW holds 35%) Steam Generation 15 ton/hour
PPA	25-Year
Expected COD	In 2019
Project Cost	THB 4,700 Million
Debt to Equity	3 : 1
Partner	<ul style="list-style-type: none"> <li>Ratchaburi Electricity Generating Company Limited holds 35%</li> <li>Rajburi Sugar Company Limited 65%</li> </ul>



# Renewable Projects in Thailand: Wind

*In Operation*



Huay Bong 2 Wind-Turbine Power Project	
Location	Nakorn Ratchasima Province
Technology	Wind-Turbine
Total Capacity	103.5 MW (20.7 MW holds 20%)
PPA	5 years with automatic renewal for a further 5 years every 5 years
COD	8 February 2013
Project Cost	THB 6,100 Million
Debt to Equity	70 : 30
Partner	<ul style="list-style-type: none"> <li>• RATCH holds 20%</li> <li>• Aeolus Power holds 60%</li> <li>• Chubu Electric Power Korat, BV holds 20%</li> </ul>

Huay Bong 3 Wind-Turbine Power Project	
Location	Nakorn Ratchasima Province
Technology	Wind-Turbine
Total Capacity	103.5 MW (20.7 MW holds 20%)
PPA	5 years with automatic renewal for a further 5 years every 5 years
COD	14 November 2012
Project Cost	THB 6,500 Million
Debt to Equity	70 : 30
Partner	<ul style="list-style-type: none"> <li>• RATCH holds 20%</li> <li>• Aeolus Power holds 60%</li> <li>• Chubu Electric Power Korat, BV holds 20%</li> </ul>

# Renewable Projects in Thailand: Solar

*In Operation*



## Solar Power Project (Korat 3, Korat 4, Korat 7)

Location	Nakorn Ratchasima Province
Technology	Solar Power
Total Capacity	18 MW (7.2 MW holds 40%)
PPA	5 years with automatic renewal for a further 5 years every 5 years
COD	<ul style="list-style-type: none"> <li>Korat 3: 9 March 2012</li> <li>Korat 4: 14 May 2012</li> <li>Korat 7: 30 May 2012</li> </ul>
Partner	<ul style="list-style-type: none"> <li>Ratchaburi Energy Company Limited holds 40%</li> <li>Solar Power holds 60%</li> </ul>

## Solarta Power Project

Location	Ayutthaya Province
Technology	Solar Power Generation
Total Capacity	34.25 MW (16.78 MW holds 49%)
PPA	5 years with automatic renewal for a further 5 years every 5 years
COD	<ul style="list-style-type: none"> <li>Ayutthaya Province : 7 April 2011</li> <li>Suphan Buri Province : In 2012</li> <li>Nakon Pathom Province : In 2012</li> </ul>
Partner	<ul style="list-style-type: none"> <li>Ratchaburi Energy Company Limited holds 49%</li> <li>Yanhee Power holds 51%</li> </ul>



# Renewable Projects in Thailand: Biomass



*Under Construction*



## Songkhla Biomass Power Project

Location	Songkhla Province
Technology	Thermal Power Plant
Total Capacity	9.9 MW (3.96 MW holds 40%)
PPA	5-Year (Automatic Renewal)
Progress	94% as of July 2015
Expected COD	August 2015
Project Cost	THB 846 Million
Debt to Equity	75 : 25
Partner	<ul style="list-style-type: none"><li>• Ratchaburi Energy Company Limited holds 40%</li><li>• Precise Power Producer holds 40%</li><li>• Assiddeek Saving Cooperative holds 20%</li></ul>

# International Projects : Hydro

In Operation

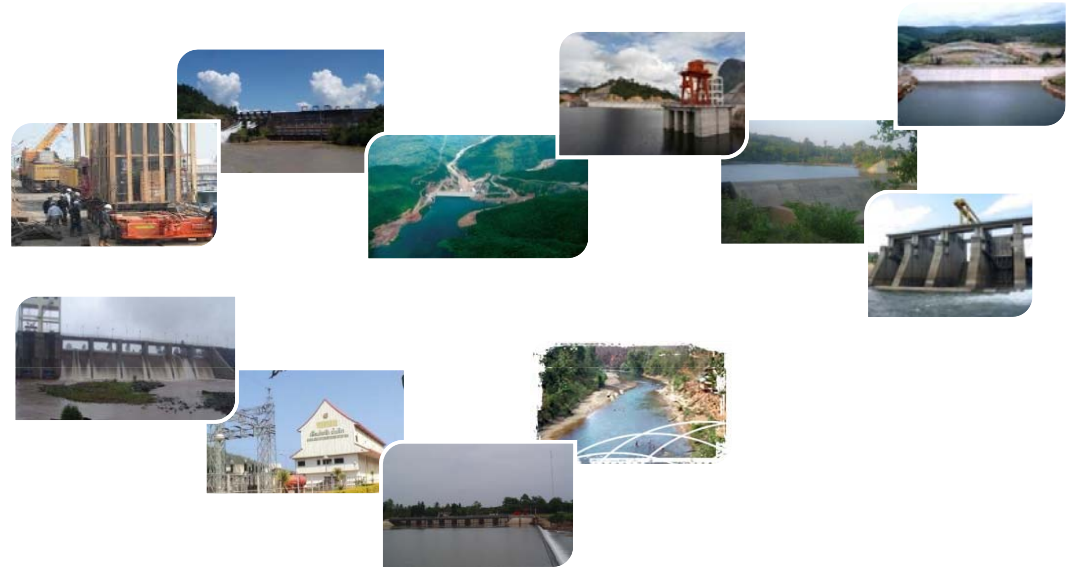


**Num Ngum 2 Hydroelectric Power Plant (NN2)**

Location	Lao PDR
Technology	Hydro Power Plant
Total Capacity	615 MW (153.75 MW holds 25%)
PPA	27-Year
IOD / COD	In 2011 / In 2013
Partner	<ul style="list-style-type: none"> <li>• SEAN* holds 75%</li> <li>• GOL holds 25%</li> </ul>

*\* Remark: SEAN's shareholder consist of*

- RATCH holds 33.33%
- Bangkok Expressway PCL holds 16.67%
- CH. Karnchang holds 38%
- P.T. Construction & Irrigation 5.33%
- Shlapak Development Company holds 5.33%
- Team Consulting Engineering and Management 1.34%



**EDL-Generation Public Company (EDL-Gen)**

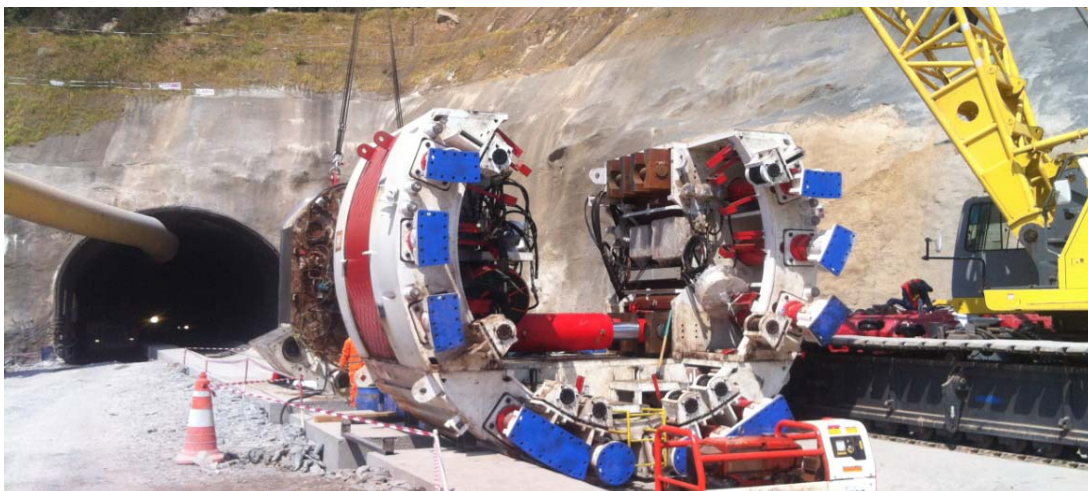
Location	Lao PDR
Technology	Hydro Power Plant
Total Capacity	881 MW (89.05 MW holds 10.108%)
Shareholders	<ul style="list-style-type: none"> <li>• RATCH-Lao holds 5.801%</li> <li>• RH International (Singapore) Corporation Pte. Limited holds 4.307%</li> <li>• EDL holds 75%</li> <li>• Others holds 14.892%</li> </ul>

# International Projects : Hydro

## Under Construction

### Xe Pian - Xe Namnoy Project

Location	Lao PDR
Technology	Hydro Power Plant
Total Capacity	410 MW (102.5 MW holds 25%)
PPA	27-year
Progress	20.89% as of 3 July 2015
Expected COD	In 2018
Project Cost	USD 1,020 Million
Debt to Equity	70 : 30
Partner	RATCH holds 25% SK Engineering holds 26% Korea Western Power holds 25% Lao PDR holds 24%





# International Projects : Coal

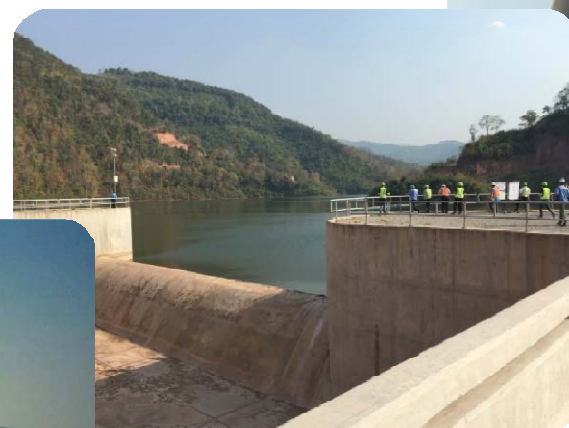
*In Operation Unit 1*

*Under Construction Unit 2&3*



## Hongsa Thermal Project

Location	Lao PDR
Technology	Lignite-Fired
Total Capacity	1,878 MW (751.2 MW holds 40%)
PPA	25-Year
Expected COD	In 2015
Progress	97.8% as of June 2015
Project Cost	USD 3,710 Million
Debt to Equity	75 : 25
Partner (Power Plant )	RATCH holds 40% Banpu Power holds 40% Lao PDR holds 20%
Partner (Phu Fai Mining)	RATCH holds 37.5% Banpu Power holds 37.5% Lao PDR holds 25%



# International Projects : Gas

*In Operation*



## Townsville Power Plant

Location	North Queensland
Technology	Combined Cycle Gas Turbine
Total Capacity	234 MW (187.20 MW holds 80%)
COD	In 1999

All output sold under a 20 year PPA to AGL / Arrow, expiring in 2025

## Kemerton Power Plant

Location	Western Australia
Technology	Open Cycle Gas / Diesel Turbine
Total Capacity	300 MW (240 MW holds 80%)
COD	In 2005

All capacity sold under a 25 Year PPA to Verve Energy, expiring in 2030

## BP Kwinana Power Plant

Location	Western Australia
Technology	Co-generation
Total Capacity	35.4 MW (28.32 MW holds 80%)
COD	In 1996

Energy and Services Agreement (ESA) with BP and a PPA (power only) with Verve Energy, both expiring in 2021

# International Projects : Gas

*In Operation*



**Toora**

Location	Victoria
Commissioned	In 2002
Total Capacity	21 MW (16.80 MW holds 80%)
Contracting Party	Merchant



**Starfish Hill**

Location	South Australia
Commissioned	In 2003
Total Capacity	34.5 MW (27.60 MW holds 80%)
Contracting Party	Merchant



**Windy Hill**

Location	Queensland
Commissioned	In 2000
Total Capacity	12 MW (9.60 MW holds 80%)
Contracting Party	Ergon Energy, expiry date in August 2015

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