

INVESTOR RELATIONS OFFICE

## **Corporate Presentation**

J.P. Morgan's Asia Yield 1x1 Forum in Japan





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For further information, please contact Investor Relations Section of the Electricity Generating Public Company Limited (EGCO) at Tel: (662) 998-5145-8 or Email: ir@egco.com





#### Agenda

Thailand Electricity's Overview

**EGCO Group's Overview** 

**Financial Performances** 



**Thailand Electricity's Overview** 



**EGCO Group's Overview** 

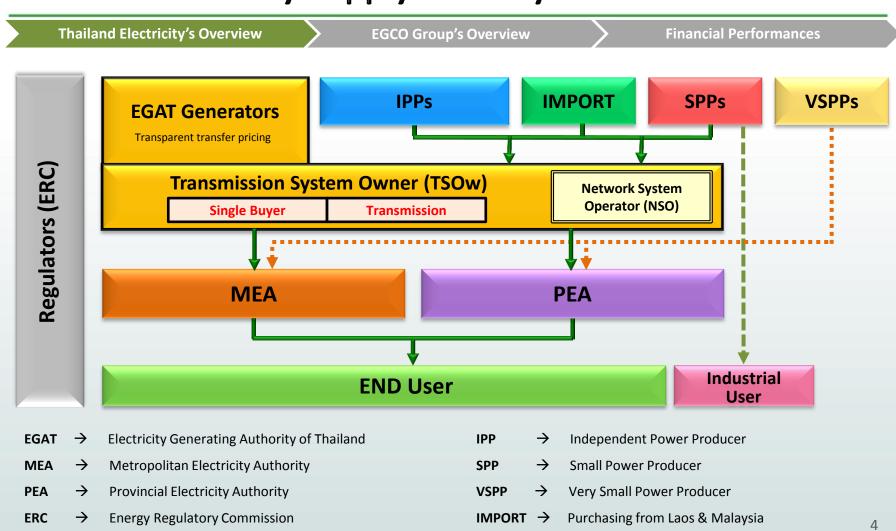


**Financial Performances** 





#### **Current Electricity Supply Industry**







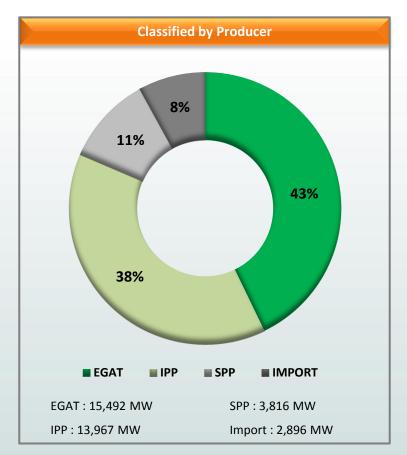
#### **Thailand's Power Industry**

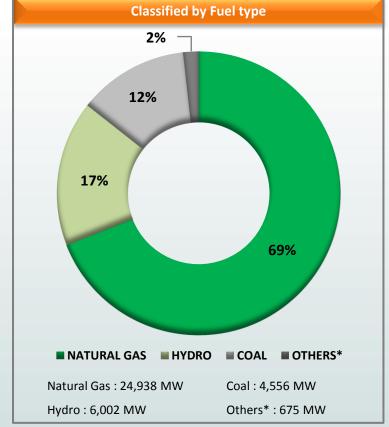
**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

As of July 2015, Thailand's Power Installed Capacity was 36,171.03 MW.

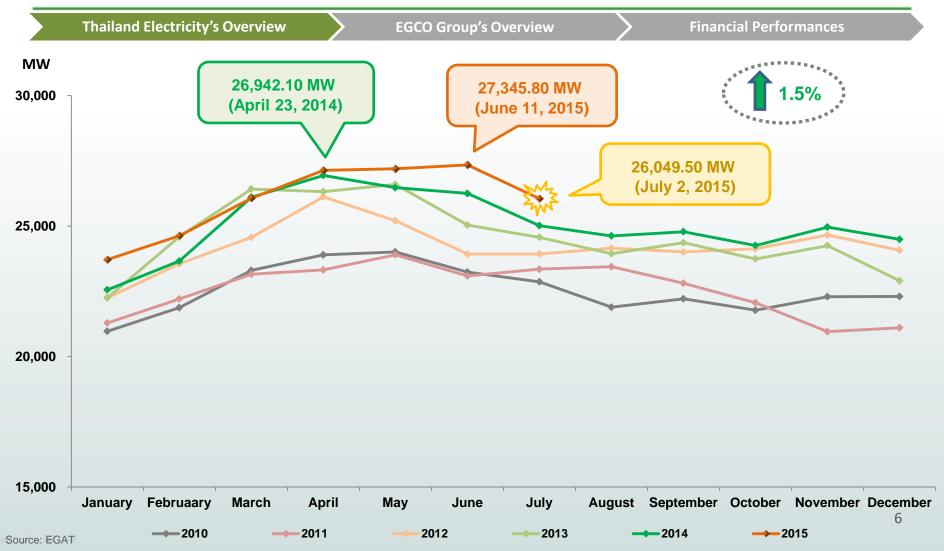




<sup>\*</sup>OTHERS = Fuel Oil, Diesel, Renewable



## **Peak Demand Comparison**







#### **Thailand's Power Development Plan (PDP 2015)**

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

On May 14, 2015, The National Energy Policy Council approved Thailand's Power Development Plan (PDP 2015). The Plan was endorsed by the Cabinet on June 30, 2015.

To increase renewable At the end of portion from 8% 2036, Thailand's to 20-25% power installed To reduce gas-fired capacity would portion from 65% To set Reserve be up to 70.4 GW. to 30-40% in 2036 Margin at least 15% of peak electricity demand. To increase coal-The average tariff fired portion from rate over PDP 20% to 25% 2015 is 4.587 Baht/kWh.





#### Thailand's Power Installed Capacity (2015 - 2036)

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

The total generating capacity during 2015 – 2036 can be summarized as the following:

Total capacity (as of December 2014)	37,612 MW	
Total additional capacity during 2015 - 2036	57,459 MW	
Total retired capacity during 2015 - 2036	-24,736 MW	
Grand total capacity (at the end of 2036)	70,335 MW	

Gas-fired power plants	17,478 MW
Renewable power plants	12,205 MW
Import from other countries	11,016 MW
Coal-fired power plants	7,390 MW
Cogeneration power plants	4,119 MW
Pumped Storage Hydro power plants	2,101 MW
Nuclear power plants	2,000 MW
Combined Cycle power plants	1,250 MW
	57,459 MW





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**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 



**Thailand Electricity's Overview** 



**EGCO Group's Overview** 



**Financial Performances** 





#### **About EGCO**

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

- ➤ The first Independent Power Producer (IPP) in Thailand established on May 12, 1992 through a spin off by EGAT.
- ➤ Listed on the Stock Exchange of Thailand on January 16, 1995





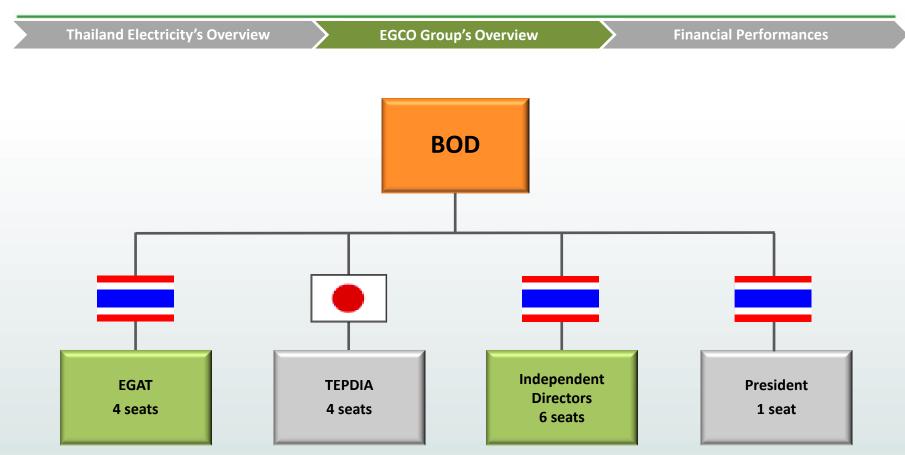
#### **EGCO's Shareholders**







#### **EGCO's Board of Directors**







#### **Investment Committee**

**Thailand Electricity's Overview EGCO Group's Overview Financial Performances EGAT** Mitsubishi **EGCO TEPCO EGAT** (President) **Corporation** 





#### **EGCO Group's Business Lines**

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

#### EGCO Group's business lines can be categorized into 3 business groups:



#### **Power Business**

To develop and acquire power plants with multiple fuel types.



#### **Service Business**

To provide operation, maintenance, engineering and construction services to power plants and other industries.



#### **Other Business**

To invest in water businesses that supply raw and tap water and the integrated energy business.



#### **EGCO Group's Power Plants Portfolio**

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

Currently, EGCO Group's portfolio comprises of 23 operating power plants, totaling contracted capacity 3,767.09 MWe.

				EGCO	Contracted	Attrib. Capacity	Contract		
Power Plant	Province/Country	Fuel Type	Plant Type	Shares	Capacity (MW)	(MWe)	Years	COD	Expired
IPP									
			Thermal			20	Jun 19, 1996	Jun 2016	
KEGCO (KN2&3)	Nakhon Si Thammarat	Natural Gas	Combined Cycle	100.00%	748.20 748.20	748.20	20	Jun 19, 1996	Jun 2016
GPG (KK2)	Saraburi	Natural Gas	Combined Cycle	50.00%	1,468.00	734.00	25	May 5, 2007 & Mar 1, 2008	May 2032 & Mar 2033
BLCP	Rayong	Coal	Thermal	50.00%	1,346.50	673.25	25	Oct 2006 & Feb 2007	Oct 2031 & Feb 2032
					Total IPPs	2,155.45			
SPP									
EGCO Cogen	Rayong	Natural Gas	Cogeneration	80.00%	112.18	89.74	21	Jan 28, 2003	Jan 2024
GCC	Saraburi	Natural Gas	Cogeneration	50.00%	108.63	54.32	21	Sep 3, 1998	Sep 2019
NKCC	Saraburi	Natural Gas	Cogeneration	50.00%	121.30	60.65	21	Oct 12, 2000	Oct 2021
scc	Samut Prakan	Natural Gas	Cogeneration	50.00%	114.45	57.23	21	Sep 23, 1999	Sep 2020
GYG	Yala	Parawood	Thermal	50.00%	20.20	10.10	25	Nov 28, 2006	Nov 2031
					Total SPPs	272.04			
Renewable (Domestic)									
NED	Lop Buri	Solar	PV Solar PP	66.67%	63.00	42.00	10	Dec 22, 2011 & May 2, 2013	Dec 2021 & May 2023
SPP2	Saraburi	Solar	PV Solar PP	100.00%	8.00	8.00	10	May 2, 2012	May 2022
SPP3	Si Sa Ket	Solar	PV Solar PP	100.00%	8.00	8.00	10	Feb 21, 2012	Feb 2022
SPP4	Si Sa Ket / Ubon Ratchathani	Solar	PV Solar PP	100.00%	6.00	6.00	10	Jan 24, 2012	Jan 2022
SPP5	Roi Et	Solar	PV Solar PP	100.00%	8.00	8.00	10	Jun 22, 2012	Jun 2022
GPS	Nakhon Sawan / Chai Nat / Phetchabun	Solar	PV Solar PP	60.00%	26.00	15.60	10	Mar 1-5, 2012 & Feb 1, 2013	Mar 2022 & Feb 2023
TWF	Chaiyaphum	Wind	Wind Turbine	90.00%	6.90	6.21	10	Jul 18, 2013	Jul 2023
Roi-Et Green	Roi Et	Rice Husk	Thermal	70.30%	8.80	6.19	21	May 29, 2003	May 2024
Solarco	Nakorn Pathom / Suphan Buri	Solar	PV Solar PP	49.00%	57.00	27.93	10	Nov 18, 2013 & Dec 16, 2013	Dec 2023
GIDEC	Songkhla	Waste	Thermal	50.00%	6.50	3.25	10	Dec 11, 2014	Dec 2024
					Total Renewable	131.18			
Overseas									
QPL	Philippines	Coal	Thermal	98.00%	460.00	450.80	25	May 30, 2000	Jun 2025
NTPC (NT2)	Laos	Hydro	Hydro PP	35.00%	1,023.00	358.05	25	Apr 30, 2010	Apr 2035
MPPCL	Philiphines	Coal	Thermal	40.95%	589.00	241.17	3-16	Jun 1998 & Dec 1998	Jan 2022 (Meralco)
SEG	Indonesia	Geothermal	Thermal	20.00%	227.00	45.40	30	Jun 2000 & Mar 2009	Jun 2030 & Mar 2039
BRWF	Australia	Wind	Wind Turbine	100.00%	113.00	113.00	15	Nov 28, 2014	Nov 2029
					Total Overseas	1,208.42			
				Total	Operating Projects	<u>3,767.09</u>			15





#### **EGCO Group's Power Plants Portfolio**

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

Currently, EGCO Group's portfolio consists of 3 under construction projects and 4 under development projects, totaling contracted capacity <u>1,720.95 MWe</u>.

Power Plant	Province/Country	Fuel Type	Plant Type	EGCO Shares	Contracted Capacity (MW)	Attrib. Capacity (MWe)	Contract Years	COD	Expired
Under Construction									
KEGCO (KN4)	Nakhon Si Thammarat	Natural Gas	Combined Cycle	100.00%	930.00	930.00	25	Jun 2016	Jun 2041
XPCL	Laos	Hydro	Hydro PP	12.50%	1,280.00	160.00	29	Oct 2019	Oct 2048
CWF	Chaiyaphum	Wind	Wind Turbine	90.00%	90.00	81.00	25	Dec 2016	Dec 2041
	Total Under Construction				1,171.00				
Under Development									
TP Cogen	Ratchaburi	Natural Gas	Cogeneration	100.00%	113.00	113.00	25	Oct 2017	Oct 2042
SK Cogen	Ratchaburi	Natural Gas	Cogeneration	100.00%	107.00	107.00	25	Oct 2017	Oct 2042
TJ Cogen	Pathum Thani	Natural Gas	Cogeneration	100.00%	107.00	107.00	25	Jun 2017	Jun 2042
SBPL	Philippines	Coal	Thermal	49.00%	455.00	222.95	20	Q1/2019	Q1/2039
Total Under Development				549.95					
	Total Under Construction and Under Development Projects								

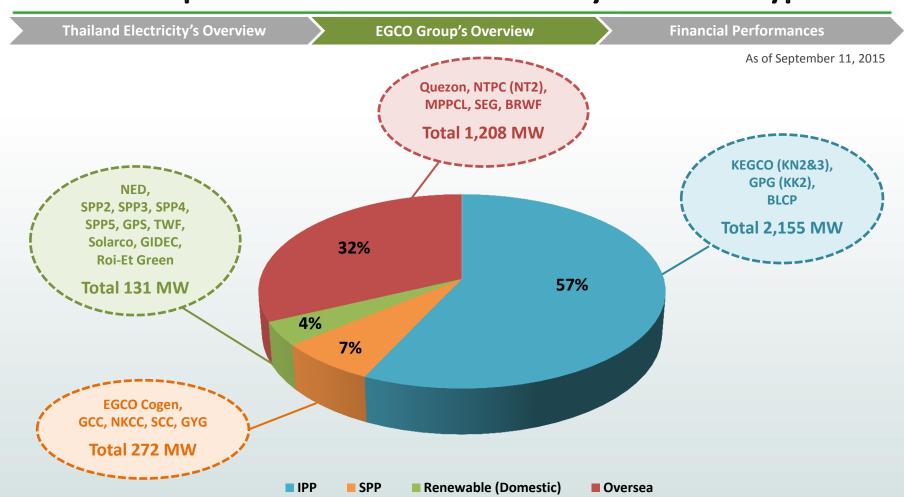


#### EGCO Group's Operating Power Plants Classified by Fuel

**Thailand Electricity's Overview EGCO Group's Overview Financial Performances** As of September 11, 2015 Roi-Et Green, NED, SPP2, SPP3, SPP4, SPP5, GYG, GPS, TWF, SEG Solarco, **GIDEC, BRWF** Total 300 MW NTPC (NT2) 8% Total 358 MW 10% 46% 36% KEGCO (KN2&3), GPG (KK2), EGCO Cogen, GCC, NKCC, SCC BLCP, QPL, **MPPCL Total 1,744 MW Total 1,365 MW** ■ Natural Gas Coal Hydro Renewable



#### **EGCO Group's Power Plants Classified by Producer Type**



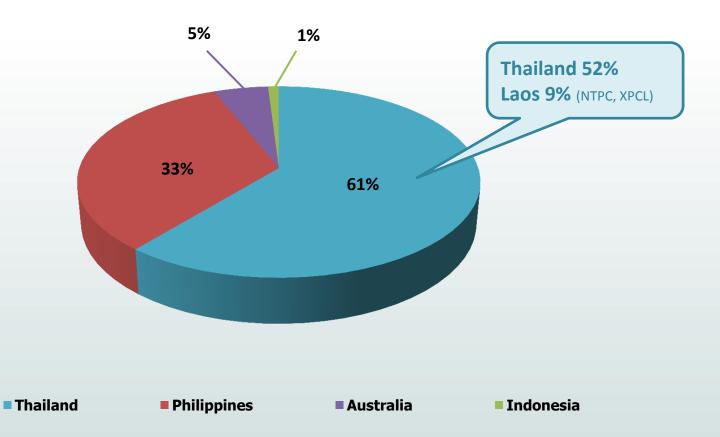




#### EGCO Group's Net Asset classified by investment country



As of July 30, 2015

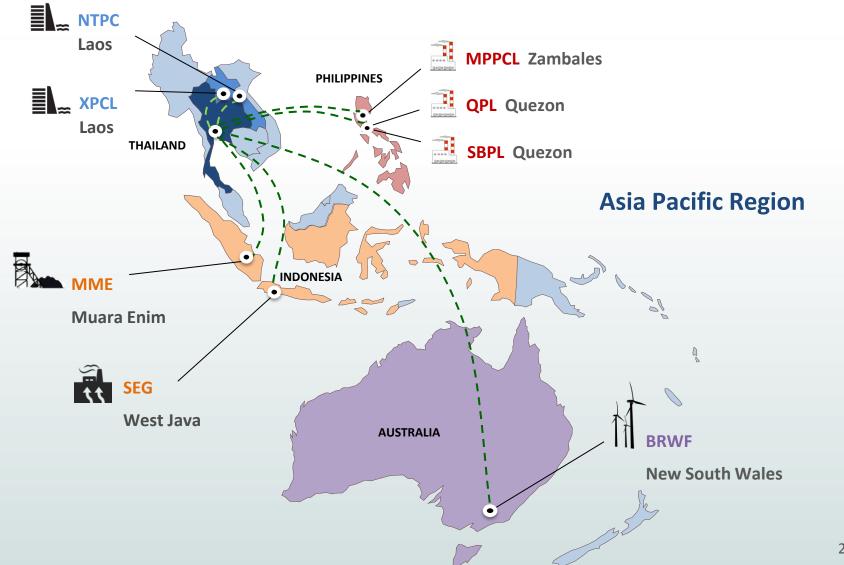




#### **EGCO Group's Neighboring Country**



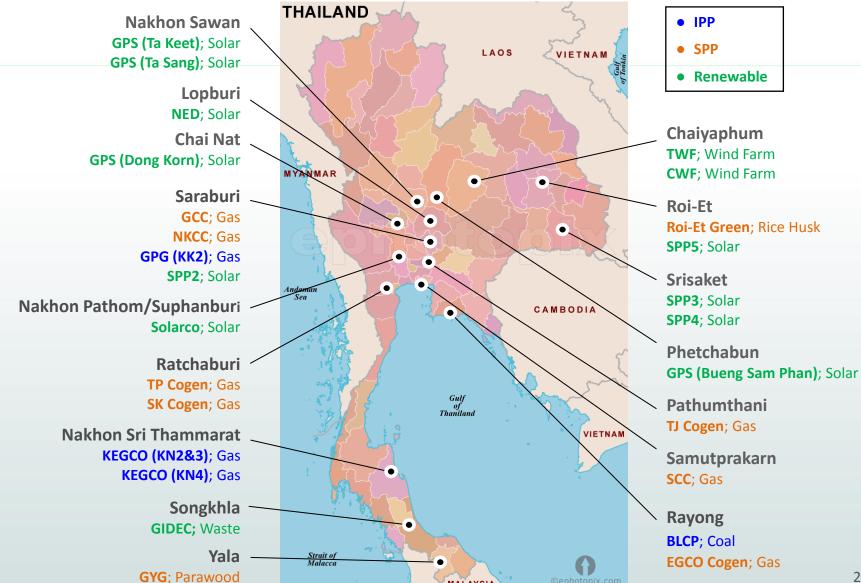
#### **Investment Map**





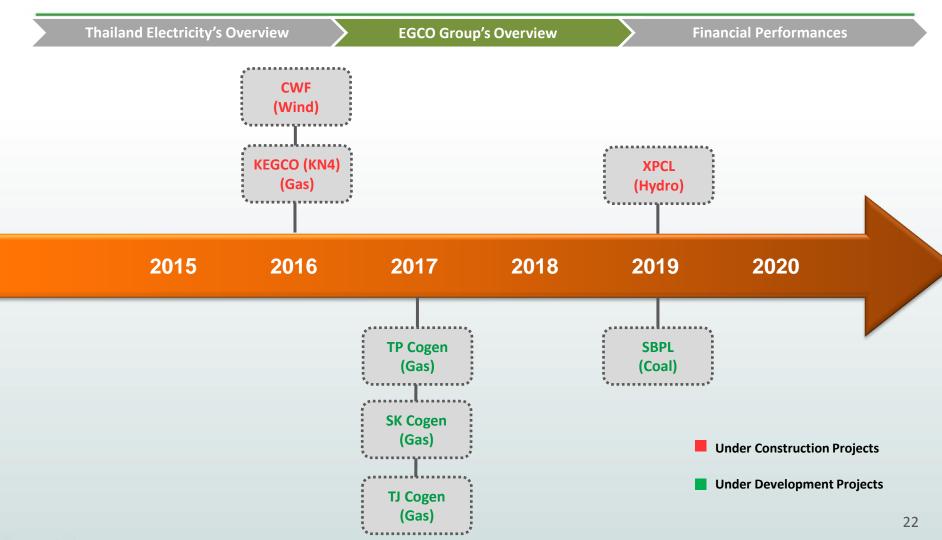
#### EGCO Group's Thailand Investment Map

**Energy** for life



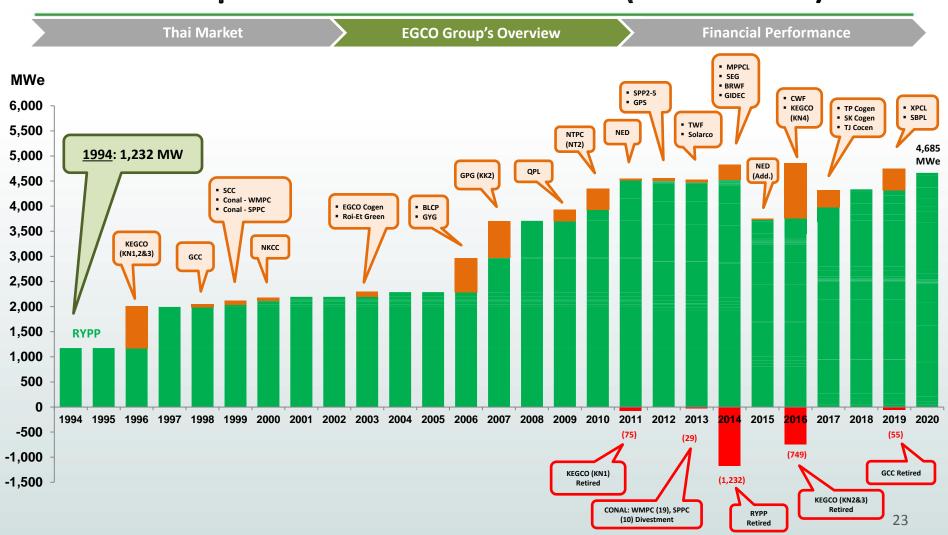


## **Projects in Pipeline**





## EGCO Group's Power Plants Portfolio (1994 - 2020)







## **EGCO Group's Other Business Portfolio**

Thailand Electricity's Overview

**EGCO Group's Overview** 

**Financial Performances** 

Currently, EGCO Group's other business portfolio comprises 5 companies:

Company	Business Type			
EGCO Engineering and Service Co., Ltd. (ESCO)	O&M			
Pearl Energy Philippines Operating Inc. (PEPOI)	O&M			
Quezon Management Services Inc. (QMS)	Management Service			
Eastern Water Resources Development and Management Plc. (EASTW)	Water			
Manambang Muara Enim Co., Ltd. (MME)	Coal Mining			



#### **EGCO Group's Corporate Strategies**

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 

Operate power plants to achieve optimum efficiency and manage projects under construction to achieve COD on time Boost long-term earning by acquisition of greenfield projects and/or expansion of existing projects **Acquire operating** assets to realize quick earning





## Agenda

**Thailand Electricity's Overview** 

**EGCO Group's Overview** 

**Financial Performances** 



**Thailand Electricity's Overview** 



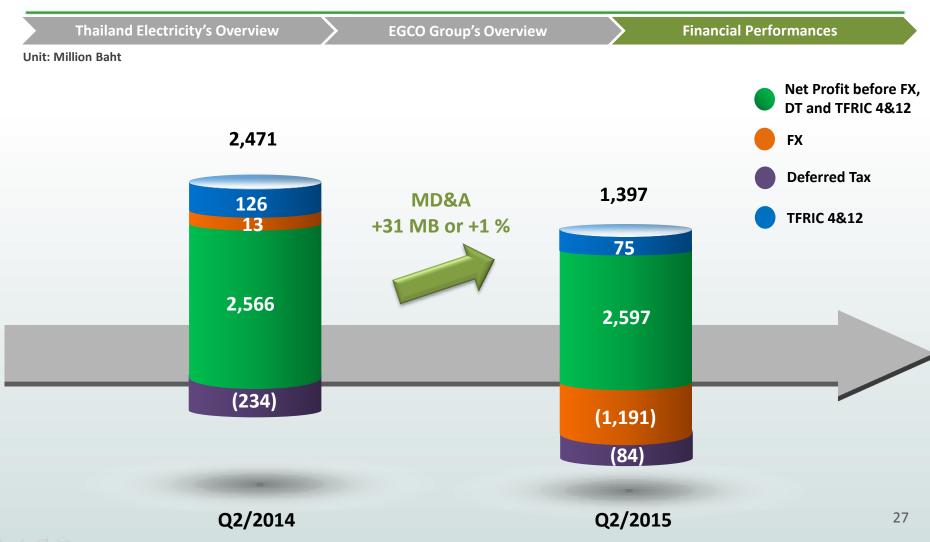
**EGCO Group's Overview** 



**Financial Performances** 

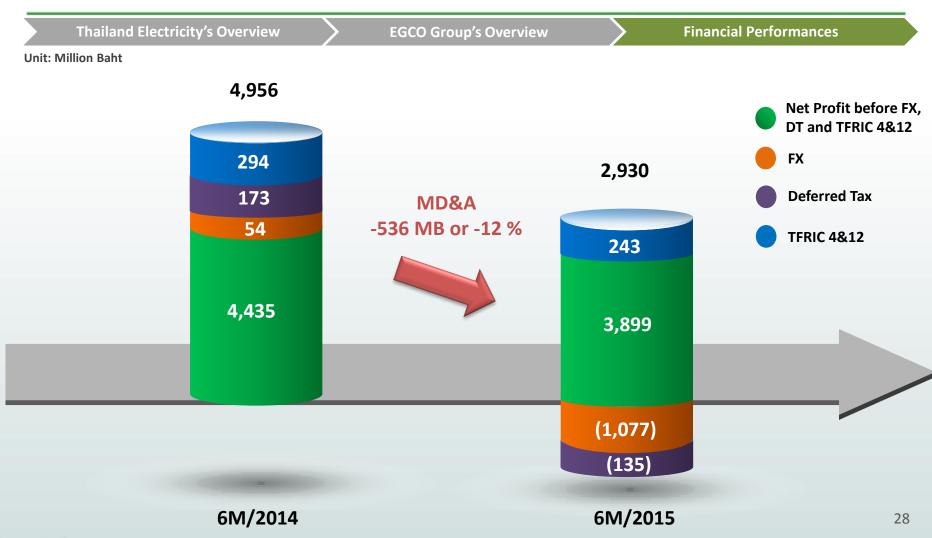


#### Q2/2014 VS Q2/2015 Net Profit



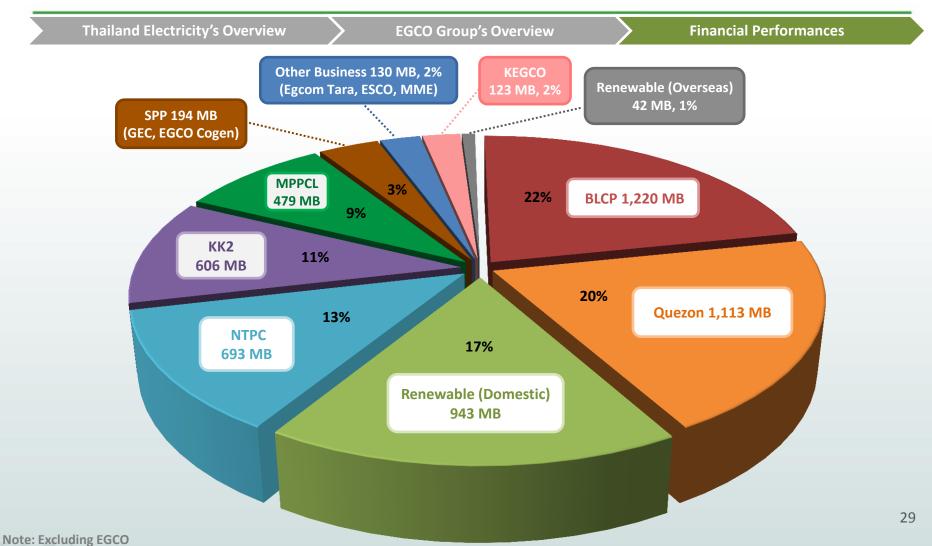


#### 6M/2014 VS 6M/2015 Net Profit





#### 6M/2015 Net Profit before FX, Deferred Tax and TFRIC 4&12; Breakdown







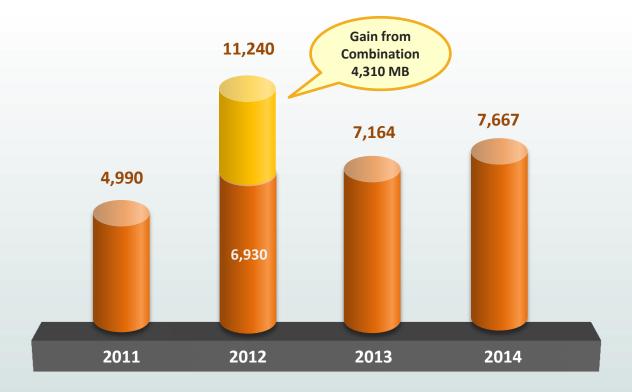
## **Historical Net Profit during 2011 - 2014**

Thailand Electricity's Overview

**EGCO Group's Overview** 

**Financial Performances** 

**Unit: Million Baht** 





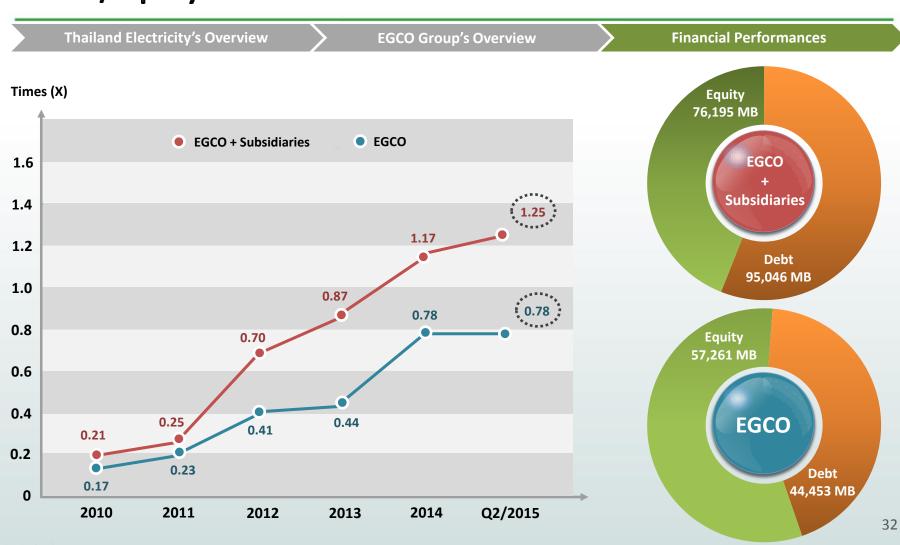


#### **EGCO & Subsidiaries' Outstanding Loan (EGCO Portion)**

**Thailand Electricity's Overview EGCO Group's Overview Financial Performances Total Outstanding Total Outstanding** As of March 31, 2015 As of June 30, 2015 **AUD 244 M AUD 249 M** USD 1,432 M **USD 1,380 M** JPY 17,194 M JPY 17,194 M THB 19,097 M THB 22,899 M  $\sum$ **Total Outstanding** THB 74,040 M THB 81,741 M (Baht equivalence)

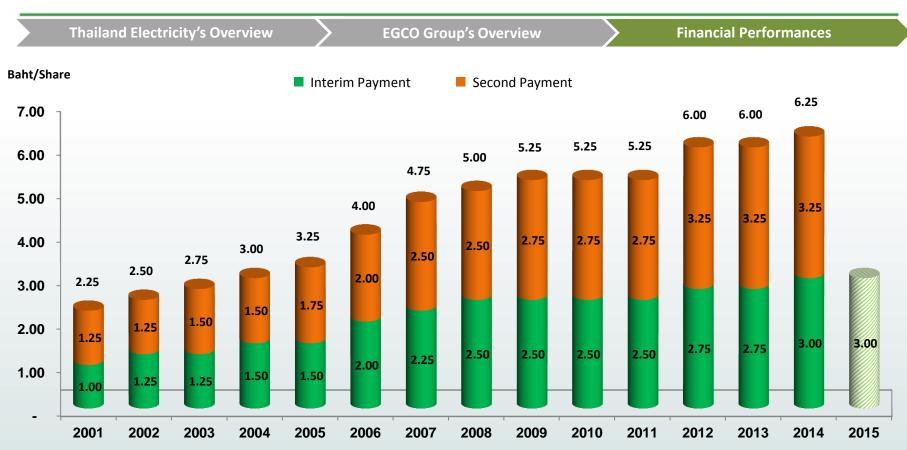


#### **Debt/Equity**





#### **Historical Dividend Payment**



Note: BOD in the 20<sup>th</sup> August's Meeting approved the appropriation of net profit from the first-half year operation of 2015 at 3.00 baht for the interim dividend payment which will be paid on September 18, 2015.







# **THANK YOU**





# Appendices





#### **Divestment of EGCOM Tara**

#### **Detail of Business**

Type: Tap Water Producer

**Location:** Ratchaburi and Samut

Songkram Province

**Contractual Type: BOO** 

**Term of Contract: 30 years from** 

April 7, 2001

with PWA

Divestment of EGCOM Tara Co., Ltd. (EGCOM Tara)



#### **Detail of Divestment**

- ✓ Sale all ESCO's shares in EGCOM Tara (74.19% of shares in EGCOM Tara) to Universal Utility Co., Ltd, a wholly owned subsidiary of East Water .
- ✓ The divestment of EGCOM Tara was completed on August 31, 2015.





## **Projects Under Construction**

#### **Project Description**

**Type:** Combined Cycle Power Plant

**Location:** Khanom, Nakhon Si

**Thammarat** 

**Shareholders: EGCO 100%** 

**SCOD**: June 19, 2016

**Contractual Type: IPP** 

**Contracted Capacity: 930 MW** 

PPA: 25 years with EGAT

Khanom Power
Plant Project
Unit 4 (KN4)



- ✓ Overall Progress : As of July 2015, the overall progress was 93.30%.
- ✓ Details of Construction work :
  - All major equipment were on base.
  - Related piping and electrical works are being conducted.





## **Projects Under Construction**

#### **Project Description**

Type: Hydro Power Plant (Run of River)

**Location**: Xayaburi District, Laos PDR

Shareholders: EGCO 12.5%, CK 30%,

EDL 20%, BECL 7.5%,

**GPSC 25%**,

PT Construction and Irrigation Co., Ltd. 5%

**SCOD**: October 29, 2019

**Contractual Type: IPP** 

Contracted Capacity: 1,220 MW with EGAT

and 60 MW with EDL

PPA: 29 years with EGAT and EDL

Xayaburi Power
Plant Project
(XPCL)



- ✓ Overall Progress : As of June 2015, the overall progress was 46.43%.
- ✓ Details of Construction work :
  - Construction work of Navigation Lock Control Building is ongoing.
  - Excavation for Powerhouse and Fish Pass is ongoing.





# **Projects Under Construction**

#### **Project Description**

**Type:** Wind Power Plant

**Location**: Sub Yai, Chaiyaphum

**Shareholders:** EGCO 90%,

**PVI Group 10%** 

SCOD: December 1, 2016

**Contractual Type : SPP Non-Firm** 

**Contracted Capacity: 90 MW** 

with EGAT

Adder: 3.50 Baht/kWh for 10 years

Chaiyaphum Wind Farm (CWF)



- ✓ Overall Progress : As of July 2015, the overall progress was 16.75%.
- Details of Construction work:
  - Excavation, lean concrete work and anchor bolt installation for WTG foundations are ongoing.





## **Projects Under Development**

#### **Project Description**

**Type:** Cogeneration Power Plant

**Location**: Klong Luang,

**Pathum Thani** 

**Shareholders: EGCO 100%** 

**SCOD**: June 1, 2017

**Contractual Type: SPP** 

Cogeneration

**Installed Capacity: 110 MW** 

**Contracted Capacity: 90 MW** 

with EGAT

**Contracted Capacity** 

with IU: 17 MW and 10 t/h of steam

TJ Cogeneration
Project
(TJ Cogen)



- ✓ EPC Contract : EPC signing was executed on April 1, 2015.
- ✓ Financing: Financial Close is expected to be achieved in November 2015.
- ✓ Others: EIA for natural gas pipeline and EIA for power plant were approved on July 31, 2014 and February 5, 2015, respectively. BOI certification issuance is in process.





## **Projects Under Development**

#### **Project Description**

**Type:** Cogeneration Power Plant

**Location**: Ban Pong, Ratchaburi

**Shareholders: EGCO 100%** 

**SCOD**: October 1, 2017

**Contractual Type: SPP** 

Cogeneration

**Installed Capacity: 125 MW each** 

**Contracted Capacity: 90 MW each** 

with EGAT

**Contracted Capacity** 

with IU: TP Cogen → 23 MW and

40 t/h of steam

SK Cogen → 17 MW and

60 t/h of steam

TP & SK
Cogeneration
Project
(TP Cogen &
SK Cogen)



- ✓ EPC Contract : EPC Contract was signed on November 1, 2014.
- ✓ Financing: Financial Close is expected to be achieved in September 2015.
- ✓ Others: EIA for natural gas pipeline and EIA for power plant were approved on March 20, 2014 and March 19, 2015, respectively. BOI certification is in process.





# **Projects Under Development**

### **Project Description**

**Type:** Coal-Fired Power Plant

**Technology: Supercritical Boiler Location: Quezon Province,** 

Luzon, The Philippines

**Shareholders: EGCO 49%,** 

**MPG 51%** 

**SCOD**: March 1, 2019

**Contractual Type: IPP** 

**Installed Capacity: 500 MW** 

**Contracted Capacity: 455 MW** 

with Meralco

PSA Term: 20 years with 5-year

extension

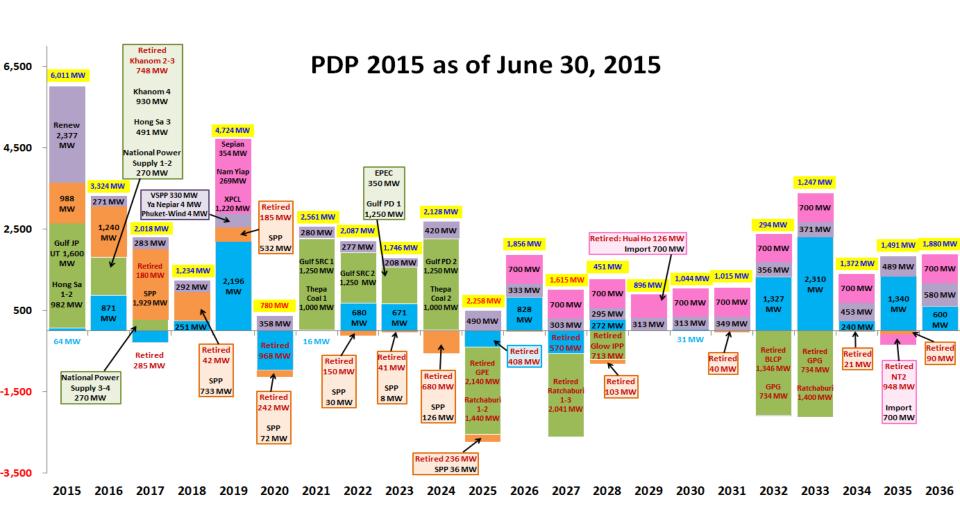
San Buenaventura Power Co., Ltd. (SBPL)



- ✓ EPC : EPC contract was signed on October 8, 2014.
- ✓ Financing: Financial Close is expected to be achieved in Q3/2015.
- ✓ Others: On May 20, 2015, the ERC of Philippines approved the Power Supply Agreement (PSA) between SBPL and MERALCO.



# Thailand's Power Installed Capacity (2015 - 2036)



**EGAT** 

IPP/Private

Import from Neighboring Countries





# **EGCO Group's Power Plants Portfolio**

Currently, EGCO Group's portfolio comprises of 9 domestic renewable power plants and 2 oversea renewable power plants, totaling contracted capacity <u>283.39 MWe.</u>

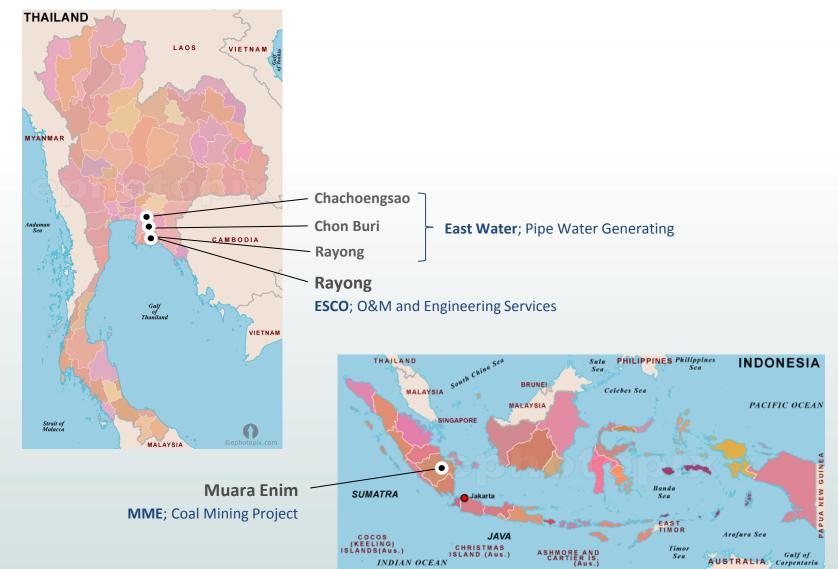
Power Plant	Province/Country	Fuel Type	Plant Type	EGCO Shares	Contracted Capacity (MW)	Attrib. Capacity (MWe)	Contract Years	COD	Expired
Renewable (Domestic)									
NED	Lop Buri	Solar	PV Solar PP	66.67%	63.00	42.00	10	Dec 22, 2011 & May 2, 2013	Dec 2021 & May 2023
SPP2	Saraburi	Solar	PV Solar PP	100.00%	8.00	8.00	10	May 2, 2012	May 2022
SPP3	Si Sa Ket	Solar	PV Solar PP	100.00%	8.00	8.00	10	Feb 21, 2012	Feb 2022
SPP4	Si Sa Ket / Ubon Ratchathani	Solar	PV Solar PP	100.00%	6.00	6.00	10	Jan 24, 2012	Jan 2022
SPP5	Roi Et	Solar	PV Solar PP	100.00%	8.00	8.00	10	Jun 22, 2012	Jun 2022
GPS	Nakhon Sawan / Chai Nat / Phetchabun	Solar	PV Solar PP	60.00%	26.00	15.60	10	Mar 1-5, 2012 & Feb 1, 2013	Mar 2022 & Feb 2023
TWF	Chaiyaphum	Wind	Wind Turbine	90.00%	6.90	6.21	10	Jul 18, 2013	Jul 2023
Roi-Et Green	Roi Et	Rice Husk	Thermal	70.30%	8.80	6.19	21	May 29, 2003	May 2024
Solarco	Nakorn Pathom / Suphan Buri	Solar	PV Solar PP	49.00%	57.00	27.93	10	Nov 18, 2013 & Dec 16, 2013	Dec 2023
GIDEC	Songkhla	Waste	Thermal	50.00%	6.50	3.25	10	Dec 11, 2014	Dec 2024
	Total Renewable (Domestic)					131.18			
Renewable (Overseas)									
SEG	Indonesia	Geothermal	Thermal	20.00%	227.00	45.40	30	Jun 2000 & Mar 2009	Jun 2030 & Mar 2039
BRWF	Australia	Wind	Wind Turbine	100.00%	113.00	113.00	15	Nov 28, 2014	Nov 2029
	Total Renewable (Overseas)					158.40			
	Total Renewable					289.58			



# **EGCO Group's Other Businesses**



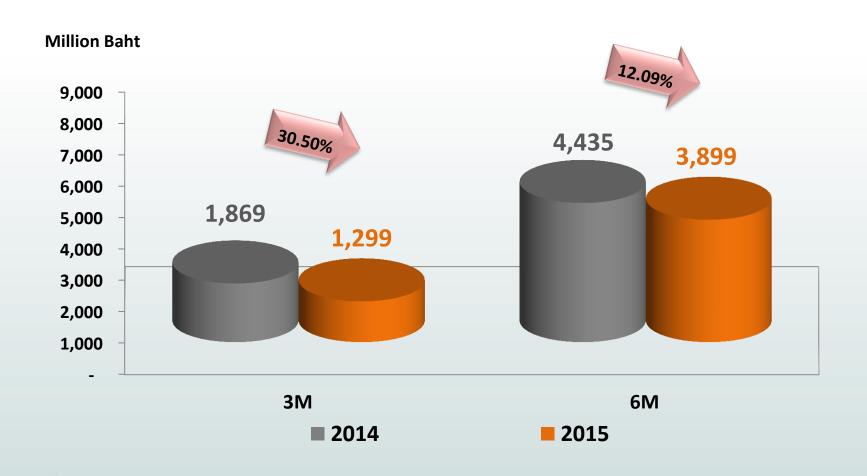
# **Investment Map**







## Accumulated Net Profit before FX, Deferred Tax and TFRIC 4&12: Comparison







# Maintenance in 6M/2014 VS 6M/2015

: Actual in 6M/2014 # : Unit : Actual in 6M/2015 D : Days

Power Plant	Jan	Feb	Mar	Apr	May	Jun
BLCP		<b>#1</b> (9D)	#1 (22D)		#2 (19D)	
QPL	(17D)	(46D)				
MPPCL	#2 (21D) #2 (43D)	#1 (7D)	#1 (12D)			





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