

# Investment Opportunities in the Philippine Energy Sector



Secretary Carlo Jericho L. Petilla  
Department of Energy

## ➤ Investment Opportunities

- Power
- Oil & Gas
- Coal
- Alternative Fuels (for Transport)
- Renewable Energy

## ➤ Investor's Support



# Power

# Power Sector Situationer

## 2013 Capacity in MW

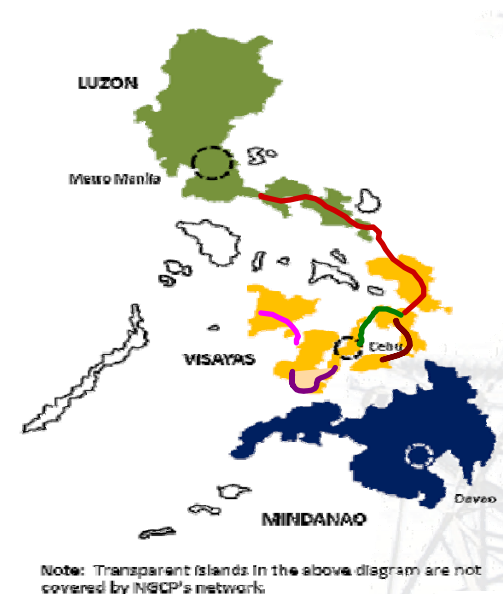
FUEL TYPE	LUZON		VISAYAS		MINDANAO		PHILIPPINES	
	MW	% Share	MW	% Share	MW	% Share	MW	% Share
Coal	4,531	36.16	806	32.91	232	11.32	5,568	32.71
Oil Based	1,778	14.19	670	27.39	625	30.50	3,074	18.05
Natural Gas	2,861	22.84	1	0.04			2,862	16.81
Geothermal	824	6.58	915	37.39	108	5.29	1,848	10.85
Hydro	2,462	19.66	11	0.47	1,047	51.09	3,521	20.68
Wind	33	0.26					33	0.19
Biomass	38	0.31	44	1.81	36	1.75	119	0.70
Solar					1	0.05	1	0.01
<b>TOTAL</b>	<b>12,528</b>		<b>2,448</b>		<b>2,049</b>		<b>17,025</b>	

Source: DOE List of Existing Power Plants as of May 2013

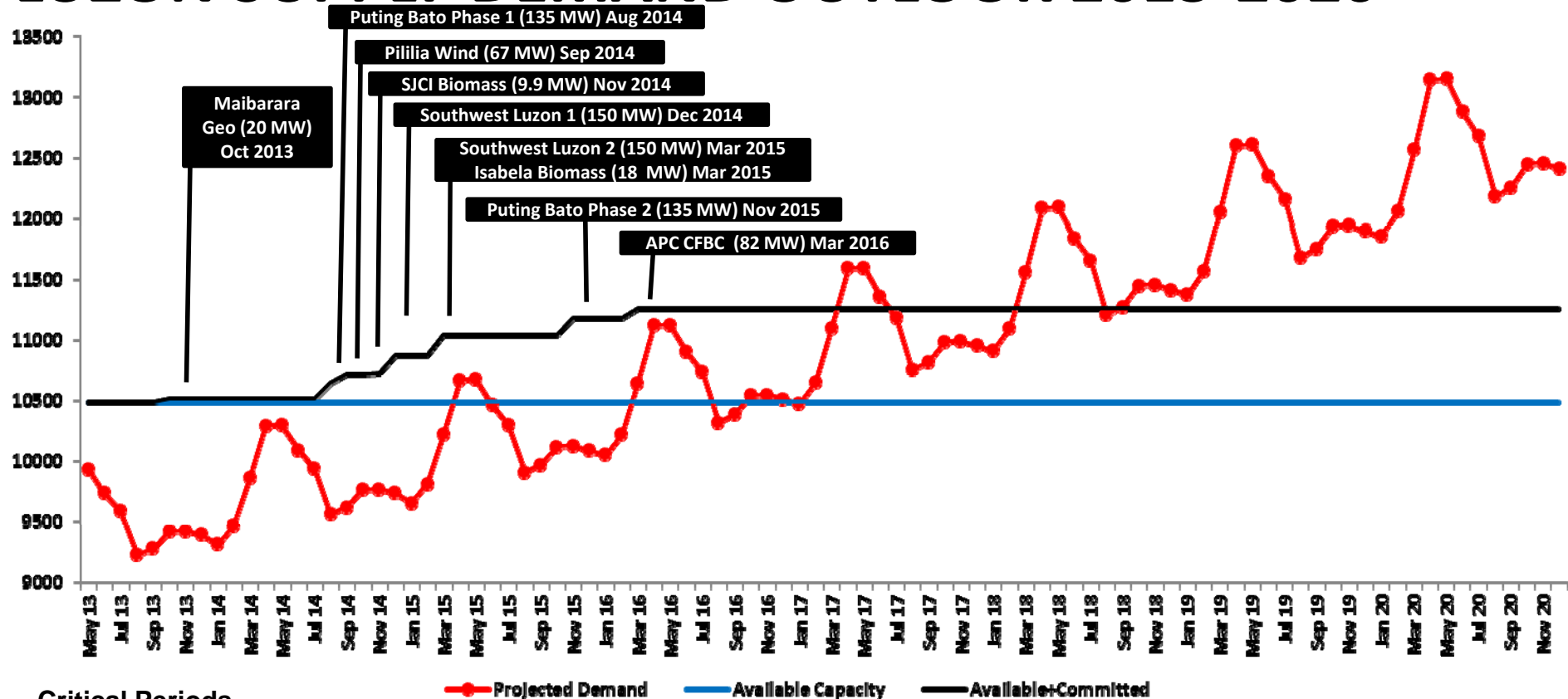
- Includes embedded generators
- Excludes off-grid generators

### Interconnection Line Capacity

- Leyte-Luzon (440 MW)
- Leyte-Cebu (400 MW)
- Leyte-Bohol (100 MW)
- Cebu-Negros (200 MW)
- Negros – Panay (100 MW)



# LUZON SUPPLY-DEMAND OUTLOOK 2013-2020



### On Available Capacity:

- 2015 Peak: Projected Deficit of 184 MW
- 2016 Peak: Projected Deficit of 635 MW

### On Available Capacity + Committed:

- 2017 Peak: Projected Deficit of 339 MW
- 2018 Peak: Projected Deficit of 833 MW

### Notes

- Demand curve as plotted includes total of peak demand and required Reserve Margin (RM) i.e. 4% regulating reserve and contingency and dispatchable reserve requirement
- 4.2 % peak demand growth rate resulted from observed 0.6 elasticity ratio of demand for electric power with national economic growth applied to 7 percent GDP growth rate (GR) target for 2013-2015.
- 4.8 % peak demand growth rate resulted from observed 0.6 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2016-2020.
- Assumed 6.6 percent average forced outage of the total dependable capacity

# COMMITTED POWER PROJECTS

## Luzon Grid Committed Power Projects, 767.4 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Project Cost (Php Billion)	Target Commissioning
<a href="#">135 MW Puting Bato Coal Fired Power Plant Phase I</a>	South Luzon Thermal Energy Corp. (SLTEC)	Brgy. Puting Bato West, Calaca, Batangas	135.0	12.9	August 2014
135 MW Puting Bato Coal Fired Power Plant Phase II	South Luzon Thermal Energy Corp. (SLTEC)	Brgy. Puting Bato West, Calaca, Batangas	135.0	9.6	November 2015
<a href="#">2 X 150 MW SLPGC Coal-Fired Power Plant Phase I</a>	Southwest Luzon Power Generation Corporation	Brgy. San Rafael, Calaca, Batangas	300.0	45.4	Unit I - Dec 2014 Unit II - March 2015
<a href="#">82 MW APC Circulating Fluidized Bed Coal Fired Power Plant</a>	Anda Power Corporation	Brgy. Bundagul, Mabalacat, Pampanga	82	8.6	March 2016
<a href="#">Maibarara Geothermal Power Project</a>	Maibarara Geothermal, Inc.	Sitio Capuz, Brgy. San Rafael, Sto. Tomas, Batangas	20.0	3.4	October 2013
<a href="#">Pililla Wind Power Project</a>	Alternergy Wind One Corporation	Pililla, Rizal	67.5	7.7	September 2014 (Subject to FIT)
<a href="#">9.9 MWe (net) SJCiPower Rice Husk-Fired Biomass power Plant Project</a>	San Jose City I Power Corporation	Brgy. Tulat, San Jose, Nueva Ecija	9.9	1.2	December 2014
<a href="#">20 MW IBEC Biomass Power Plant</a>	Isabela Biomass Energy Corporation	Isabela	18	1.9	March 2015 (Subject to FIT)
<b>TOTAL</b>			<b>767.4</b>	<b>90.7</b>	

# INDICATIVE POWER PROJECTS

## Luzon Grid Indicative Power Projects, **10,152.5 MW**

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Target Commissioning
2 X 20 MW FDC Camarines CFB Coal Power Plant	FDC Utilities, Inc.	Camarines Sur	40.0	March 2016
2 X 300 MW Coal-Fired Power Plant	Redondo Peninsula Energy, Inc.	Sitio Naglatore, Cawag, Subic Bay Freeport Zone	600.0	Phase I - October 2016 Phase II - December 2016
2 X 600 MW Mariveles Expansion Project	GNPower Mariveles Coal Plant Ltd. Co.	Mariveles, Bataan	1,200.0	2018
2 X 150 MW SLPGC Coal-Fired Power Plant Phase II	Southwest Luzon Power Generation Corporation	Brgy. San Rafael, Calaca, Batangas	300.0	Unit I - 2017 Unit II - 2017
2 X 300 MW Masinloc Expansion	AES Masinloc Power Partners Co., Inc.	Zambales	600.0	Unit 3 (300 MW) - September 2016 Unit 4 (300 MW) - September 2016
300 MW Limay Power Plant Project Phase I	SMC Consolidated Power Corporation	Brgy. Lamao, Limay, Bataan	300.0	150 MW - Dec. 2015 150 MW - May 2016
Quezon Power Expansion Project	Quezon Power Phils.	Mauban, Quezon	500.0	'March 2018
300 MW Limay Power Plant Project Phase II	SMC Consolidated Power Corporation	Brgy. Lamao, Limay, Bataan	300.0	2018
300 MW Limay Power Plant Project Phase III	SMC Consolidated Power Corporation	Brgy. Lamao, Limay, Bataan	300.0	2020
<b>TOTAL COAL</b>			<b>4,140.0</b>	

List of Committed Power Projects as of 28 August 2013



# INDICATIVE POWER PROJECTS

## Luzon Grid Indicative Power Projects, 10,152.5 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Target Commissioning
Aero Derivative Combined Cycle Power Plant	Calamba Aero Power Corporation	Calamba, Laguna	150.0	TBA
<b>TOTAL DIESEL</b>			<b>150.0</b>	
Pagbilao 300 MW Combined Cycle Gas Fired Power Plant	Energy World Corporation	Brgy. Ibabang Polo, Grande Island, Pagbilao, Quezon	300.0	June 2014
300 MW Batangas Mid-Merit Plant Project	First Gen Corporation	Batangas	300.0	September 2014
San Gabriel Power Plant	First Gas Power Corp.	San Gabriel, Batangas	550.0	September 2015
LNG-Fired Combined Cycle Power Plant	Meralco PowerGen Corporation	Atimonan, Quezon	1,750.0	2018
Combined Cycle Gas Turbine Power Plant Project	Atlantic, Gulf and Pacific Company of Manila, Inc	Limay, Bataan	2,400.0	Unit 1 – March 2017; Unit 2 – March 2018
<b>TOTAL NATURAL GAS</b>			<b>5,300.0</b>	
Tanawon Geothermal Project	Energy Development Corporation	Guinlajon, Sorsogon	40.0	2018
Rangas Geothermal Project	Energy Development Corporation	Bacon District, Sorsogon	40.0	2019
Kayabon Geothermal Project	Energy Development Corporation	Manito, Albay	40.0	2019
<b>TOTAL GEOTHERMAL</b>			<b>120.0</b>	
Dupinga Hydroelectric Power Project	Constellation Energy Corporation	Gabalton, Nueva Ecija	3.0	October 2015
Ibulao Hydroelectric Power Project	Hydrocore, Inc.	Lagawe, Ifugao	4.5	May 2015
<b>TOTAL HYDRO</b>			<b>7.5</b>	

List of Committed Power Projects as of 28 August 2013

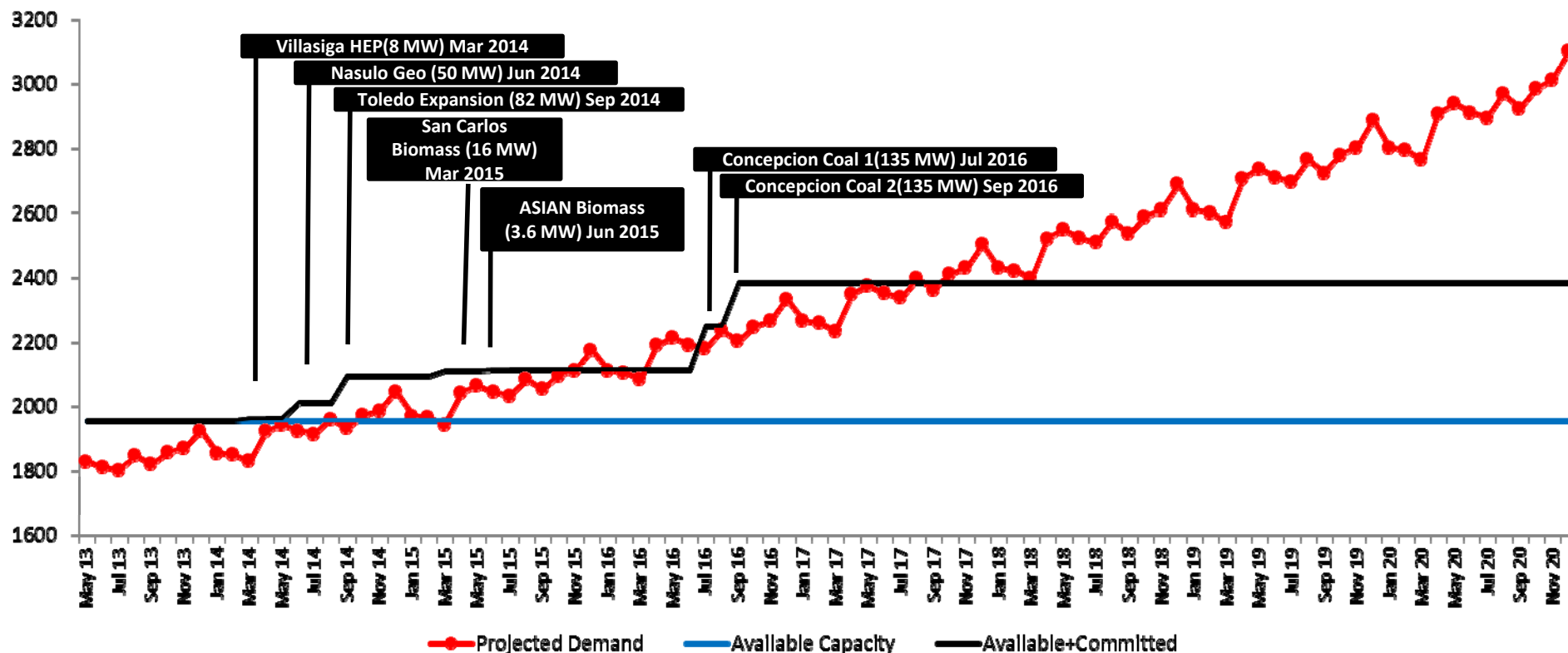


# INDICATIVE POWER PROJECTS

## Luzon Grid Indicative Power Projects, 10,152.5 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Target Commissioning
Phase 2: Mabitac Wind Power Project	Alternergy Sembrano Wind Corporation	Mt. Sembrano, Mabitac, Laguna	56.0	January 2017
Phase 1: Pasuquin East Wind Power Project	Energy Logics Philippines, Inc.	Pasuquin, Ilocos Norte	48.0	January 2017 (Subject to FIT)
Burgos Wind Power Project	EDC Burgos Wind Power Corporation	Nagsurot-Saoit, Burgos, Ilocos Norte	87.0	October 2014 (Subject to FIT)
Cavinti Wind Farm Project	Alternergy Wind Cavinti Corporation (Project Company)	Cavinti, Laguna	50.0	January 2017
80 MW Caparispisan and Balaoi Wind Energy Project	Northern Luzon UPC Asia Corporation	Brgys. Caparispisan and Balaoi, Municipality of Pagudpud, Province of Ilocos Norte	81.0	September 2014
Balaoi Wind Power Project	Northern Luzon UPC Asia Corporation	Brgy. Balaoi, Pagudpud, Ilocos Norte	45.0	August 2015
<b>TOTAL WIND</b>			<b>367.0</b>	
Currimao Solar Photovoltaic Power Project	Mirae Asia Energy Corporation	Currimao, Ilocos Norte	20.0	August 2014 Subject to FIT
Macabud Solar Photovoltaic Power Project	ATN Philippines Solar Energy Group, Inc.	Brgy. Macabud, Rodriguez, Rizal	30.0	February 2016 Subject to FIT
<b>TOTAL SOLAR</b>			<b>50.0</b>	
20 MW Waste-to-Energy Project using Thermal Gasifier Conversion	CJ Global Green Energy Philippine Corp.	Camarines Sur	18.0	June 2015
<b>TOTAL BIOMASS</b>			<b>18.0</b>	

# VISAYAS SUPPLY-DEMAND OUTLOOK 2013-2020



## Critical Periods

### On Available Capacity:

- 2014 Peak: Projected Deficit of 92 MW
- 2015 Peak: Projected Deficit of 221 MW

### On Available Capacity + Committed:

- 2015 Peak: Projected Deficit of 62 MW
- 2016 Peak: Projected Deficit of 100 MW
- 2017 Peak: Projected Deficit of 121 MW

## Notes

- Demand curve as plotted includes total of peak demand and required Reserve Margin (RM) i.e. 4% regulating reserve and contingency and dispatchable reserve requirement
- 7 % peak demand growth rate resulted from observed 1 elasticity ratio of demand for electric power with national economic growth applied to 7 percent GDP growth rate (GR) target for 2013-2015.
- 8 % peak demand growth rate resulted from observed 1 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2016-2020.
- Assumed 7 percent average forced outage of the total dependable capacity

# COMMITTED POWER PROJECTS

## Visayas Grid Committed Power Projects, 429.6 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Project Cost (Php Billion)	Target Commissioning
<a href="#">2 X 135 MW Concepcion Coal-fired Power Plant</a>	Palm Thermal Consolidated Holdings Corp.	Brgy. Nipa, Concepcion, Iloilo	270.0	26.4	1st Unit - July 2016 2nd Unit - September 2016
<a href="#">TPC Coal-Fired Power Plant Expansion Project (1 x 82 MW Coal-Fired Power Plant)</a>	Toledo Power Company	Toledo City, Cebu	82.0	10.2	September 2014
<a href="#">Nasulo Geothermal Project</a>	Energy Development Corporation	Nasuji, Valencia, Negros Oriental	50.0	4.0	June 2014
<a href="#">Villasiga HEP</a>	Sunwest Water & Electric Co., Inc.	Brgy. Igsoro, Bugasong, Antique	8.0	1.4	March 2014
Asian Energy System Biomass Project	Asian Energy System Corporation	Cebu	3.6	0.2	December 2015
<a href="#">18 MW San Carlos Biomass Project</a>	San Carlos BioPower Inc.	San Carlos City, Negros Occidental	16.0	1.7	March 2015
<b>TOTAL</b>			<b>429.6</b>	<b>43.8</b>	

# INDICATIVE POWER PROJECTS

## Visayas Grid Indicative Power Projects, 718 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Target Commissioning
1 X 20 MW FDC Danao CFB Coal Power Plant	FDC Utilities, Inc.	Danao City, Cebu	20.0	2016
PEDC Expansion Project	Panay Energy Development Corporation (Global Business Power Corporation)	Brgy. Ingore, La Paz, Iloilo	150.0	2015
300 MW Therma Visayas Energy Project	Therma Visayas Inc.	Brgy. Bato, Toledo City, Cebu	300.0	June 2017
<b>TOTAL COAL</b>			<b>470.0</b>	
Dauin Geothermal Project	Energy Development Corporation	Dauin, Negros Oriental	40.0	2018
<b>TOTAL GEOTHERMAL</b>			<b>40.0</b>	

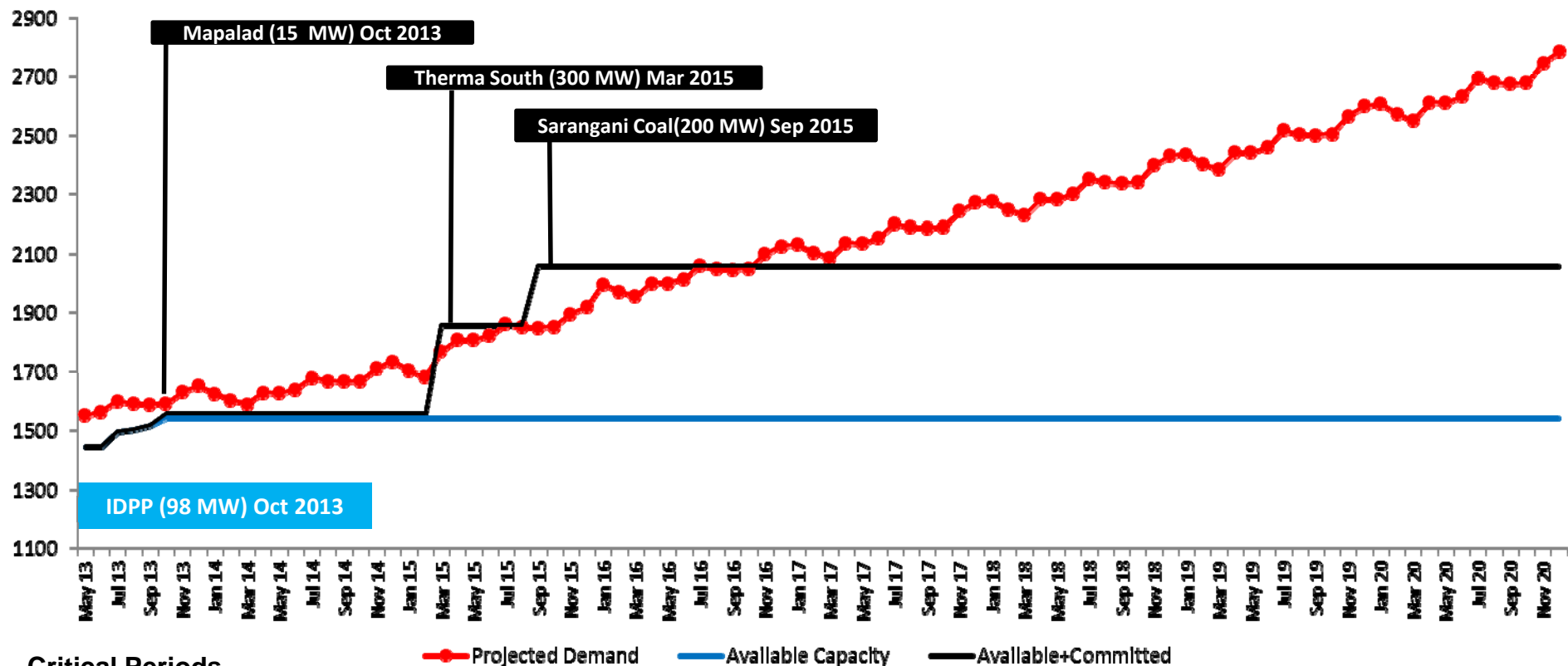
# INDICATIVE POWER PROJECTS

## Visayas Grid Indicative Power Projects, 718 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Target Commissioning
Timbaban Hydroelectric Power Project	Oriental Energy and Power Generation Corporation	Madalag, Aklan	18.0	August 2017
Igbulo (Bais) Hydroelectric Power Project	Century Peak Energy Corporation	Igbaras, Iloilo	6	January 2015
<b>TOTAL HYDRO</b>			<b>24.0</b>	
Leyte Solar Photovoltaic Power Project	Phil. Solar Farm-Leyte, Inc.	Ormoc City, Leyte	30.0	2018
<b>TOTAL SOLAR</b>			<b>40.0</b>	
Nabas Wind Power Project	Petrogreen Energy Corporation	Brgy. Pawa, Nabas, Aklan	50	Q3 2013
54 MW San Lorenzo Wind Power Project	Trans-Asia Renewable Energy Corporation	San Lorenzo, Guimaras Island	54	April 2014
Pulupandan Wind Power Project	First Maxpower International Corporation	Pulupandan, Negros Occidental	50	April 2014
<b>TOTAL HYDRO</b>			<b>154.0</b>	

List of Committed Power Projects as of 28 August 2013

# Mindanao SUPPLY-DEMAND OUTLOOK 2013-2020



## Critical Periods

### On Available Capacity:

- 2013 Peak: Projected Deficit 119 MW
- 2014 Peak: Projected Deficit 191 MW
- 2015 Peak: Projected Deficit 377 MW

### On Available Capacity + Committed:

- 2016 Peak: Projected deficit of 70 MW
- 2017 Peak: Projected Deficit of 215 MW

## Notes

- Demand curve as plotted includes total of peak demand and required Reserve Margin (RM) i.e. 4% regulating reserve and contingency and dispatchable reserve requirement
- 5.6 % peak demand growth rate resulted from observed 0.8 elasticity ratio of demand for electric power with national economic growth applied to 7 percent GDP growth rate (GR) target for 2013-2015.
- 12.8 % peak demand growth rate resulted from observed 1.6 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2016
- 8 % peak demand growth rate resulted from observed 1 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2017-2020
- Assumed 3.41 percent average forced outage of the total dependable capacity

# COMMITTED POWER PROJECTS

## Mindanao Grid Committed Power Projects, 515 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Project Cost (Php Billion)	Target Commissioning
<a href="#">2 X 150 MW Coal-Fired Therma South Energy Project</a>	Therma South Inc.	Brgy. Binugao, Toril, Davao City and Brgy. Inawayan, Sta. Cruz, Davao Del Sur	300.0	24.0	March 2015
<a href="#">2 X 100 MW Southern Mindanao Coal Fired Power Station</a>	Sarangani Energy Corporation	Brgy, Kamanga, Maasim, Sarangani	200.0	19.5	February 2015
<a href="#">15 MW Diesel Power Plant</a>	Mapalad Energy Generating Corporation	Mapalad, Dalipuga, Iligan City	15.0	0.4	October 2013
<b>TOTAL</b>			<b>515.0</b>	<b>43.9</b>	



# INDICATIVE POWER PROJECTS

## Mindanao Grid Indicative Power Projects, 2534.6 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Target Commissioning
ZAM 100 MW Circulating Fluidized Bed (CFB) Coal-Fired Power Station	San Ramon Power Inc.	Sitio San Ramon, Bgry. Talisayan, Zamboanga City	100.0	December 2015
Davao del Norte 20 MW Circulating Fluidized Bed Biomass-Coal Fired Thermal Power Plant	FDC Utilities, Inc.	Maco, Davao del Norte	20.0	March 2015
300 MW SMC Davao Power Plant Project Phase I	San Miguel Consolidated Power Corporation	Brgy. Culaman, Malita, Davao del Sur	300.0	150 MW - Oct. 2015 150 MW - March 2016
Sibuguey Power Plant Project	Philippine National Oil Company (PNOC-EC)	Sibugay, Zamboanga	100.0	September 2016
3 X 135 MW FDC-Misamis Circulating Fluidized Bed (CFB) Coal-Fired Power Plant Project	FDC Utilities, Inc.	Phividec Industrial Estate, Villanueva, Misamis Oriental	405.0	September 2016
300 MW SMC Davao Power Plant Project Phase II	San Miguel Consolidated Power Corporation	Brgy. Culaman, Malita, Davao del Sur	300.0	December 2018
600 MW SMC Davao Power Plant Project Phase III	San Miguel Consolidated Power Corporation	Brgy. Culaman, Malita, Davao del Sur	600.0	300 MW - Dec 2019 300 MW - Dec 2020
3x135 MW PsagCorp Coal-fired Power Plant	GN Power	Kauswagan, Lanao del Norte	405	December 2017
2x55 MW Balingasag Thermal Power Plant	Minergy Coal Corporation	Brgy. Mandangoa, Balingasag, Misamis Oriental	110	January 2017
<b>TOTAL COAL</b>			<b>2,340.0</b>	

# INDICATIVE POWER PROJECTS

## Mindanao Grid Indicative Power Projects, 2534.6 MW

Name of the Project	Project Proponent	Location	Rated Capacity (MW)	Target Commissioning
Tagoloan Hydropower	First Gen Mindanao Hydropower Corp.	Impasugong & Sumilao, Bukidnon	20.0	October 2015
Bubunawan Hydroelectric Power Project	First Gen Mindanao Hydropower Corp.	Baungon and Libona, Bukidnon	8.0	October 2015
Cabadbaran Hydroelectric Power Project	First Gen Mindanao Hydropower Corp.	Cabadbaran, Agusan del Norte	14.0	December 2015
Puyo Hydroelectric Power Project	First Gen Mindanao Hydropower Corp.	Jabonga, Agusan del Norte	30.0	July 2015
Tumalaong Hydroelectric Power Project	First Gen Mindanao Hydropower Corp.	Baungon, Bukidnon	8.0	October 2015
Culaman Hydroelectric Power Project	Oriental Energy and Power Generation Corporation	Manolo Fortich, Bukidnon	10.0	June 2018
Limbatangon Hydroelectric Power Project	Turbines Resource & Development Corp.	Cagayan de Oro City, Misamis Occidental	6.0	January 2017
Tudaya 1 Hydroelectric Power Project	Hedcor Sibulan, Inc.	Sta. Cruz, Davao del Sur	6.6	TBA
Tudaya 2 Hydroelectric Power Project	Hedcor Tudaya, Inc.	Sta. Cruz, Davao del Sur	7.0	October 2015
<b>TOTAL HYDRO</b>			<b>109.6</b>	

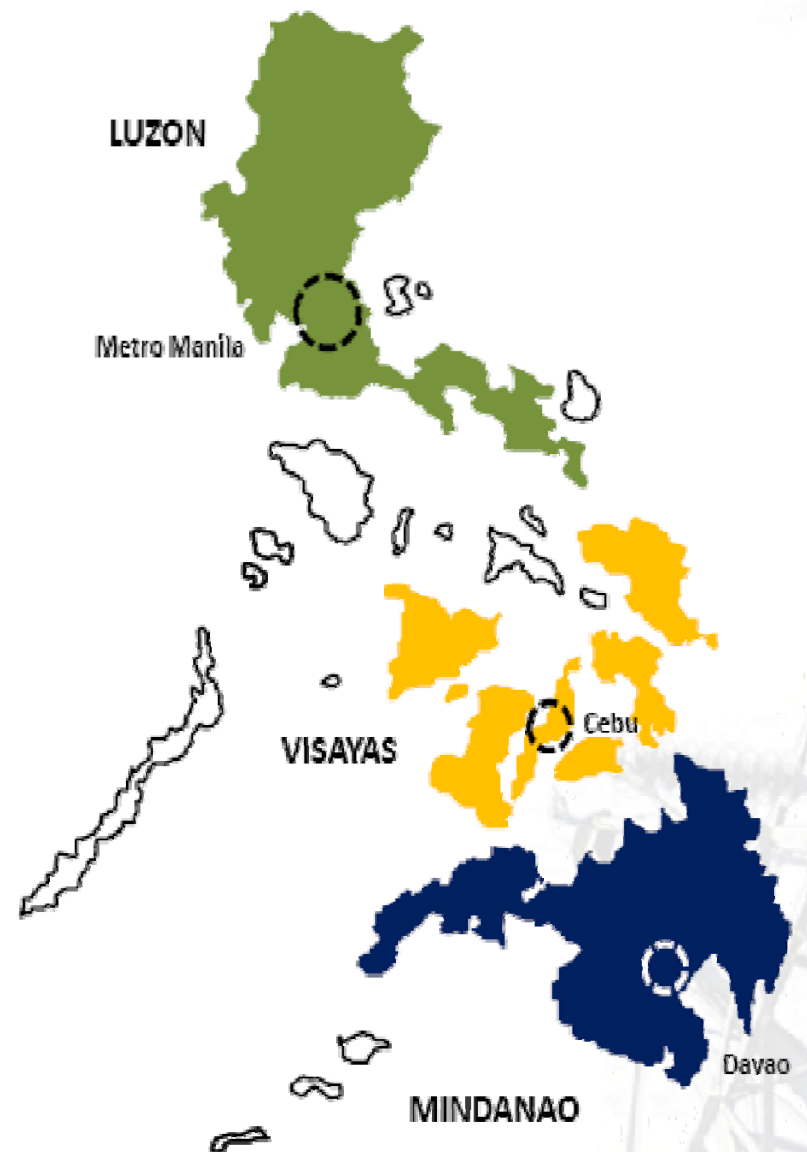
# INDICATIVE POWER PROJECTS

## Mindanao Grid Indicative Power Projects, **2534.6 MW**

<b>Name of the Project</b>	<b>Project Proponent</b>	<b>Location</b>	<b>Rated Capacity (MW)</b>	<b>Target Commissioning</b>
<a href="#">Mindanao 3 Geothermal</a>	Energy Development Corporation	Kidapawan, North Cotabato	50	December 2017
<b>TOTAL GEO</b>			<b>50</b>	
Darong Solar Photovoltaic Power Project	PhilNew Energy Inc.	Sta. Cruz, Davao del Sur	35.0	September 2015 (Subject to FIT)
<b>TOTAL SOLAR</b>			<b>35.0</b>	

# Power

- **Infrastructures in power generation**
  - Greenfield generation projects
  - Possible joint venture with proponents of indicative projects
  - Privatization of National Power Corporation's (NPC) plants and NPC-IPP contracts
  
- **Competitive power market**
  - Electricity trading in the Wholesale Electricity Spot Market
  - Supply/aggregation business
  - Metering service provider
  - Renewable Energy Market
  
- **Missionary electrification**
  - New Power Providers in the island grid



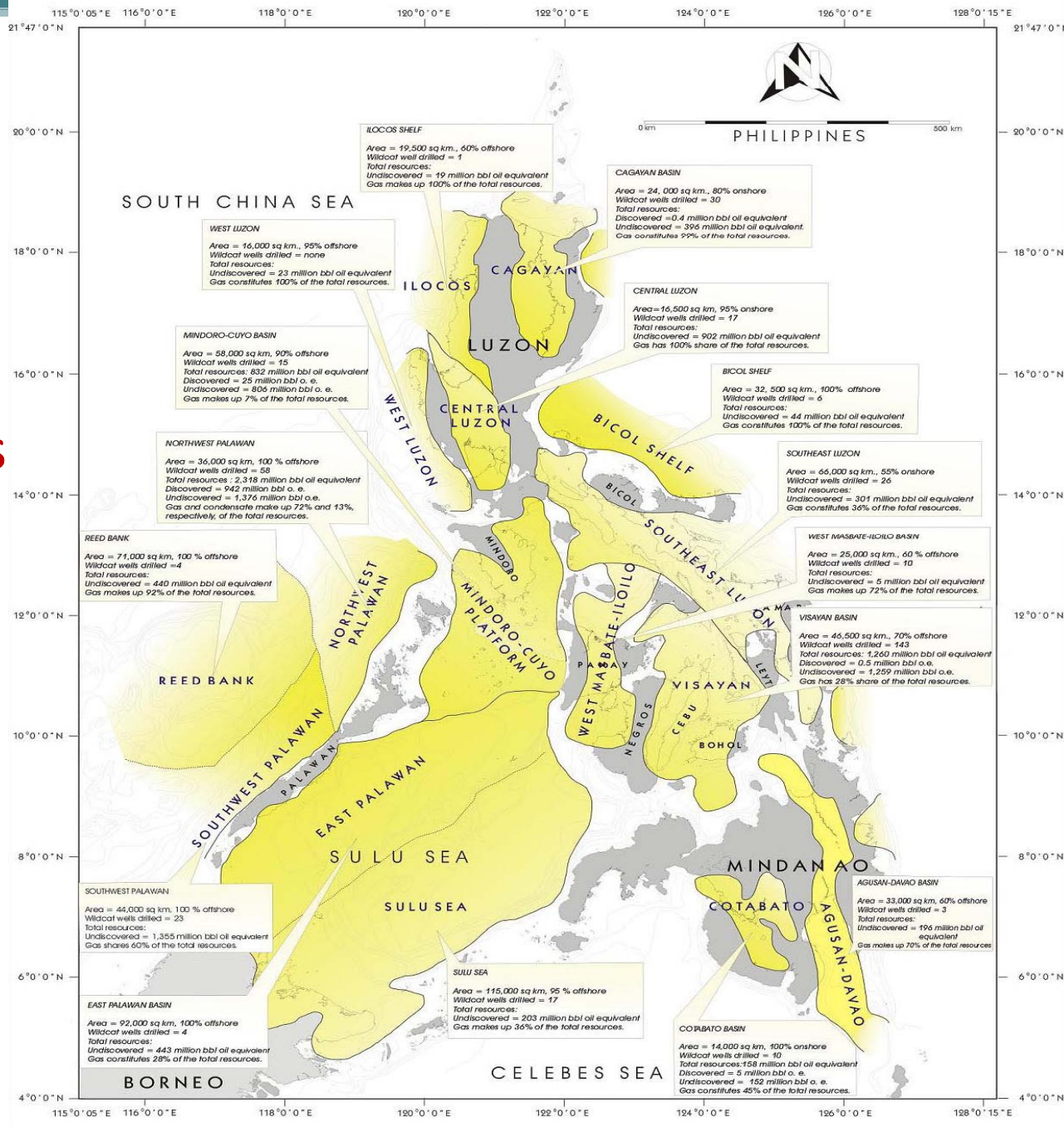
Note: Transparent islands in the above diagram are not covered by NGCP's network.



# Oil & Gas

# Areas of Opportunity

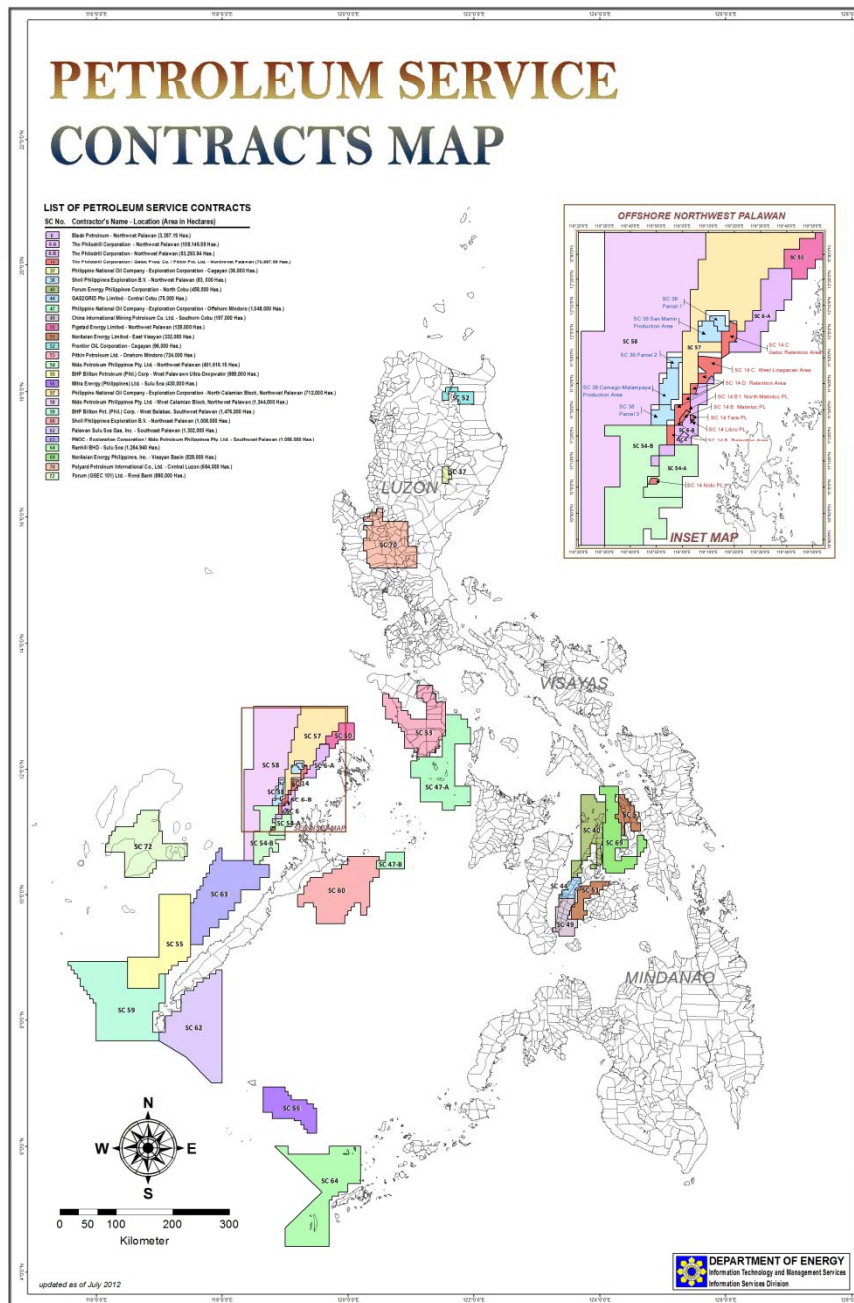
There are **16**  
Sedimentary basins  
representing an  
area of over  
700,000 sq km.





# Upstream Oil & Gas Exploration

- There are 26 existing petroleum service contracts



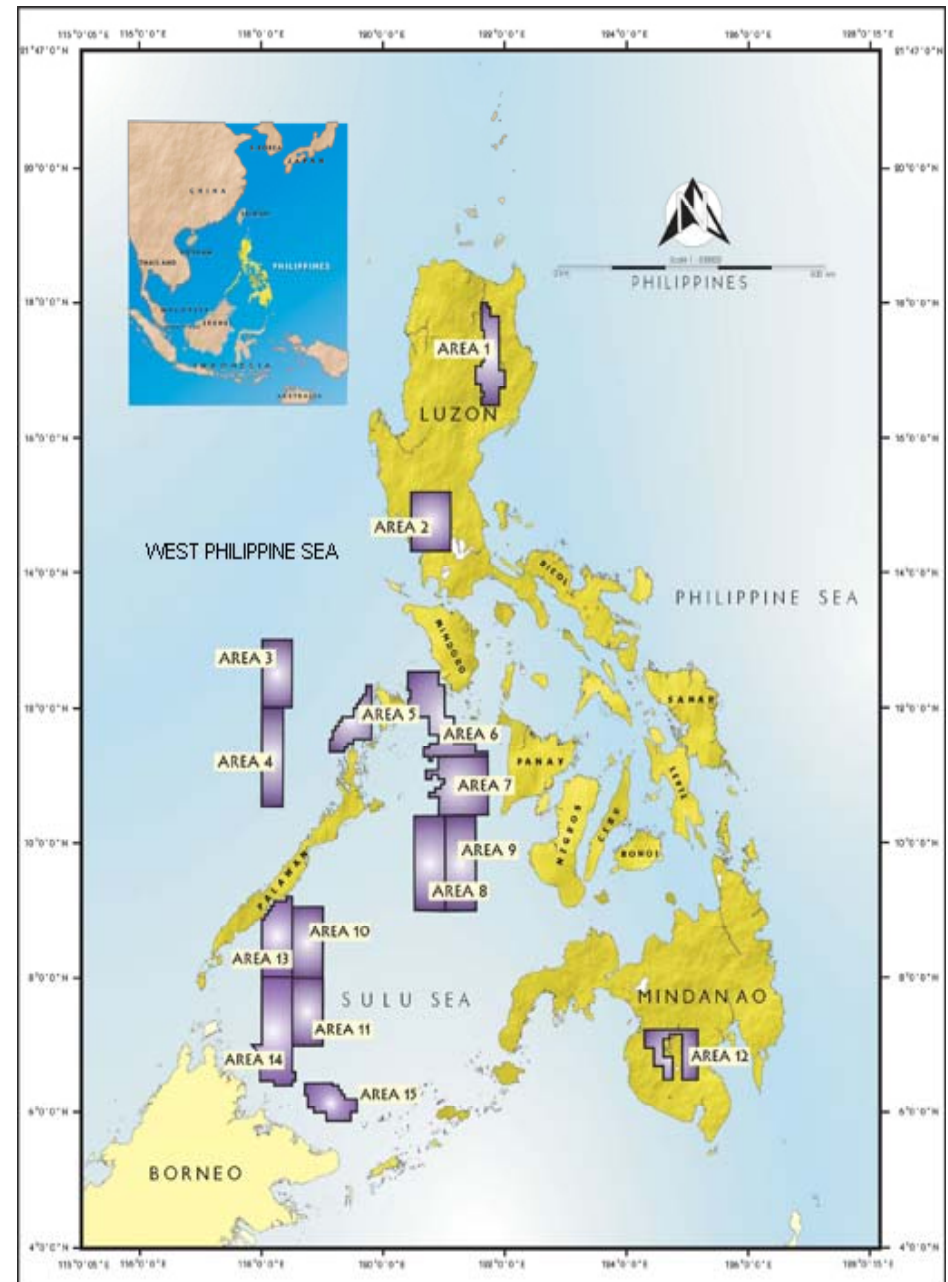


# Existing Petroleum Service Contractors

No.	Operator	PSC NO.	Location	Area (hectares)
1	Blade Petroleum	6	NW Palawan	3,397.19
2	Pitkin Petroleum Ltd.	6A	NW Palawan	108,146.59
3	The Philodrill Corp.	6B	NW Palawan	53,293.95
4	The Philodrill Corp. / Galoc Production Co./ Pitkin Petroleum Ltd.	14	NW Palawan	70,887.52
5	Philippine National Oil Co. – Exploration Corp.	37	Cagayan	36,000.00
6	Shell Philippines Exploration B. V.	38	NW Palawan	83,000
7	Forum Exploration Inc.	40	North Cebu	458,000.00
8	Gas To Grid Pte. Ltd.	44	Central Cebu	75,000
9	Philippine National Oil Co. – Exploration Corp.	47	Offshore Mindoro	1,466,700
10	China International Mining Petroleum Co., Ltd.	49	South Cebu	265,000
11	Frigstad Energy	50	Calauit, NW Palawan	128,000
12	Otto Energy Investments Ltd.	51	East Visayan Basin	332,000
13	Frontier Oil Corp.	52	Piat San Jose, Cagayan	96,000
14	Pitkin Petroleum Ltd.	53	Onshore Mindoro	660,000
15	Nido Petroleum Phils. Pty. Ltd	54	NW Palawan	(Area A = 401,616.15 Area B = 312,000)
16	BHP Billiton Pet. (Phil.) Corp.	55	West Palawan Ultra-Deepwater	900,000
17	Mitra Energy Ltd.	56	Sulu Sea	430,000
18	Philippine National Oil Co. – Exploration Corp./ China National Offshore Oil Corp. Int'l	57	Calamian Block, NW Palawan	712,000
19	Nido Petroleum Phils. Pty. Ltd.	58	West Calamian Block, NW Palawan	1,344,000
20	BHP Billiton Pet. (Phil.) Corp.	59	West Balabac, SW Palawan	1,476,000
21	Palawan Sulu Sea Gas Inc.	62	East Palawan	1,302,000
22	Philippine National Oil Co. – Exploration Corp. / Nido Petroleum Phils. Pty. Ltd.	63	SW Palawan	1,056,000
23	Ranhill Energy Sdn. Bhd.	64	Sulu Sea	1,264,940
24	OTTO Energy Phils. Inc.	69	Visayan Basin	704,000
25	Polyard Petroleum International Co. Ltd.	70	Central Luzon Basin	684,000
26	Forum (Gsec101) Ltd.	72	Reed Bank	1,063,000

# Oil & Gas

- Joint Venture with existing Service Contractors
- Participation in the Philippine Energy Contracting Round (PECR) 5 for Petroleum in the 1<sup>st</sup> quarter of 2014



# Coal

# 2012 Coal Reserves

(by Region in Million MT)

<b>QUEZON</b>
Resource Potential - 2.00
In-situ Reserves - 0.09

<b>MINDORO</b>
Resource Potential - 100.00
In-situ Reserves - 1.44

<b>SEMIRARA</b>
Resource Potential - 570.00
In-situ Reserves - 119.89

<b>NEGROS</b>
Resource Potential - 4.50
In-situ Reserves - 2.01

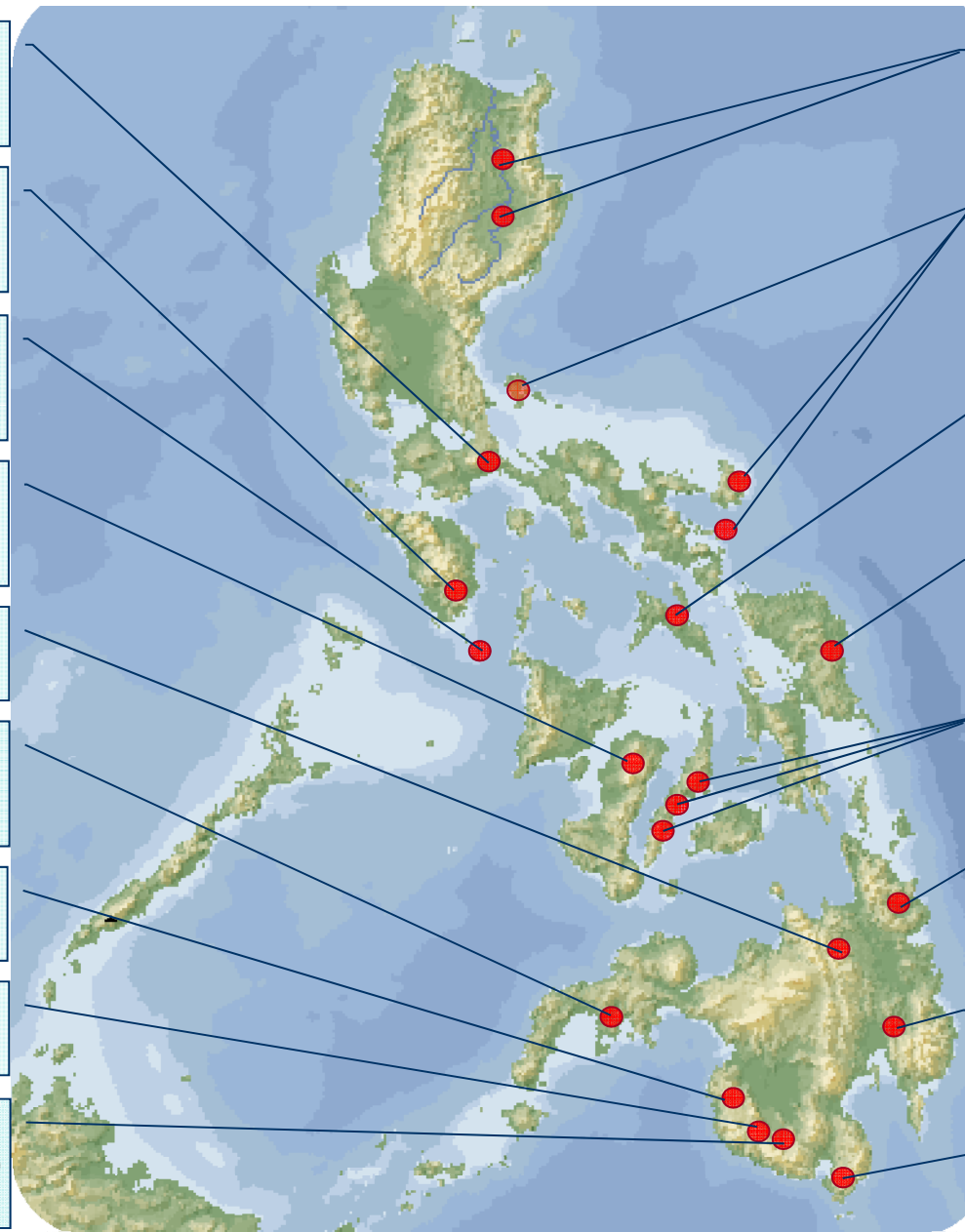
<b>BUKIDNON</b>
Resource Potential - 50.00

<b>ZAMBOANGA</b>
Resource Potential - 45.00
In-situ Reserves - 37.98

<b>MAGUINDANAO</b>
Resource Potential - 108.00

<b>SULTAN KUDARAT</b>
Resource Potential - 300.30

<b>SOUTH COTABATO</b>
Resource Potential - 230.40
In-situ Reserves - 81.06



<b>CAGAYAN VALLEY</b>
Resource Potential - 336.00
In-situ Reserves - 82.57

<b>BATAN-POLILLO-CATANDUANES</b>
Resource Potential - 17.00
In-situ Reserves - 6.02

<b>MASBATE</b>
Resource Potential - 2.50
In-situ Reserves - 0.08

<b>SAMAR</b>
Resource Potential - 27.00
In-situ Reserves - 8.59

<b>CEBU</b>
Resource Potential - 165.00
In-situ Reserves - 11.63

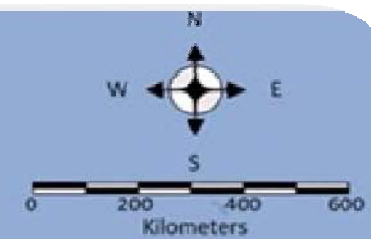
<b>SURIGAO</b>
Resource Potential - 209.00
In-situ Reserves - 69.55

<b>DAVAO</b>
Resource Potential - 100.00
In-situ Reserves - 0.21

<b>SARANGANI</b>
Resource Potential - 120.00

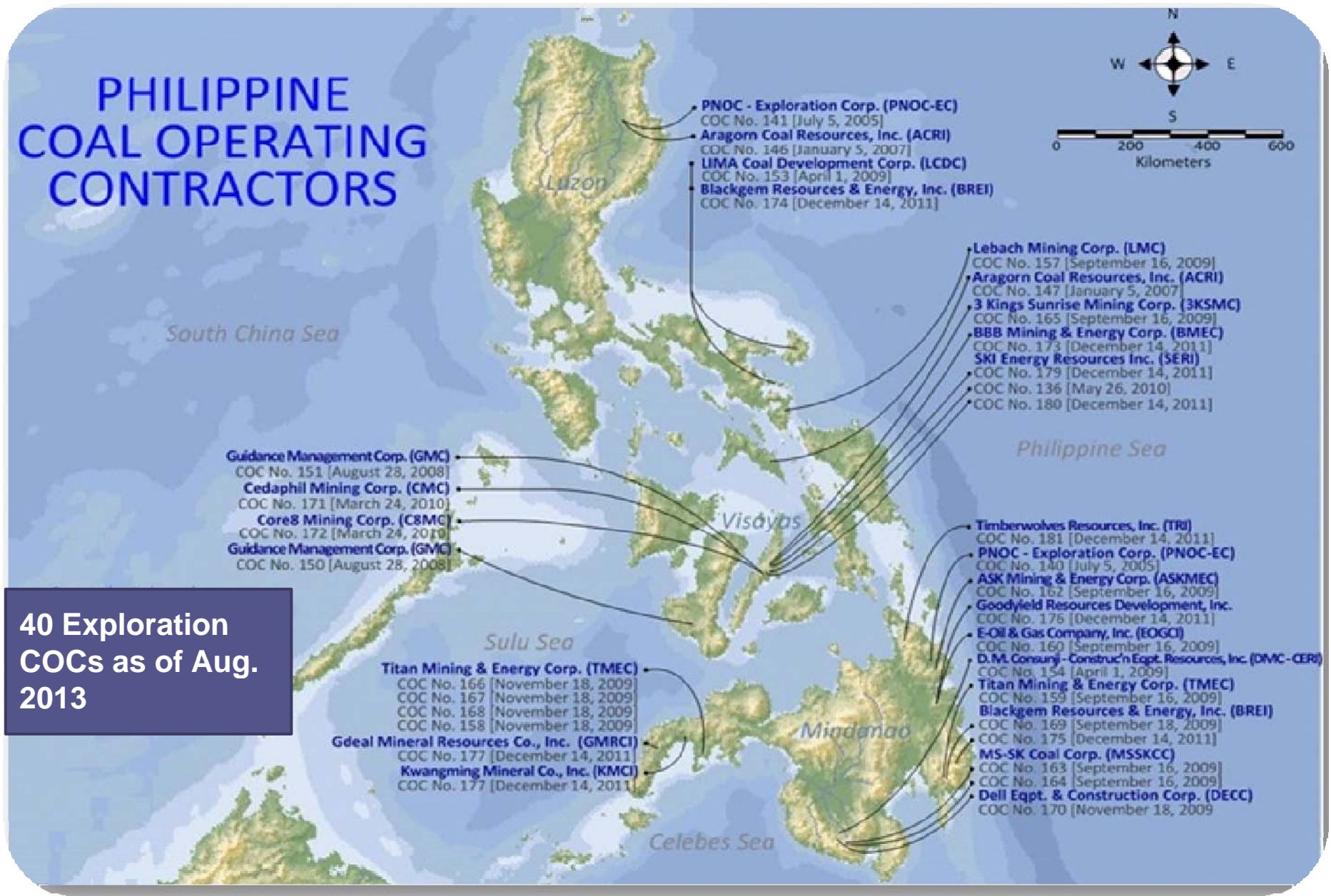


# PHILIPPINE COAL OPERATING CONTRACTORS

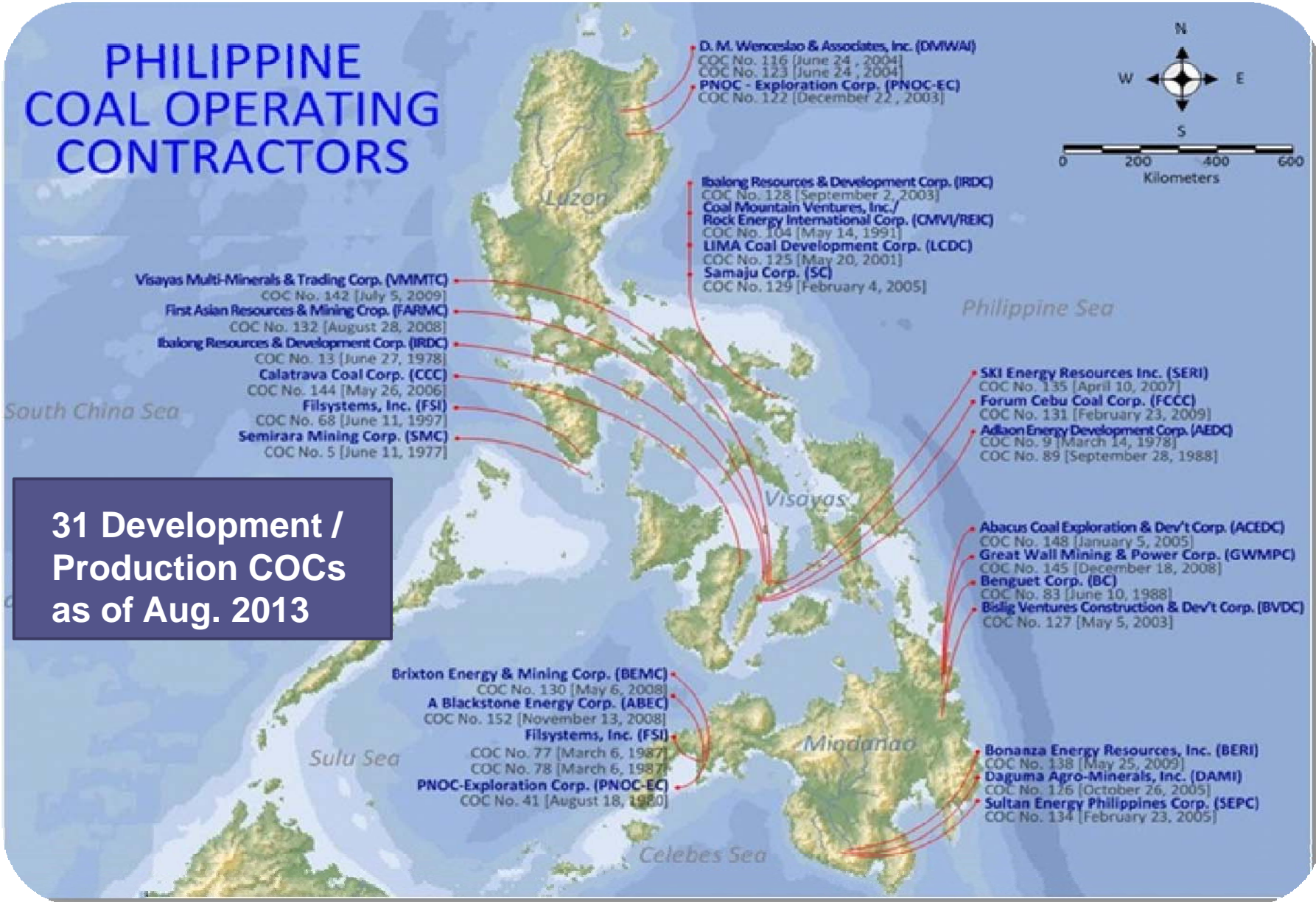
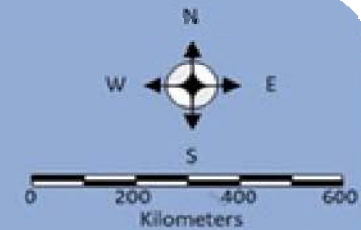


- **PNOC - Exploration Corp. (PNOC-EC)**  
COC No. 141 [July 5, 2005]
  - **Aragorn Coal Resources, Inc. (ACRI)**  
COC No. 146 [January 5, 2007]
  - **LIMA Coal Development Corp. (LCDC)**  
COC No. 153 [April 1, 2009]
  - **Blackgem Resources & Energy, Inc. (BREI)**  
COC No. 174 [December 14, 2011]
- 
- **Lebach Mining Corp. (LMC)**  
COC No. 157 [September 16, 2009]
  - **Aragorn Coal Resources, Inc. (ACRI)**  
COC No. 147 [January 5, 2007]
  - **3 Kings Sunrise Mining Corp. (3KSMC)**  
COC No. 165 [September 16, 2009]
  - **BBB Mining & Energy Corp. (BMEC)**  
COC No. 173 [December 14, 2011]
  - **SKI Energy Resources Inc. (SERI)**  
COC No. 179 [December 14, 2011]
  - **COC No. 136** [May 26, 2010]
  - **COC No. 180** [December 14, 2011]
- 
- **Guidance Management Corp. (GMC)**  
COC No. 151 [August 28, 2008]
  - **Cedaphil Mining Corp. (CMC)**  
COC No. 171 [March 24, 2010]
  - **Core8 Mining Corp. (C8MC)**  
COC No. 172 [March 24, 2010]
  - **Guidance Management Corp. (GMC)**  
COC No. 150 [August 28, 2008]
- 
- **Timberwolves Resources, Inc. (TRI)**  
COC No. 181 [December 14, 2011]
  - **PNOC - Exploration Corp. (PNOC-EC)**  
COC No. 140 [July 5, 2005]
  - **ASK Mining & Energy Corp. (ASKMEC)**  
COC No. 162 [September 16, 2009]
  - **Goodyield Resources Development, Inc.**  
COC No. 176 [December 14, 2011]
  - **E-Oil & Gas Company, Inc. (EOGCI)**  
COC No. 160 [September 16, 2009]
  - **D.M. Consult'g - Construc'n Eqpt. Resources, Inc. (DMC-CERI)**  
COC No. 154 [April 1, 2009]
  - **Titan Mining & Energy Corp. (TMEC)**  
COC No. 159 [September 16, 2009]
  - **Blackgem Resources & Energy, Inc. (BREI)**  
COC No. 169 [September 18, 2009]
  - **COC No. 175** [December 14, 2011]
  - **MS-SK Coal Corp. (MSSKCC)**  
COC No. 163 [September 16, 2009]
  - **COC No. 164** [September 16, 2009]
  - **Dell Eqpt. & Construction Corp. (DECC)**  
COC No. 170 [November 18, 2009]
- 
- **Titan Mining & Energy Corp. (TMEC)**  
COC No. 166 [November 18, 2009]
  - **COC No. 167** [November 18, 2009]
  - **COC No. 168** [November 18, 2009]
  - **COC No. 158** [November 18, 2009]
  - **Gdeal Mineral Resources Co., Inc. (GMRCI)**  
COC No. 177 [December 14, 2011]
  - **Kwangming Mineral Co., Inc. (KMCI)**  
COC No. 177 [December 14, 2011]

**40 Exploration COCs as of Aug. 2013**



# PHILIPPINE COAL OPERATING CONTRACTORS



**D. M. Wenceslao & Associates, Inc. (DMWA)**  
COC No. 116 [June 24, 2004]  
COC No. 123 [June 24, 2004]  
**PNOC - Exploration Corp. (PNOC-EC)**  
COC No. 122 [December 22, 2003]

**Ibalong Resources & Development Corp. (IRDC)**  
COC No. 128 [September 2, 2003]  
**Coal Mountain Ventures, Inc./  
Rock Energy International Corp. (CMV/REIC)**  
COC No. 104 [May 14, 1991]  
**LIMA Coal Development Corp. (LCDC)**  
COC No. 125 [May 20, 2001]  
**Samaju Corp. (SC)**  
COC No. 129 [February 4, 2005]

**Visayas Multi-Minerals & Trading Corp. (MMTC)**  
COC No. 142 [July 5, 2009]  
**First Asian Resources & Mining Corp. (FARMC)**  
COC No. 132 [August 28, 2008]  
**Ibalong Resources & Development Corp. (IRDC)**  
COC No. 13 [June 27, 1978]  
**Calatrava Coal Corp. (CCC)**  
COC No. 144 [May 26, 2006]  
**Filsystems, Inc. (FSI)**  
COC No. 68 [June 11, 1997]  
**Semirara Mining Corp. (SMC)**  
COC No. 5 [June 11, 1977]

*Philippine Sea*

**SKI Energy Resources Inc. (SERI)**  
COC No. 135 [April 10, 2007]  
**Forum Cebu Coal Corp. (FCCC)**  
COC No. 131 [February 23, 2009]  
**Ardian Energy Development Corp. (AEDC)**  
COC No. 9 [March 14, 1978]  
COC No. 89 [September 28, 1988]

*Visayas*

**Abacus Coal Exploration & Dev't Corp. (ACEDC)**  
COC No. 148 [January 5, 2005]  
**Great Wall Mining & Power Corp. (GWMPC)**  
COC No. 145 [December 18, 2008]  
**Benguet Corp. (BC)**  
COC No. 83 [June 10, 1988]  
**Bislig Ventures Construction & Dev't Corp. (BVDC)**  
COC No. 127 [May 5, 2003]

**31 Development /  
Production COCs  
as of Aug. 2013**

**Brixton Energy & Mining Corp. (BEMC)**  
COC No. 130 [May 6, 2008]  
**A Blackstone Energy Corp. (ABEC)**  
COC No. 152 [November 13, 2008]  
**Filsystems, Inc. (FSI)**  
COC No. 77 [March 6, 1987]  
COC No. 78 [March 6, 1987]  
**PNOC-Exploration Corp. (PNOC-EC)**  
COC No. 41 [August 18, 1980]

*Mindanao*

**Bonanza Energy Resources, Inc. (BERI)**  
COC No. 138 [May 25, 2009]  
**Dagama Agro-Minerals, Inc. (DAMI)**  
COC No. 126 [October 26, 2005]  
**Sultan Energy Philippines Corp. (SEPC)**  
COC No. 134 [February 23, 2005]

*Sulu Sea*

*Celebes Sea*



**Coal Operating Contracts (COC) - Exploration**

<b>No.</b>	<b>Name of Company</b>	<b>COC No.</b>	<b>Location of Mine</b>
1	SKI-Construction Group, Inc.	136	Naga, Cebu
2	Philippine National Oil Company - Exploration Corporation	140	Cagwait and Marihatag, Surigao del Sur
3	Philippine National Oil Company - Exploration Corporation	141	Benito Soliven and Cauayan, Isabela
4	Monte Oro Resources and Energy, Inc.	143	San Andres and Panganiban, Catanduanes
5	Aragorn Coal Resources, Inc.	146	Cauayan, Isabela
6	Aragorn Coal Resources, Inc.	147	Palanas and Cataingan, Masbate
7	Guidance Management Corporation	150	Bayawan, Negros Occidental
8	Guidance Management Corporation	151	Bayawan, Negros Occidental
9	Philippine National Oil Company - Exploration Corporation (JVA with Agusan Petroleum and Mineral Corp.)	152	Siay, Zamboanga Sibugay
10	Lim a Coal Development Corporation	153	Bacon Gubat, Sorsogon
11	DMC-Construction Equipment Resources, Inc.	154	Bagumbayan, Sultan Kudarat
12	Oriental Energy & Power Generation Corporation	155	Boljoon and Oslob, Cebu
13	Lebach Mining Corporation	157	Gubat, Sorsogon
14	Titan Exploration & Development Corporation	158	Payao, Zamboanga
15	Titan Exploration & Development Corporation	159	Manay, Davao Oriental
16	Eoil & Gas Co., Inc.	160	Bunawan, Agusan del Sur
17	Oriental Energy & Power Generation Corporation	161	Kitcharao, Surigao del Norte
18	ASK Mining & Exploration Corporation	162	Cagwait and Marihatag, Surigao del Sur
19	MS-SK Coal Corporation	163	Bagumbayan, Sultan Kudarat
20	MS-SK Coal Corporation	164	Kalamansig, Senator Ninoy Aquino and Palimbang, Sultan Kudarat
21	3Kings Sunrise Mining Corporation	165	Carmen, Cebu
22	Titan Exploration & Development Corporation	166	Diplahan-Buug, Zamboanga Sibugay
23	Titan Exploration & Development Corporation	167	Diplahan, Zamboanga Sibugay
24	Titan Exploration & Development Corporation	168	Siay Zamboanga Sibugay
25	Blackgem Resources & Energy, Inc.	169	Tarragona, Davao Oriental
26	Dell Equipment & Construction Corporation	170	Saragani & South Cotabato
27	Cedaphil Mining Corporation	171	Toledo City, Cebu
28	Core 8 Mining Corporation	172	Toledo City, Cebu



Coal Operating Contracts – Development and Production			
No.	Name of Company	COC No.	Location of Mine
1	Semirara Mining Corporation	5	Semirara Island, Caluya, Antique
2	Adlaon Energy Development Corporation	9	Bgy. Santicon, Balaas, Maloray & Manlapay, Municipality of Dalaguete & Argao, Cebu
3	Ibalong Resources Development Corporation (formerly Manguerra)	13	Mantalagon, Dalaguete, Cebu
4	Philippine National Oil Company - Exploration Corporation	41	Malangas, Zamboanga Sibugay
5	Filsystems, Inc.	68	Bulalacao, Mindoro Oriental
6	Filsystems, Inc.	77	Payao, Zamboanga Sibugay
7	Filsystems, Inc.	78	Payao and Siay, Zamboanga Sibugay
8	Benguet Corporation	83	Liang, Marihatag & San Miguel, Surigao del Sur
9	Adlaon Energy Development Corporation	89	Adlaon, Cebu City
10	A Blackstone Energy Corp.	93	Lalat, Zamboanga Sibugay
11	Batan Coal Resources Corporation (formerly Rock Energy International, Inc.)	104	Batan Island, Rapu Rapu, Albay
12	D. M. Wenceslao and Associates, Inc.	116	Municipality of Baculud, Gattaran and Iguig, Cagayan Province
13	Philippine National Oil Company - Exploration Corporation	122	Cauayan, Isabela
14	D. M. Wenceslao and Associates, Inc.	123	Municipality of Baculud, Gattaran and Iguig, Cagayan Province
15	Lima Coal Development Corporation	125	Calanaga and San Ramon, Batan Island, Rapu-Rapu, Albay
16	Daguma Agro Minerals Inc.	126	Ned, Lake Sebu, South Cotabato and Sultan Kudarat
17	Bislig Venture Construction and Development Inc.	127	Bislig, Surigao del Sur
18	Ibalong Resources Development Corporation (formerly Manguerra)	128	Bilbao, Batan Island, Rapu-Rapu, Albay
19	SAMAJU Corporation	129	San Ramon, Batan Island, Rapu-Rapu Albay
20	Brixton Energy & Mining Corporation	130	Diplahan and Buug, Zamboanga Sibugay
21	Forum Cebu Coal Corporation	131	Dalaguete, Naga Cebu
22	First Asia Resource Mining Corporation (Formerly Forum Exploration Inc.)	132	Balamban, Cebu
23	Sultan Energy Phils. Corporation	134	Ned, Lake Sebu, South Cotabato & Sto. Niño, Bagumbayan, Sultan Kudarat
24	SKI-Construction Group, Inc.	135	Cahumayan, Portland & Dungga, Danao, Cebu
25	Batan Coal Resources Corporation (formerly Rock Energy International, Inc.)	137	Batan Island, Rapu Rapu, Albay
26	Bonanza Energy Resources, Inc.	138	Maitum, Sarangani Province & Ned, Lake Sebu, South Cotabato
27	Visayas Multi-Minerals Mining and Trading Corporation	142	Toledo, Cebu
28	Calatrava Coal Multi-Purpose Cooperative	144	Calatrava, Negros Occidental
29	Great Wall Mining and Power Corporation	145	San Miguel, Surigao del Sur
30	Abacus Coal Exploration and Dev't Corp.	148	Tago, Surigao del Sur
31	Il Rey'c Coal Mining Exploration Corp.	149	Danao City, Cebu

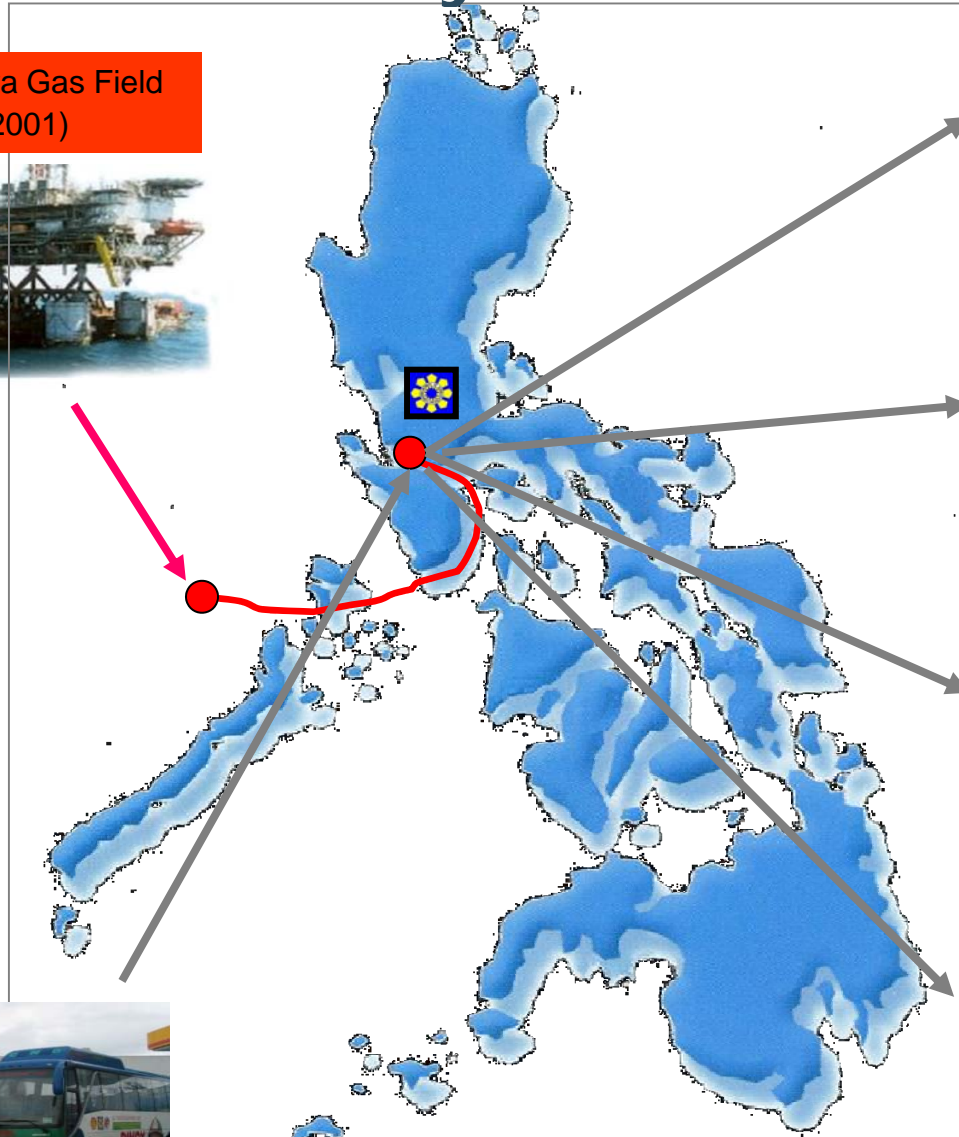
# Coal Exploration/ Development & Production

- Joint Venture with existing coal operating contractors
- Participation in the PECR 5 for Coal in the 1<sup>st</sup> quarter of 2014

# Natural Gas

# Natural Gas Industry

Malampaya Gas Field  
2.7 TCF (2001)



560 MW San Lorenzo First Gen  
IPP



1,000 MW Sta. Rita  
First Gen/ IPP



1,200 MW Ilijan Power Plant  
NPC IPP(KEPCO)



Shell Refinery



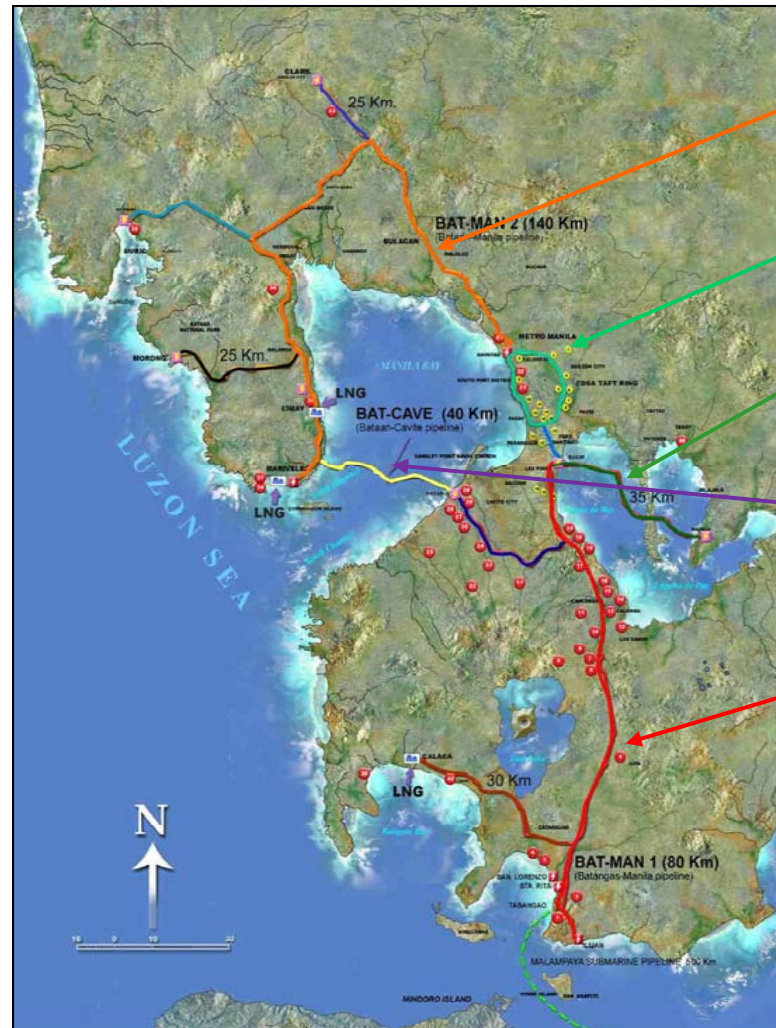
CNG Bus (2008)





# NATURAL GAS

- Develop strategic infrastructure for receiving, storage, transmission and distribution
- Requires high-pressure pipelines
- LNG Terminals
- CNG vehicles and refilling stations are needed for public transport



**BATMAN 2**  
(Bataan - Manila)  
140 kms. (2020)

**ET LOOP**  
(EDSA – Taft Loop)  
40 kms. (2020)

**SU-MA**  
(Sucat - Malaya)  
15 kms. (2017)

**BATCAVE**  
(Batangas – Cavite)  
40 kms (2022)

**BATMAN 1**  
(Batangas Manila)  
105 kms. (2015-17)

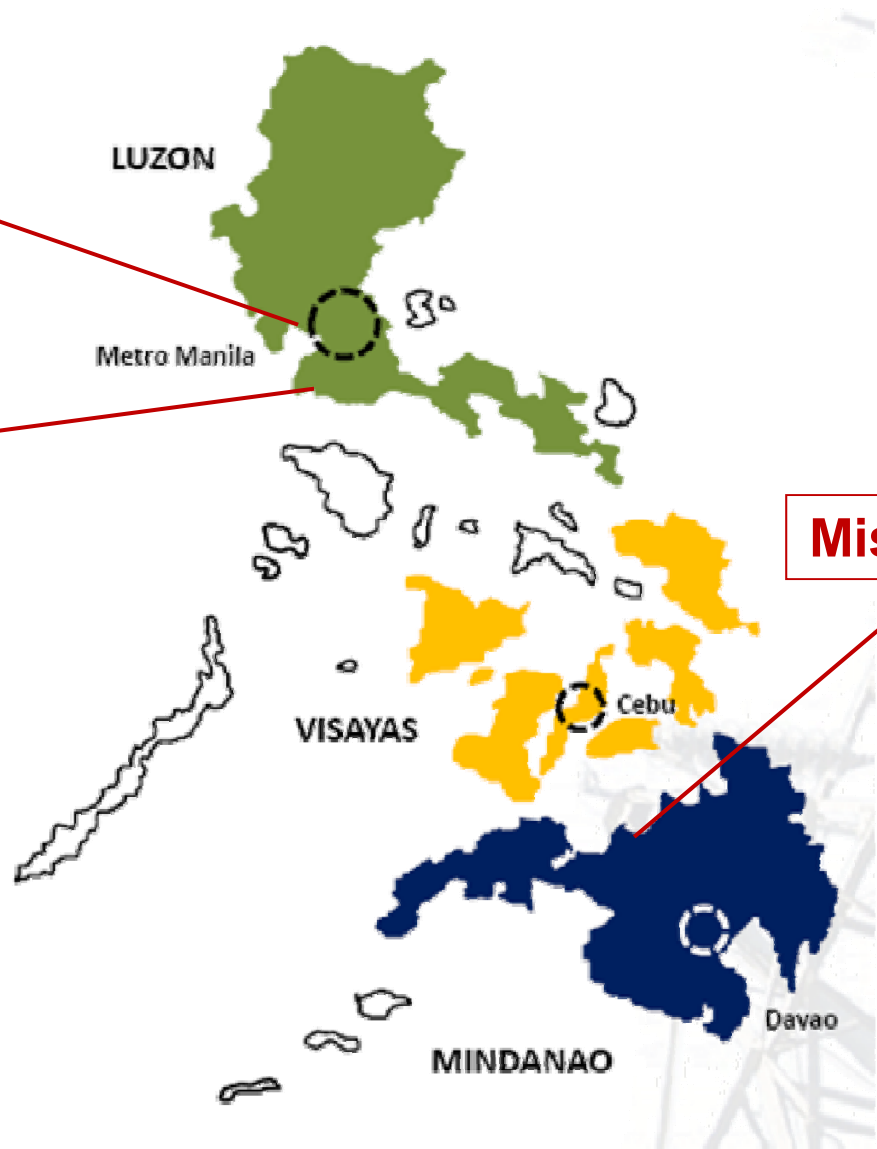


# NATURAL GAS - LNG Terminals

**Bataan**

**Batangas**

**Misamis Oriental**

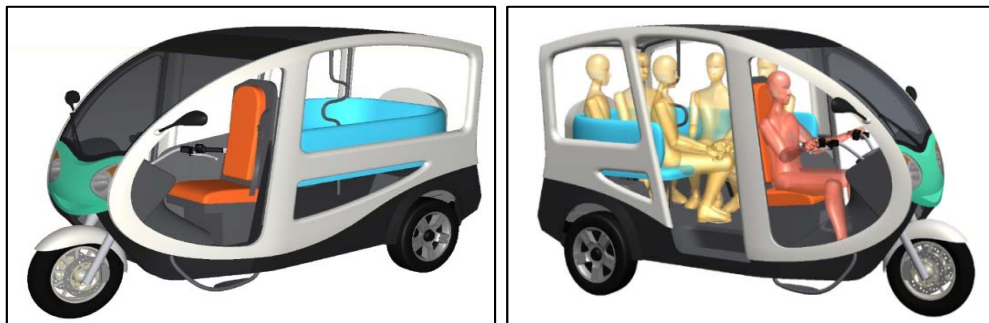


# Alternative Fuels



# E-Vehicles

- 523 existing electric vehicles
- Target: deployment of a total of 100,000 e-trikes nationwide through a loan agreement with Asian Development Bank (ADB)
  - Year 1: 3,000
  - Year 2: 17,000
  - Year 3: 30,000
  - Year 4: 30,000
  - Year 5: 20,000
- Status: out of 4 bidders; 2 are Japanese firms



# Renewable Energy

# Renewable Energy Service Contracts

Resource	Awarded Projects		Potential Capacity (MW)			Installed Capacity (MW)		
	Grid-Use	Own-Use	No. of Projects	Grid-Use	Own-Use	No. of Projects	Grid-Use	Own-Use
Hydro	201	1	176	2,825.58	1.50	27	131.22	
Ocean	3		3	5.00				
Geothermal	39		29	870.00		10	1,847.69	
Wind	37	1	36	1,753.50	0.006	1	33.00	
Solar	34	4	34	482.706	1.574			
Biomass	28	23	13	111.60	32.80	15	146.35	172.18
<b>Sub-total</b>	<b>342</b>	<b>29</b>	<b>291</b>	<b>6,048.386</b>	<b>35.88</b>	<b>53</b>	<b>2,158.26</b>	<b>172.18</b>
<b>TOTAL</b>	<b>371</b>		<b>291</b>	<b>6,084.266</b>		<b>53</b>	<b>2,330.44</b>	
<b>TOTAL RENEWABLE ENERGY CAPACITY</b>					<b>8,414.706 MW</b>			

As of 30 September 2013



# Renewable Energy - FIT Rates & Installation Targets

Resource / Technology	ERC Approved Feed-in Tariff Rates (PhP/kWh)	ERC Approved Feed-in Tariff Rates (US\$/kWh)	Installation Targets
Run-of-River Hydropower	5.9	0.140	250
Biomass Energy	6.63	0.158	250
Wind Power	8.53	0.203	200
Solar Power	9.68	0.230	50
Ocean Energy	-		10
<b>TOTAL</b>			<b>760</b>

- FIT Rules approved by ERC on 12 July 2010 and took effect on 12 August 2010
- ERC approved the FIT Rates on 27 July 2012
- Issuance of DC 2013-05-009 prescribing DOE Guidelines for the Selection Process of Renewable Energy Projects Under FIT System and the Award of Certificate for FIT Eligibility





# Renewable Energy Development

## *FIT Monitoring Board Summary (as of 30 September 2013)*

RESOURCE	FOR CONVERSION		WITH CERTIFICATE OF CONFIRMATION OF COMMERCIALITY	
	NO. OF PROJECTS	CAPACITY (MW)	NO. OF PROJECTS	CAPACITY (MW)
HYDRO	51	504.2	16	185.35
WIND	11	669.5	6	389.5
SOLAR	11	160	3	80
BIOMASS	10	77.8	5	46.3
<b>TOTAL</b>	<b>83</b>	<b>1,411.5</b>	<b>30</b>	<b>701.15</b>

Note:

- Department Circular No. 2009-07-0011 entitled “Guidelines governing a transparent and competitive system of awarding renewable energy service/operating contracts and providing for the registration process or RE developers” is currently being revisited to facilitate the processing of RE Applications.
- Target date of completion of 249 pending RE applications is on November 2013



# Investor's Support

# Investment Promotion

- Closer coordination with government agencies involved in the approval process of energy projects
- Organized a composite team to assist energy investors in the processing of their licenses and permits from other government agencies
  - In lieu of a one stop shop, the investment officers will facilitate transactions for ease and convenience of the energy investors
  - One investment officer per energy investor company
- Publish Energy Investment Kits
- Conduct Energy Investment Fora
- Publish the Energy Investors' Guidebook



# DOMO ARIGATO GOZAIMASU

**Symposium on Investment for  
Energy Sector in the Philippines  
Tokyo, Japan  
16 October 2013**





# Committed Power Projects

LUZON



## 2x135 MW Puting Bato Coal Fired Power Plant Phase I&II

Location: **Brgy. Puting Bato West, Calaca, Batangas**

Capacity: **270 MW**

Target Testing & Commissioning : **Phase 1 – May 2014; Phase 2-June 2015**

Target Commercial Operation : **Phase 1 – August 2014; Phase 2-November 2015**

Proponent : **South Luzon Thermal Energy Corp. (SLTEC)**; 50-50 joint venture project of TAOIL and AC Energy Holdings, Inc.

### **Status:**

- Secured SEC, BIR, BOC, BOI, ECC permits
- EPC contractor was awarded to DMCI on 31 March 2011/3 May 2013

### **Project Cost:**

- financial close on 28 Oct. 2011/1 July 2013; Project cost =Php 22.5B



Image Source: SLTEC, July 2013



## 2 X 150 MW SLPGC Coal-Fired Power Plant Phase I



Location: **Brgy. San Rafael, Calaca, Batangas**

Capacity: **300 MW**

Target Testing & Commissioning : **Unit I - Dec 2014; Unit II - March 2015**

Target Commercial Operation : **TBA**

Proponent : **Southwest Luzon Power Generation Corporation (SLPGC)**

### Status:

- Secured SEC, BOC, BOI, ECC, GIS, LLA permits
- EPC signed March 2012

### Project Cost:

- Project cost for Phase I and II is Php45.36B; financial close on 24 February 2012 (60% Loan / 40% Equity)



Image Source: SLPGC, June 2013





# Maibarara Geothermal Power Project

Location: **Sitio Capuz, Brgy. San Rafael, Sto. Tomas, Batangas**

Capacity: **20 MW**

Target Testing & Commissioning : **July 2013**

Target Commercial Operation : **October 2013**

Proponent : **Maibarara Geothermal, Inc. (MGI)**

## Status:

- Secured DOE Geo SC, SEC, BOC, BOI, ECC, GIS permits
- Entered into an Electricity Supply Agreement (ESA) with Trans-Asia Oil and Energy Development Corp. for the 100% offtake of generated electricity
- Selected IEE Corp & Fuji Electric as main and subcontractors for the power plant EPC

## Project Cost:

- Project cost Php3.4B / \$79.4M; Secured 70% project financing with selected financial institutions

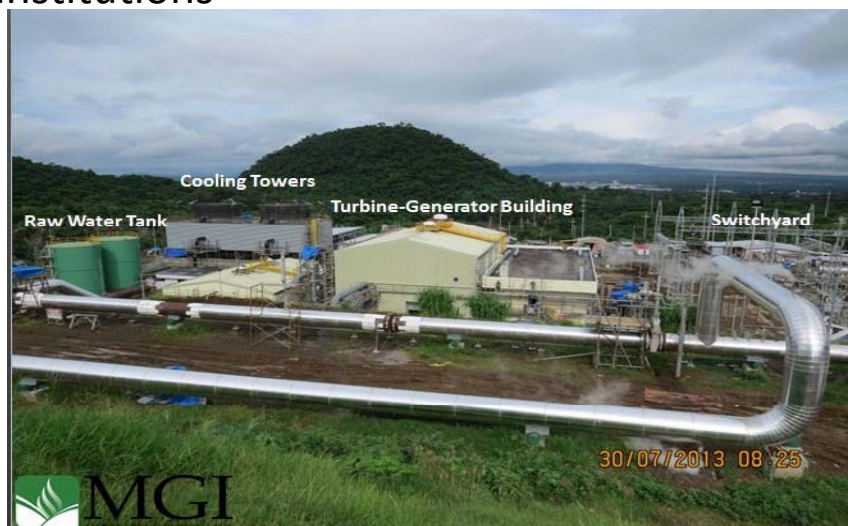


Image Source: MGI, July 2013

## Pililla Wind Power Project Phase 1



Location: **Brgy. Halayhayin, Pililla, Rizal**

Capacity: **67.5 MW**

Target Testing & Commissioning : **September 2014 (Subject to FIT)**

Target Commercial Operation : **TBA (Subject to FIT)**

Proponent : **Alternergy Wind One Corporation**

### **Status:**

- AWOC to finance the implementation of the project with 100% equity
- Interconnection Agreement with MERALCO last 1 March 2012
- EPC and O&M Contract with consortium of Nordex SE and McConnell Donnell

### **Project Cost:**

- Project Finance Term Sheet with selected financial institution; Project cost is US\$177.9Million



Image Source: Alternergy, July 2013

## 9.9 MWe (net) SJCiPower Rice Husk-Fired Biomass power Plant Project



Location: **Brgy. Tulat, San Jose, Nueva Ecija**

Capacity: **9.9 MW**

Target Testing & Commissioning : **November 2014 (Subject to FIT)**

Target Commercial Operation : **TBA (Subject to FIT)**

Proponent : **San Jose City I Power Corporation**

### **Status:**

- Various permits obtained
- Signed EPC with Engcon of Singapore
- Launching and groundbreaking on 12 October 2012; on-going construction (60%)

### **Project Cost:**

- Project cost is Php1.234B



Image Source: DOE-REMB-BD, July 2013



## 20 MW IBEC Biomass Power Project



Location: **Isabela**

Capacity: **20MW**

Target Testing & Commissioning : **March 2015**

Target Commercial Operation : **TBA (Subject to FIT)**

Proponent : **Isabela Biomass Energy Corporation (IBEC)**

### **Status:**

- Various permits obtained
- On-going Construction (20%)
- Subject to FIT



Image Source: DOE-REMB-BD, July 2013



# Committed Power Projects

**VISAYAS**



## 2 X 135 MW Concepcion Coal-fired Power Plant

Location: **Brgy. Nipa, Concepcion, Iloilo**

Capacity: **270 MW**

Target Testing & Commissioning : **1st Unit - July 2016; 2nd Unit - September 2016**

Target Commercial Operation : **TBA**

Proponent : **Palm Thermal Consolidated Holdings Corp.**

### **Status:**

- Ground breaking on 15 Jan. 2013; Commencement of construction on Q2 2013
- negotiations with DUs/ECs are underway for the review of the proposed Power Supply Contract offered by PCPC
- EPC Contract signed 2 February 2013

### **Project Cost:**

- Project cost is Php26.356B



Image Source: DOE-VFO, July 2013

## TPC Coal-Fired Power Plant Expansion Project



Location: **Toledo City, Cebu**

Capacity: **82 MW**

Target Testing & Commissioning : **September 2014**

Target Commercial Operation : **TBA**

Proponent : **Toledo Power Company (GBPC)**

### **Status:**

- On-going securing of permits and other regulatory requirements
- Groundbreaking Ceremony held last 11 November 2012

### **Project Cost:**

- Loan agreement with Banks in place, financial close on 07 March 2013 (70% Loan / 30% Equity); Project cost is Php10.17B



Image Source: DOE-VFO, July 2013



# Nasulo Geothermal Project



Location: **Nasuji, Valencia, Negros Oriental**

Capacity: **50 MW**

Target Testing & Commissioning : **June 2014**

Target Commercial Operation : **TBA**

Proponent : **Energy Development Corporation (EDC)**

## Status:

- Various certificates and permits obtained (CoC, CoAI, DOE Geo SC, LGU, LUP, ECC, WR)

## Project Cost:

- to be financed by EDC; Project cost \$91M



Image Source: DOE-VFO, July 2013

## Villasiga HEP



Location: **Brgy. Igsoro, Bugasong, Antique**

Capacity: **8 MW**

Target Testing & Commissioning : **March 2014**

Target Commercial Operation : **TBA**

Proponent : **Sunwest Water & Electric Co., Inc. (SUWECO)**

### **Status:**

- Various certificates and permits obtained (LGU, WP, RP, ECC, BOI, DOE Hydro SC)

### **Project Cost:**

- Financing from PNB; Project cost Php1.4B



Image Source: DOE-VFO, July 2013



## Consolacion Landfill Methane Recovery and Electricity Generation Project



Location: **La Consolacion, Cebu**

Capacity: **3.6 MW**

Target Testing & Commissioning : **June 2015**

Target Commercial Operation : **TBA**

Proponent : **Asian Energy System Corporation**

### **Status:**

- Obtained necessary permits; Obtained ECC on February 2010
- On-going construction (15%)
- Will take 2 years to accumulate needed methane from the landfill for the plant usage

### **Project Cost:**

- Project cost is Php199M; Loan approval from DBP granted on 25 May 2011





## 18 MW SCBI Biomass Power Plant Project

Location: **San Carlos, Negros Occidental**

Capacity: **18 MW (16 MW net)**

Target Testing & Commissioning : **March 2015**

Target Commercial Operation : **TBA**

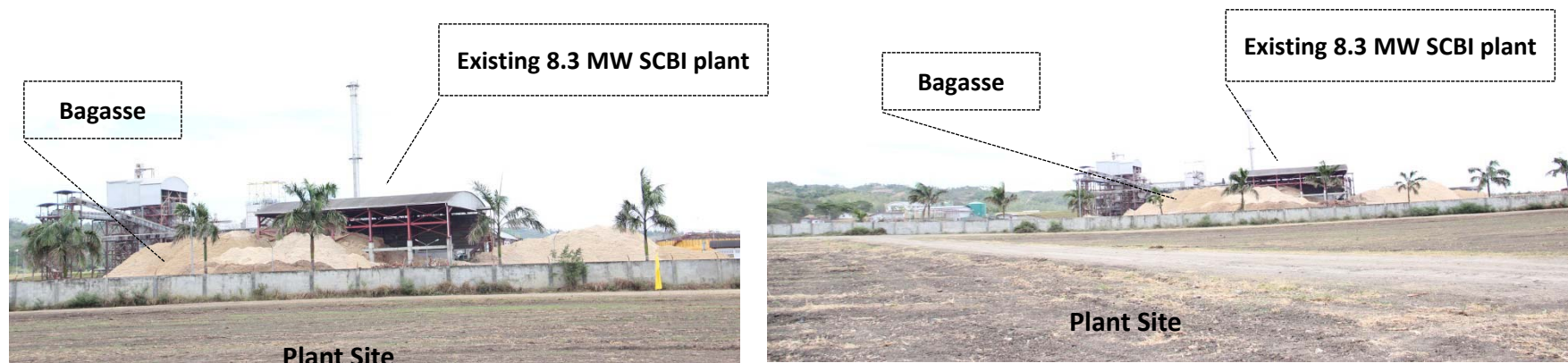
Proponent : **San Carlos Biopower Inc.**

### Status:

- Obtained necessary permits
- EPC signed 10 Aug. 2012
- Commencement of construction on Dec. 2012; On-going construction (10%)

### Project Cost:

- Project cost is \$3.5B





# **Committed Power Projects**

## **MINDANAO**

## 2 x 150 MW Coal-fired Therma South Energy Project



Location: **Brgy. Binugao, Toril, Davao City and Brgy. Inawayan, Sta. Cruz, Davao Del Sur**

Capacity: **300 MW**

Target Testing & Commissioning : **November 2014**

Target Commercial Operation : **March 2015**

Proponent : **Therma South Inc. (Aboitiz Power)**

### **Status:**

- Secured SEC, BIR, BOC, BOI, ECC permits; LGU/Sangguniang Panlalawigan Davao City Reclassification already granted and issued on 12 December
- EPC contract awarded to Black and Veatch on June 2012

### **Project Cost:**

- Php 24 billion, Self-funded with on-going negotiation with financial institutions



Image Source: TSI, July 2013

## 2 X 100 MW Southern Mindanao Coal Fired Power Station



Location: **Brgy, Kamanga, Maasim, Sarangani**

Capacity: **200 MW**

Target Testing & Commissioning : **February 2015**

Target Commercial Operation : **September 2015**

Proponent : **Sarangani Energy Corporation (SEC)**

### **Status:**

- All development permits and some construction permits were already secured, on-going procurement of other construction permits
- EPC Contract between Owner and Daelim Philippines, Inc. executed on 30 March 2011

### **Project Cost:**

- Financial Close on 12 December 2012; Project cost \$450M



Image Source: SEC, July 2013



# 15 MW MEGC Diesel Power Plant



Location: **Mapalad, Dalipuga, Iligan City**

Capacity: **15 MW**

Target Testing & Commissioning : **July 2013**

Target Commercial Operation : **October 2013**

Proponent : **Mapalad Energy Generating Corporation (MEGC)**

## Status:

- PSA with Iligan Light & Power, Inc. (ILPI) for a 15-year supply contract dated 9 May 2011
- Obtained various permits.

## Project Cost:

- Project cost Php379M; Financing by Bank of the Philippine Islands (BPI) and Cagayan de Oro Lending Center



Image Source: MEGC, July 2013



# Mindanao 3 Geothermal Project



Location: **Kidapawan, North Cotabato**

Capacity: **50 MW**

Target Testing & Commissioning : **June 2016**

Target Commercial Operation : **TBA**

Proponent : **Energy Development Corporation (EDC)**

## Status:

- Ongoing resource assessment
- Obtained ECC, Land Use, LGU, Water Rights permits

## Project Cost:

- Project cost \$250M



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