

# Energy Projects in Region II

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Department of Energy*

Energy Investment Briefing – Region II

26 July 2018

Santiago City, Isabela



# Energy Projects in Cagayan Valley

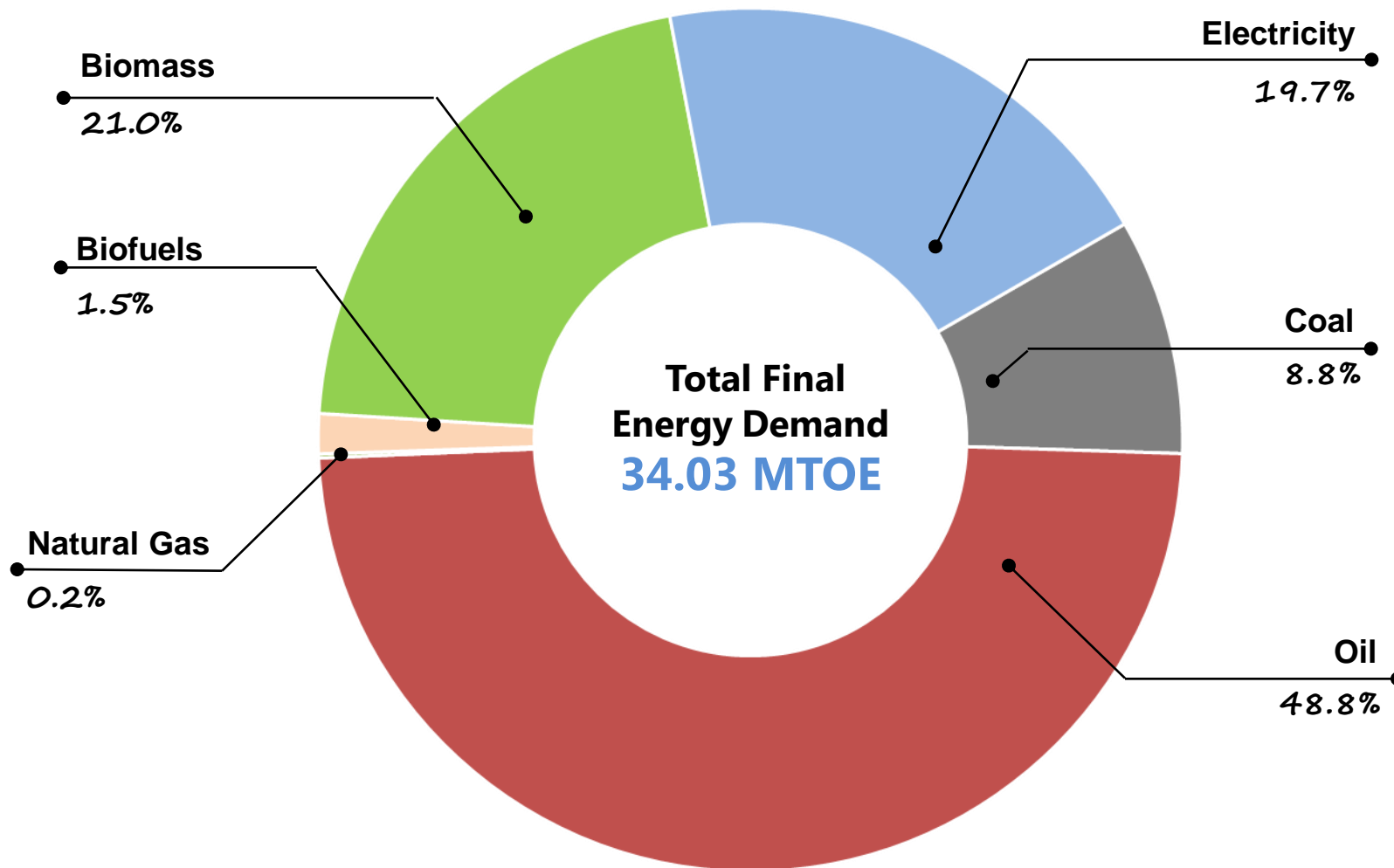
Provinces	Capital
Batanes	Basco
Cagayan	Tuguegarao
Isabela	Ilagan
Nueva Vizcaya	Bayombong
Quirino	Cabarroguis

Cities	
Santiago	1 <sup>st</sup> Class (Independent City)
Cauayan	3 <sup>rd</sup> Class City
Ilagan	2 <sup>nd</sup> Class City
Tuguegarao	3 <sup>rd</sup> Class City

Source: 2015 Census



# 2017 Total Final Energy Consumption by Fuel

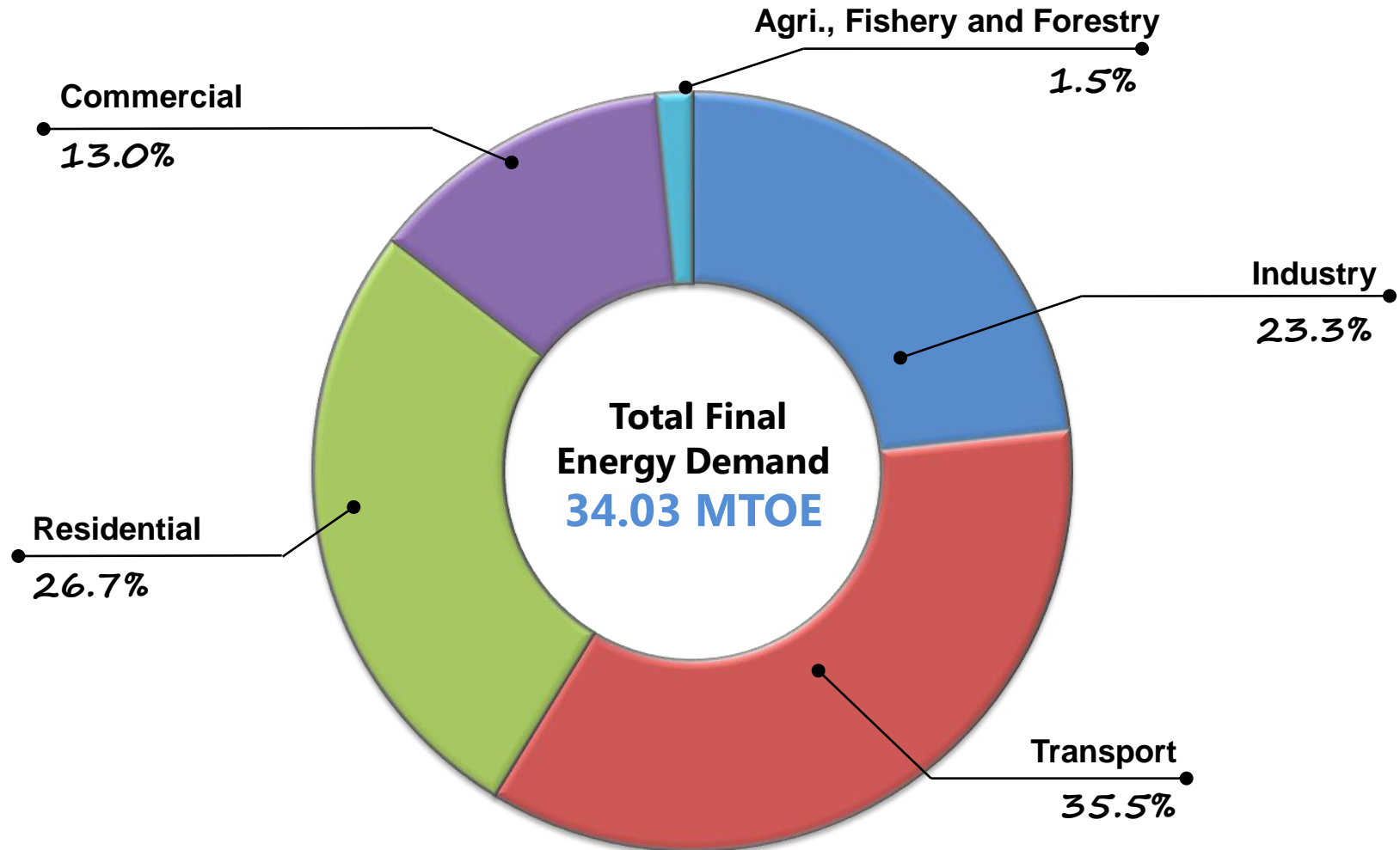


\* Preliminary as of 24 April 2018

\*\* Excludes non-energy used



# 2017 Total Final Energy Consumption by Sector

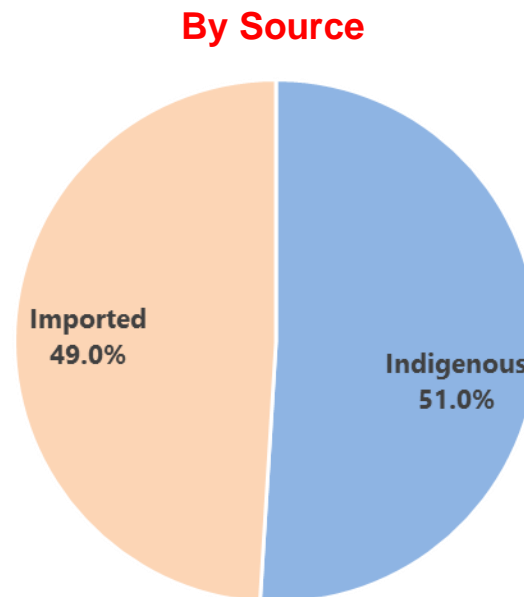
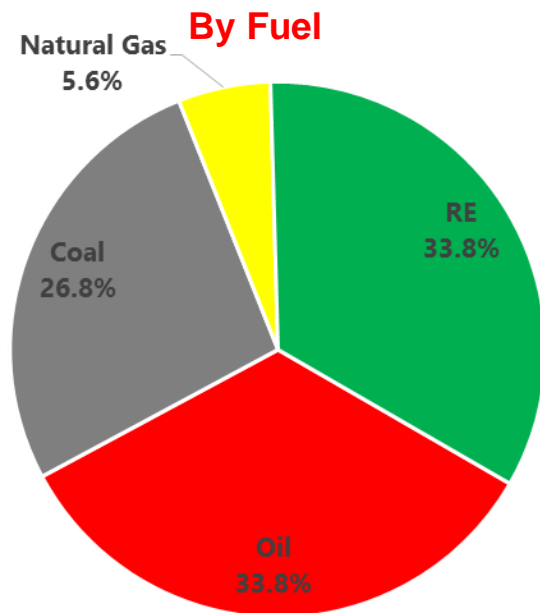


\* Preliminary as of 24 April 2018

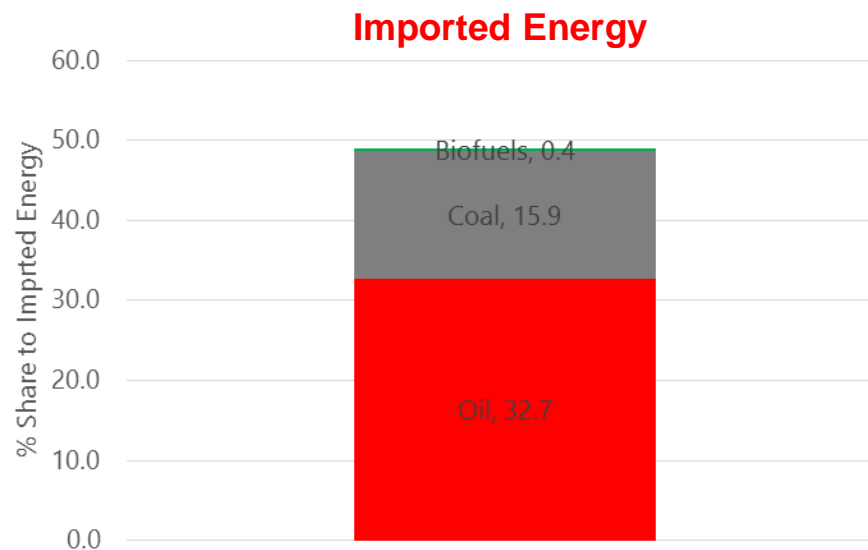
\*\* Excludes non-energy used



# 2017 Total Primary Energy Supply



Total Energy	57.71 MTOE
Self-Sufficiency	51.0%
Renewable Energy (RE)	33.8%
Clean Energy (RE + Nat Gas)	39.4%



\* Preliminary as of 24 April 2018



# Energy Projects in Region II

## Summary of Energy Projects Per Province

Province	<u>Batanes</u>		<u>Cagayan</u>		<u>Isabela</u>		<u>Nueva Vizcaya</u>		<u>Quirino</u>		Total	
	No.	Cap. (MW)	No.	Cap. (MW)	No.	Cap. (MW)	No.	Cap. (MW)	No.	Cap. (MW)	No.	Cap. (MW)
Hydro			1	6	29	670.87	14	91.5	10	206	54	974.37
Wind			5	198							5	198
Solar			2	205	11	583					13	788
Geothermal			1	45							1	45
Biomass			1	24	1	5					2	29
Bunker / Diesel	3	4.6	3	1.13	2	0.96					8	6.69
NatGas			1	383							1	383
<b>Total</b>	<b>3</b>	<b>4.60</b>	<b>14</b>	<b>862.13</b>	<b>43</b>	<b>1,259.83</b>	<b>14</b>	<b>91.50</b>	<b>10</b>	<b>206.0</b>	<b>84</b>	<b>2,424.06</b>

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# Energy Projects in Region II

## Batanes 4.60 MW

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
3.118	BASCO DPP*	NPC-SPUG	Basco, Batanes	O	Diesel
0.739	ITBAYAT DPP*	NPC-SPUG	Itbayat, Batanes	O	Diesel
0.739	SABTANG DPP*	NPC-SPUG	Sabtang, Batanes	O	Diesel
4.596					

Power Plant Project : O – Operating      I - Indicative      C – Committed  
 RE Service Contract: D – Development   PD – Pre-Development   \*Off-grid

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# Energy Projects in Region II

## Cagayan 862.13 MW

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
48.00	Aparri 1 Wind Power Project	Phinma Renewable Energy Corporation	Aparri, Cagayan	PD	Wind
40.00	Aparri 2 Wind Power Project	NorthPoint Wind Power Development Corporation	Aparri, Cagayan	PD	Wind
105.00	Aparri Solar Power Project	GreEnergy Power Systems Philippines, Inc.	Aparri, Cagayan	PD	Solar
45.00	Ballesteros Wind Power Project	Phinma Renewable Energy Corporation	Aparri , Cagayan	PD	Wind
24	NREDC Biomass Power Plant Project	Natures Renewable Energy Development Corporation	Cagayan	I	Biomass
0.741	CALAYAN DPP	NPC-SPUG	Calayan, Cagayan	O	Diesel
0.280	BALATUBAT DPP	NPC-SPUG	Camiguin Is., Calayan, Cagayan	O	Diesel
0.109	MINABEL DPP	NPC-SPUG	Camiguin Is., Calayan, Cagayan	O	Diesel
15.00	Claveria Wind Power Project	FirstMaxpower International Corporation	Claveria, Cagayan	PD	Wind
45.00	Cagua-Baua Geothermal Power Project	Pan Pacific Power Phils. Corp.	Lal-lo, Cagayan	PD	Geothermal

Power Plant Project : O – Operating      I - Indicative      C – Committed  
 RE Service Contract: D – Development    PD – Pre-Development

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# Energy Projects in Region II

## Cagayan 862.13 MW

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
100.00	Lal-lo Hybrid Solar Power Project	Natures Renewable Energy Dev't. (NAREDCO) Corporation	Lal-lo and Gattaran, Cagayan	PD	Solar
6	Pinacanauan	Sunwest Water & Electric Co., Inc.	Peñablanca, Cagayan	C	Hydo
50.00	Sanchez Mira Wind Power Project	FirstMaxpower International Corporation	Sanchez Mira, Cagayan	PD	Wind
383	Sta. Ana CCGT Power Plant	Phinma Energy Corporation	Port Irene, Sta. Ana, Cagayan	I	Natgas
862.13					

Power Plant Project : O – Operating      I - Indicative      C – Committed  
 RE Service Contract: D – Development   PD – Pre-Development

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# Energy Projects in Region II

**Isabela 1,259.83 MW**

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
50.00	Ganano River Hydroelectric Power Project	Ganano Energy & Environment Electric Cooperative	Alicia, Isabela	PD	Hydro
20.0	IBEC	Isabela Biomass Energy Corporation	Alicia, Isabela	O	Hydro
5.00	Rice Husk-Fired Biomass Power Plant	Isabela La Suerte Rice Mill Corporation	Aurora, Isabela	D	Biomass
0.60	Magat F Hydroelectric Power Project	PhilCarbon Inc.	Cordon, Isabela	PD	Hydro
50	Cordon Solar PV Power Project	Greenenergy Solutions, Inc.	Cordon, Isabela	I	Solar
14	Ilaguen 2	Isabela Power Corporation	Dinapigue, Isabela	C	Hydo
11.00	Ilaguen 3	Isabela Power Corporation	Echague, Isabela	C	Hydo
10	Ilaguen 4 Hydropower Project	Isabela Power Corporation	Echague, Isabela	I	Hydo
8.10	Abuan 2 Hydroelectric Power Project	Greenpower Resources Corporation	Ilagan, Isabela	PD	Hydro
125	Sta. Maria Solar PV Power Project	Greenenergy Solutions, Inc.	Sta. Maria, Isabela	I	Solar

# Energy Projects in Region II

**Isabela 1,259.83 MW**

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
10.00	Ilagan Hydroelectric Power Project	Trans-Asia Oil and Energy Development Corp,	Ilagan, Isabela	PD	Hydro
100.00	Isabela Solar Power Project	Living Projects 4 People Philippines Inc.	Ilagan, Isabela	PD	Solar
100	Ilagan II Solar PV Power Project	Greenenergy Solutions, Inc.	Ilagan City, Isabela	I	Solar
10.80	Abuan River 1 Hydroelectric Power Project	Greenpower Resources Corporation	Lagawe & Mayoyao, Isabela	PD	Hydro
0.240	MACONACON DPP	NPC-SPUG	Maconacon, Isabela	O	Diesel
0.716	PALANAN DPP	NPC-SPUG	Palanan, Isabela	O	Diesel
380.0	MAGAT	SN Aboitiz Power - Magat, Inc.	Ramon, Isabela	O	Hydro
6.0	NIA-BALIGATAN	National Irrigation Administration (NIA)	Ramon, Isabela	O	Hydro
2.5	MAGAT A&B	ISELCO I / I-Magat Renewable Energy Corporation	Ramon, Isabela	O	Hydro
8.5	Maris Main Canal 1 HEP*	SN Aboitiz Power Generation	Ramon, Isabela	O	Hydo
30	Sta. Maria Solar Power Project	East Coast Fas Renewable Energy and Industrial Corporation	Sta. Maria, Isabela	I	Solar

Power Plant Project : O – Operating I - Indicative C – Committed  
 RE Service Contract: D – Development PD – Pre-Development

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As of December 31, 2017

# Energy Projects in Region II

**Isabela 1,259.83 MW**

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
5.00	Ramon Solar Power Project	AAESUN Corporation	Ramon & Santiago, Isabela	PD	Solar
18.00	Isabela Solar Power Project	Daebo Green Pacific Inc.	Reina Mercedes & Luna, Isabela	PD	Solar
5.00	Dibuluan Hydroelectric Power Project	Greenpower Resources Corporation	San Agustin, Isabela	PD	Hydro
8.60	Ilaguen 5 Hydroelectric Power Project	Greenpower Resources Corporation	San Agustin, Isabela	PD	Hydro
4.50	Dabubu Hydroelectric Power Project	Greenpower Resources Corporation	San Agustin & Maddela, Isabela & Quirino	PD	Hydro
10.00	Rizal Run-of-River Hydroelectric Power Project	Strategic Power Development Corp.	San Guillermo, Isabela	PD	Hydro
4.40	Catalangan North Hydroelectric Power Project	Greenpower Resources Corporation	San Mariano, Isabela	PD	Hydro
6.50	Catalangan South Hydroelectric Power Project	Greenpower Resources Corporation	San Mariano, Isabela	PD	Hydro
19.8	GREEN FUTURE	Green Future Innovation Inc.	San Mariano, Isabela	O	Hydro
4.8	Disabungan	Greenpower Resources Corporation	San Mariano, Isabela	C	Hydo
7.8	Tumauini (Lower Cascade)	Quadrivier Energy Corp.	Tumauini, Isabela	C	Hydo

Power Plant Project : O – Operating I - Indicative C – Committed  
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# Energy Projects in Region II

**Isabela 1,259.83 MW**

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
19	Ilaguen	Isabela Power Corporation	San Mariano & San Guillermo	C	Hydo
19	Ilaguen HEPP	Isabela Power Corporation	San Mariano and San Guillermo, Isabela	I	Hydo
0.05	Lateral B Hydroelectric Power Plant	National Irrigation Administration	San Mateo , Isabela	O	Hydro
8.00	San Pablo Hydroelectric Power Project	Greenpower Resources Corporation	San Pablo, Isabela	PD	Hydro
3.00	San Pablo Site 2 Hydroelectric Power	Greenpower Resources Corporation	San Pablo, Isabela	PD	Hydro
4.90	San Pablo Site 3 Hydroelectric Power Project	Greenpower Resources Corporation	San Pablo, Isabela	PD	Hydro
130.00	San Pablo Solar Power	Solar Valley Energy Solutions Inc.	San Pablo , Isabela	PD	Solar
25.00	Limbauan Solar Power Project	BKS Green Energy Corp.	San Pablo and Cabagan, Isabela	PD	Solar
TBD	Maria Lourdes Green Solar Power Project	East Coast Asia Power Development Corporation	Santa Maria & Enrile, Isabela and Cagayan	PD	Solar
TBD	Pasto Di Apolonio Solar Power Project	East Coast Asia Power Development Corporation	Santa Maria-Cabagan and Rizal , Isabela and Kalinga	PD	Solar
14	Tumauini (Upper Cascade)	Philnew Hydro Power Corporation	Tumauini, Isabela	C	Hydo
<b>1,259.83</b>					

Power Plant Project : O – Operating I - Indicative C – Committed  
 RE Service Contract: D – Development PD – Pre-Development

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As of December 31, 2017

# Energy Projects in Region II

## Nueva Vizcaya 91.5 MW

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
3.20	Abaca Hydroelectric Power Project	JRV Renewable Energy Corporation	Dupax del Sur, Nueva Vizcaya	PD	Hydro
5.00	Casignan Hydroelectric Power Project	JRV Renewable Energy Corporation	Dupax del Norte and Alfonso Castañeda, Nueva Vizcaya	PD	Hydro
2.30	Denip Hydroelectric Power Project	JRV Renewable Energy Corporation	Alfonso Castañeda, Nueva Vizcaya	PD	Hydro
1.20	Edralin Hydroelectric Power Project	AT Dinum Company	Kasibu, Nueva Vizcaya	PD	Hydro
1.60	Mangayngay Hydroelectric Power Project	United Hydro Power Builders	Alfonso Castañeda, Nueva Vizcaya	PD	Hydro
15.00	Matuno 2 Hydroelectric Power Project	Aurora All Asia Energy Corporation	Ambaguio, Nueva Vizcaya	PD	Hydro
7.90	Matuno 2 Hydroelectric Power Project	Smith Bell Mini-Hydro Corp.	Bambang, Nueva Vizcaya	PD	Hydro
8.00	Matuno Hydroelectric Power Project	Matuno River Development Corporation	Bambang, Nueva Vizcaya	PD	Hydro
0.60	Namanaan Hydroelectric Power Project	AT Dinum Company	Kasibu, Nueva Vizcaya	PD	Hydro
26.00	Pampang Hydroelectric Power Project	FDC Renewables Corporation	Santa Fe, Nueva Vizcaya	PD	Hydro

# Energy Projects in Region II

## Nueva Vizcaya 91.5 MW

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
1.8	Communal-uddiawan	Smith-Bell Mini-Hydro Corporation	Solano, Nueva Viscaya	O	Hydro
2.1	Didipio 1	AT Dinum Company	Kasibu, Nueva Vizcaya	C	Hydo
9.4	Didipio 2	AT Dinum Company	Kasibu, Nueva Vizcaya	C	Hydo
7.4	Matuno 1	Smith Bell Mini Hydro Corporation	Ambaguio, Nueva Vizcaya	C	Hydo
91.50					

Power Plant Project : O – Operating      I - Indicative      C – Committed  
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# Energy Projects in Region II

## Quirino 206.00 MW

Capacity (MW)	Project Name	Company Name	Location	Status	Resource
142.00	Dagkan Hydroelectric Power Project	United Hydro Power Builders	Nagtipunan, Quirino	PD	Hydro
9.00	Dakgan 1 Hydroelectric Power Project	Asiapacific Renewables Corporation	Nagtipunan, Quirino	PD	Hydro
12.00	Dakgan 2 Hydroelectric Power Project	Asiapacific Renewables Corporation	Nagtipunan, Quirino	PD	Hydro
3.20	Dibuluan 2 Hydroelectric Power Project	Greenpower Resources Corporation	Maddela, Quirino	PD	Hydro
4.30	Gawagan 1 Hydroelectric Power Project	Gawagan Hydro Power Corp.	Nagtipunan, Quirino	PD	Hydro
2.60	Gawagan 2 Hydroelectric Power Project	Gawagan Hydro Power Corp.	Nagtipunan, Quirino	PD	Hydro
0.70	Geblem 1 Hydroelectric Power Project	Gawagan Hydro Power Corp.	Nagtipunan, Quirino	PD	Hydro
14.20	Addalam	Quirino Resources Development Corp.	Aglipay, Quirino	C	Hydo
3.80	Addalam	Quirino Power Energy Corporation	Aglipay, Quirino	C	Hydo
14.20	Addalam	Quirino Resources Development Corporation	Cabarroguis, Quirino	I	Hydo
206.00					

Power Plant Project : O – Operating I - Indicative C – Committed

RE Service Contract: D – Development PD – Pre-Development

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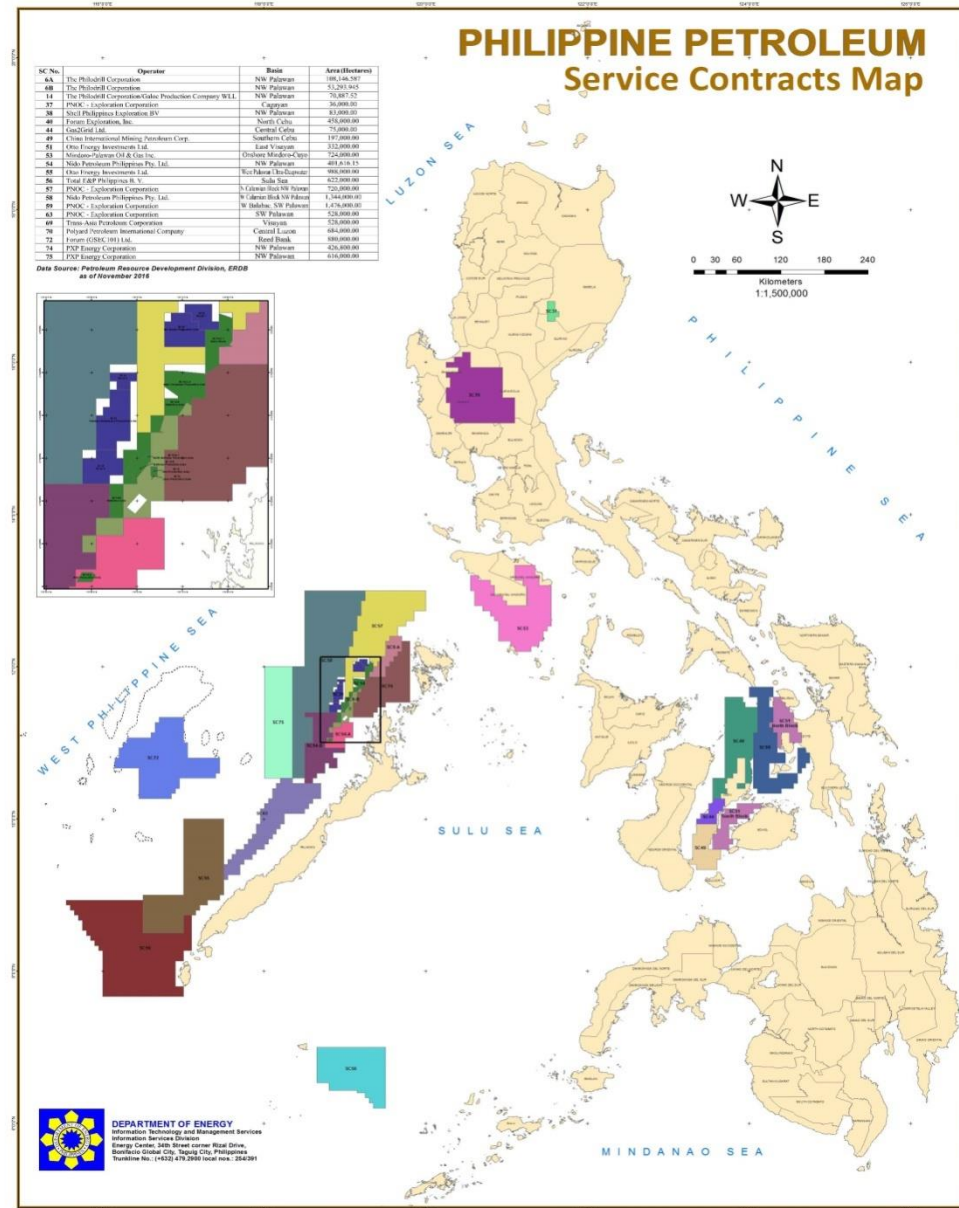


# Upstream Oil & Gas

## Petroleum Service Contracts Exploration & Development

### 22 Petroleum Service Contracts (PSCs) As of June 2018

- 7 PSCs in the Production Stage
- 15 PSCs in the Exploration Stage



# Upstream Oil & Gas

## Active Petroleum Service Contract – Region II

PSC No.	Location	Company Name	Status
37	Cagayan Basin	PNOC-EC	Production



# Upstream Coal

## Coal Operating Contracts Exploration & Development

73 Active Coal Operating  
Contracts (COCs)  
As of June 2018

- 41 COCs in the Exploration Stage
- 32 COCs in the Development and Production Stage



# Upstream Coal

## Active Coal Operating Contracts – Region II

COC No.	Location	Company Name	Status
116	Municipalities of Baculod, Gattaran & Iguig, Cagayan	D. M. WENCESLAO AND ASSOCIATES, INC.	Development & Production
122	Cauayan, Isabela	PNOC-EXPLORATION CORP.	Development & Production
123	Baculod, Gattaran and Iguig, Cagayan	D. M. WENCESLAO AND ASSOCIATES, INC.	Development & Production



# Downstream Oil

## Total Number of Gasoline Stations

REGION	MAJORS	NEW PLAYERS		REGIONAL TOTAL
		w/ bulk supply / facilities	Independent*	
National Capital Region (NCR)	612	285	247	<b>1,144</b>
Cordillera Administrative Region (CAR)	27	9	12	<b>48</b>
Region I (Ilocos Region)	122	70	237	<b>429</b>
Region II (Cagayan Valley)	107	57	141	<b>305</b>
Region III (Central Luzon)	295	233	352	<b>880</b>
Region IV (Southern Tagalog)	778	454	638	<b>1,870</b>
Region V (Bicol Region)	188	38	313	<b>539</b>
<b>Over-all Total Luzon</b>	<b>2,129</b>	<b>1,146</b>	<b>1,940</b>	<b>5,215</b>



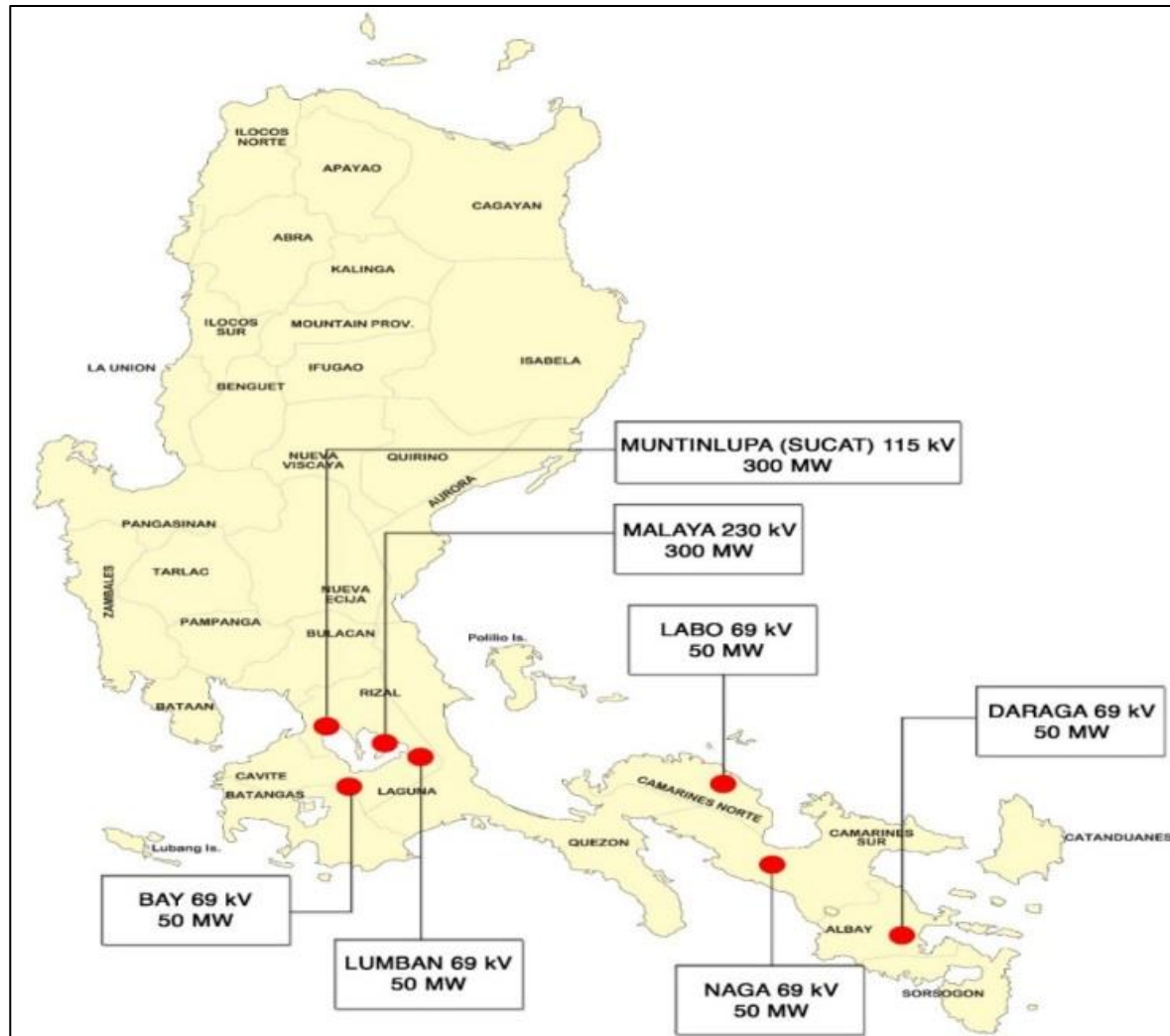


# Potential Energy Projects



# Power

## Ideal Location of New Power Plants in Luzon



# Renewable Energy

## National Renewable Energy Program

Renewable Energy Targets, 2010 - 2030		
Sector	Target Additional Capacity	Target Year
Biomass	277 MW	2015
Wind	2,345 MW	2022
Hydropower	5,398 MW	2023
Ocean Power	75 MW	2025
Geothermal	1,495 MW	2030
Solar	284 MW	2030
<b>Total</b>	<b>9,874 MW</b>	





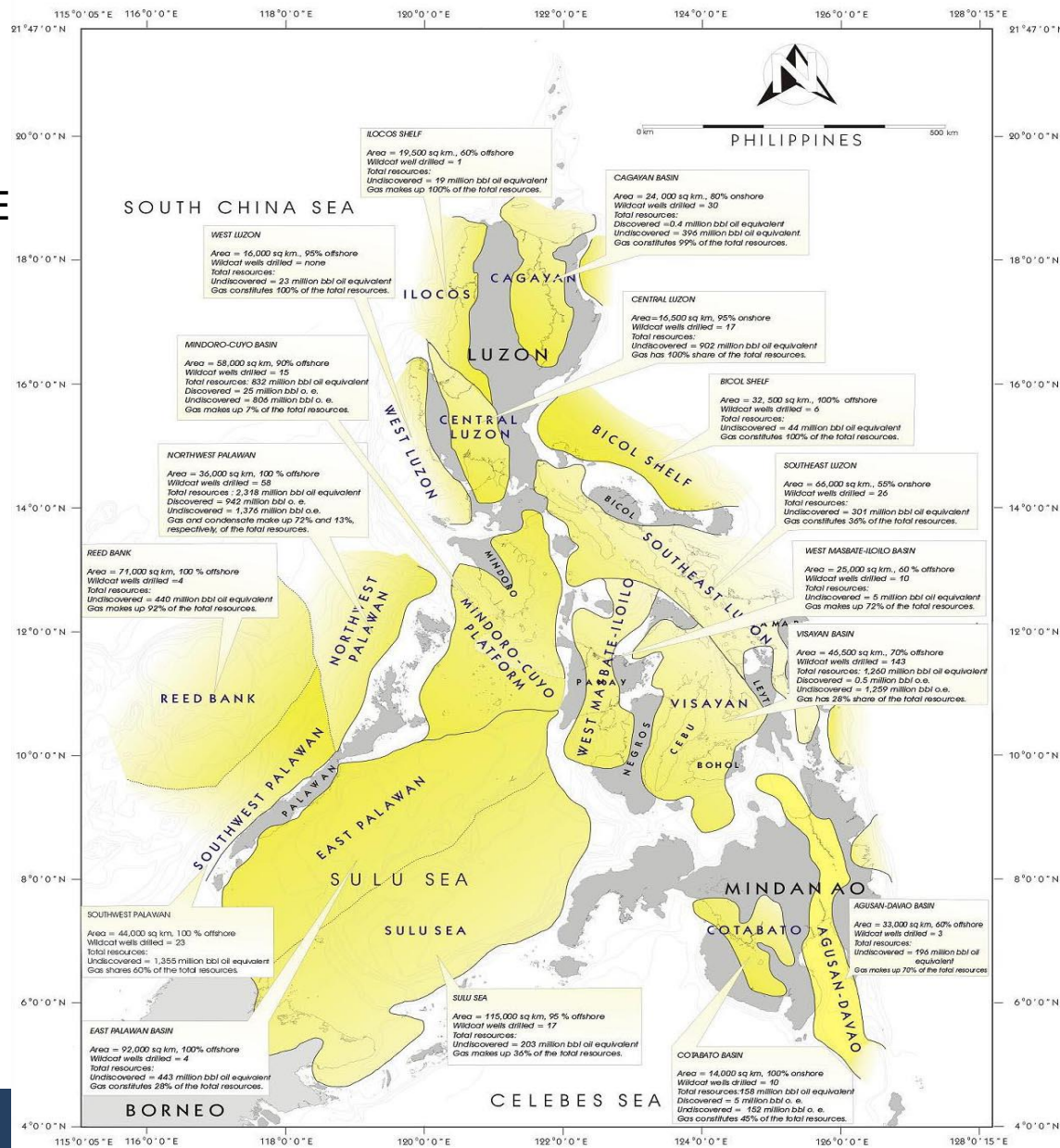
# Upstream Oil & Gas

## Philippine Sedimentary Basins

Total area: 709,000 sq km

Combined Potential: 4,777 MMBFOE

1. Ilocos Shelf
2. Cagayan Basin
3. Central Luzon Basin
4. Bicol Shelf
5. Southeast Luzon Basin
6. Mindoro-Cuyo Basin
7. West Masbate-Iloilo Basin
8. Visayan Basin
9. Agusan-Davao Basin
10. Cotabato Basin
11. Sulu Sea Basin
12. East Palawan Basin
13. Southwest Palawan Basin
14. Reed Bank Basin
15. Northwest Palawan Basin
16. West Luzon Trough



# Upstream Oil & Gas

## Sedimentary Basin – Region II

### Cagayan Basin

Area: 24,000 Sq. Km. 80% Onshore

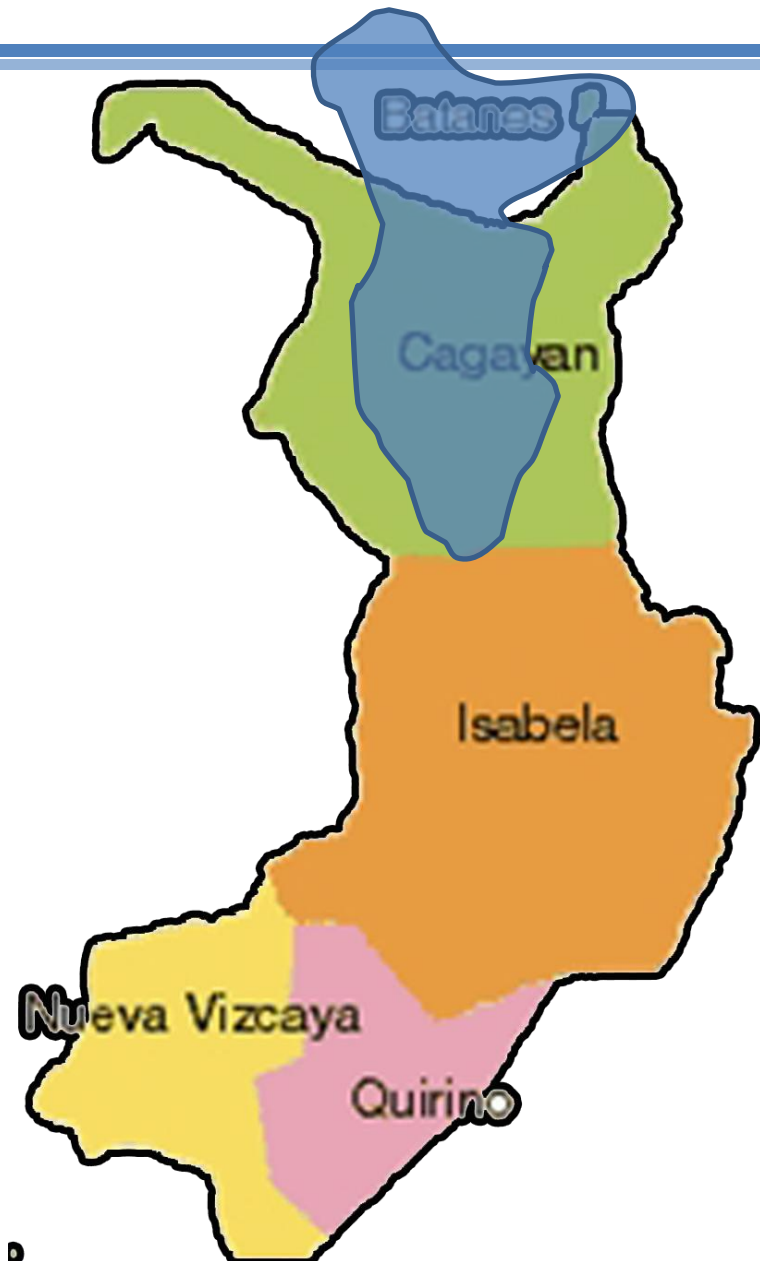
Wildcat Wells Drilled: 30

Total Resources:

Discovered: 0.4 million BBL oil equivalent

Undiscovered: 396 million BBL oil equivalent

Gas constitute 99% of the total resources



# Upstream Coal

## Summary of Regional Coal Reserves

(in Million Metric Tons)

<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	- 112.32

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

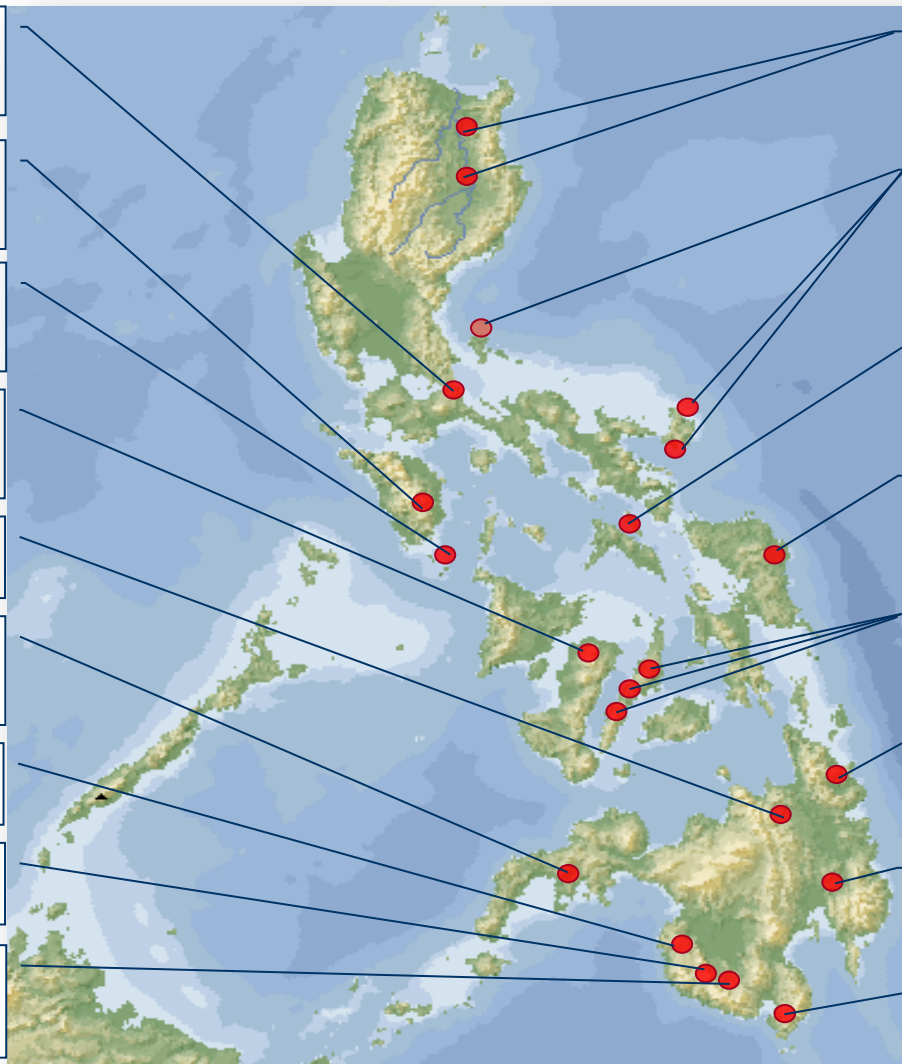
<b>BUKIDNON</b>	
Resource Potential	- 50.00

<b>ZAMBOANGA</b>	
Resource Potential	- 45.00
In-situ Reserves	- 37.99

<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	- 81.07



<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



# Upstream Coal

## Coal Reserves – Region II

### Cagayan Basin

Resource Potential: 336 million mt

In-situ Reserves: 82.57 million mt



## The Philippine Conventional Energy Contracting Program (PCECP)

1. Adopting of a ***Nomination-Based*** Contracting / Licensing Scheme;
2. Compliance of ***milestone work commitments***;
3. Compliance of ***legal, technical and financial qualifications*** under a specific guideline of requirements and criteria;
4. Introduction of ***marginal field*** as part of the available areas for petroleum ; and
5. Implementation of an expeditious awarding process ***all-year-round***



# Thank you!

For inquiries, please contact

***Investment Promotion Office  
Department of Energy***



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