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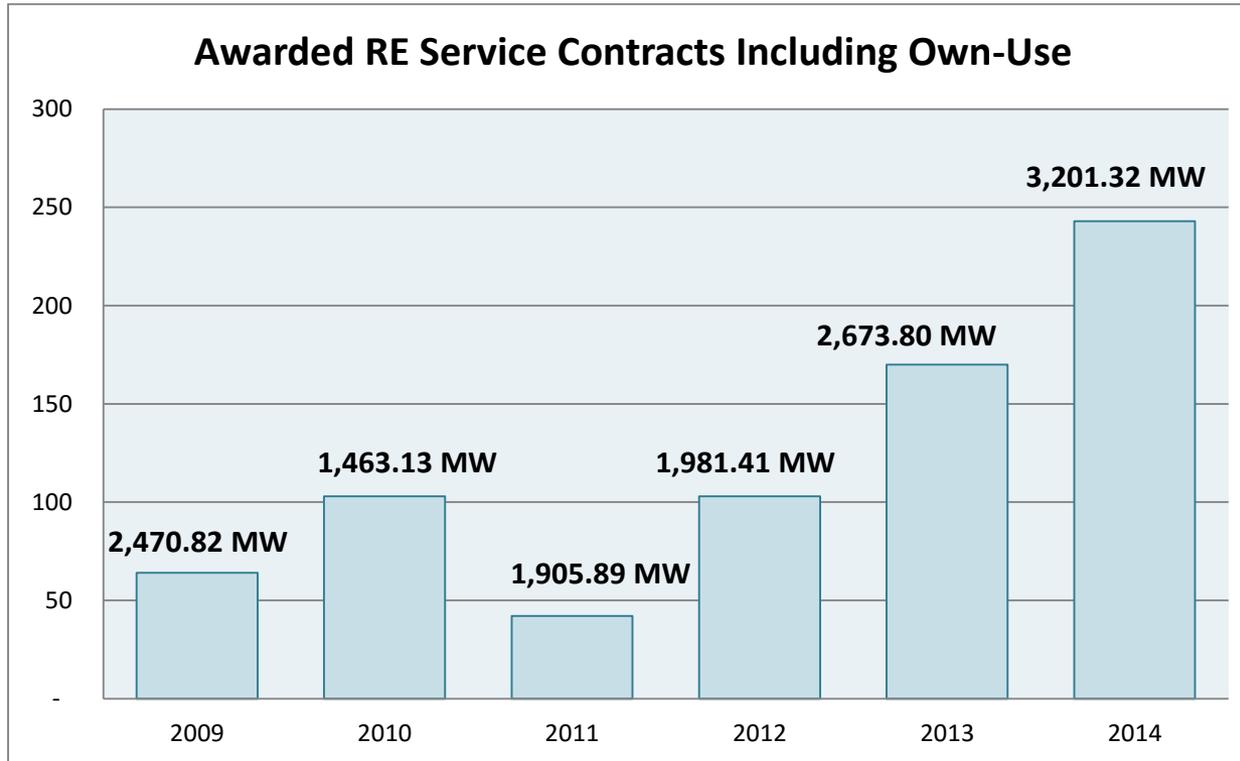
## Philippines Renewable Energy Latest Accomplishments

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Renewable Energy Management Bureau  
Department of Energy



# Renewable Energy Projects Awarded by Year



Year	2009	2010	2011	2012	2013	2014
No. of RESCs	64	103	42	103	170	243
Capacity (MW)	2,470.82	1,463.13	1,905.89	1,981.41	2,673.80	3,201.32

Total Renewable Energy Projects awarded as of Dec. 2014 is **725**



# Major Activities/Accomplishment

- Completion and Commissioning of Renewable Facilities (as of June 2015)

**635.275 MW**



# Major Activities/Accomplishment

- **Completion and Commissioning of Renewable Facilities**
  - **BIODIESEL – 98 Million Liters / Year**
  - **BIOETHANOL – 89 Million Liters / Year**



# Major Activities/Accomplishment

- **Completion and Commissioning of Renewable Facilities**
  - **BIOMASS**
    - 12 MW (Phase 1) San Jose City I Power Corporation
    - 16 MW (Phase 1) Universal Robina Corporation
    - 8 MW Victorias Milling Company Incorporated
    - 4 MW Hawaiian-Philippine Company
    - 3 MW Philippine Trade Center, Inc.
  - **GEOHERMAL**
    - 20 MW Maibarara Geothermal Power Plant
    - 30 MW Southern Negros Geothermal Production Field (Nasulo Project)
  - **SOLAR**
    - 22 MW San Carlos Solar Power
    - 325 kWp Solar PV Facilities for Own-Use by Private Academic Institutions (PAIs)
    - 10 MW Pampanga Solar Power Project
    - 4.1 MW Burgos Solar Power Project
    - 41.30 MW Cavite Economic Zone Solar Power Project
    - 30 MW Ormoc Solar Power Project
    - 1.5 MW SM North Solar Power Project



12 MW (Phase 1) San Jose City I Power Corporation



20 MW Maibarara Geothermal Power Plant



22 MW San Carlos Solar Power



# Major Activities/Accomplishment

- **Completion and Commissioning of Renewable Facilities**
  - **HYDROPOWER**
    - 45 kW Lateral – B Hydroelectric Power Plant (San Mateo, Isabela)
    - 7 MW Tudaya 2 Hydroelectric Power Plant
    - 6.6 MW Tudaya 1 Hydroelectric Power Plant
    - 3 MW Linao-Cawayan Upper Cascade Hydroelectric Power Plant
    - 8 MW Villasiga Hydroelectric Power Plant
    - 14 MW Sabangan Hydroelectric Power Project
    - 1 MW Likud Hydroelectric Power Project



# Major Activities/Accomplishment

- **Completion and Commissioning of Renewable Facilities**
  - **WIND**
    - 18.9 MW (Phase 3) Bangui Wind Power Project
    - 150 MW Burgos Wind Power Project
    - 81 MW Pagudpud (Caparispisan) Wind Power Project
    - 54 MW San Lorenzo Wind Power Project (Guimaras)
    - 54 MW Pililla Wind Power Project
    - 36 Nabas Wind Power Project



150 MW Burgos Wind Power Project



7 MW Tudaya 2  
Hydroelectric Power  
Plant

54 MW San Lorenzo  
Wind Power Project  
(Guimaras)



# Major Activities/Accomplishment

- **Accredited Biofuel Manufacturers**
  - **BIOETHANOL**
    - Balayan Distillery, Inc. (30 Million Liters / Year)
    - Far East Alcohol Corporation (15 Million Liters / Year)
    - Kooll Company, Incorporated (14.12 Million Liters / Year)
    - Universal Robina Corporation (30 Million Liters / Year)
  - **BIODIESEL**
    - Econergy Corporation (30 Million Liters / Year)
    - Phil Biochem Products, Inc. (68 Million Liters / Year)



# Major Activities/Accomplishment

- Energized 6,978 HH with total installed capacity of 209.3 kWp through Household Electrification Program (HEP)



# Major Activities/Accomplishment

- Installation of 775.78 KWp under Net-Metering Program ( as of Dec. 2014)



St. Scholastica's College



Manuel L. Quezon University



# Renewable Energy Potential Identification

## RE Resource Assessment

### Hydropower Potential Sites- JICA resource inventory result

- 1,413 Sites with potential capacity of 20,599.05 MW
  - Out of the 1,413 Sites, 188 sites is located in Mindanao with a potential capacity of 912.13 MW.

### USAID Biomass Resource Inventory Result

- 4,446.54 Mwe Potential Power Generation Capacity net of Competing uses (MW)
- 17.26 MtCO<sub>2</sub> Potential GHG emission reduction (tCO<sub>2</sub>)

**On-going detailed resource assessment of selected Low Enthalpy Geothermal Areas**

**Detailed Wind Resource Assessment Project launched last February 20, 2015**



# Summary Renewable Energy Projects under RE Law (as of September 2015)

## AWARDED PROJECTS UNDER RENEWABLE ENERGY (RE) LAW

RESOURCES	AWARDED PROJECTS		POTENTIAL CAPACITY MW		INSTALLED CAPACITY MW	
	Grid-Use	Own-Use	Grid-Use	Own-Use	Grid-Use	Own-Use
Hydro Power	414	1	8,897.30	1.50	138.19	-
Ocean Energy	8	-	31.00	-	-	-
Geothermal	43	-	750.00	-	1,906.19	-
Wind	51	1	1,168.00	-	426.90	-
Solar	93	12	2,544.81	2.187	131.90	1.90
Biomass	40	23	249.07	6.42	191.55	140.43
<b>Sub-Total</b>	<b>649</b>	<b>37</b>	<b>13,640.18</b>	<b>10.107</b>	<b>2,794.73</b>	<b>142.33</b>
<b>TOTAL</b>	<b>686</b>		<b>13,650.29</b>		<b>2,937.06</b>	

## BIOFUELS REGISTRATION / ACCREDITATION

RESOURCES	No. of Companies	No. of Projects
Bioethanol	12	12
Biodiesel	11	11
<b>Total</b>	<b>23</b>	<b>23</b>



# Summary Renewable Energy Projects under RE Law (as of September 2015)

## PENDING APPLICATIONS UNDER RE LAW

RESOURCES	PENDING APPLICATIONS		POTENTIAL CAPACITY MW		INSTALLED CAPACITY MW	
	Grid-Use	Own-Use	Grid-Use	Own-Use	Grid-Use	Own-Use
Hydro Power	167	-	2,203.54	-	132.80	-
Ocean Energy	2	-	-	-	-	-
Geothermal	2	-	60.00	-	-	-
Wind	11	-	240.00	-	-	-
Solar	62	-	1,981.94	-	-	-
Biomass	9	2	32.00	-	51.40	12.50
<b>Sub-Total</b>	<b>253</b>	<b>2</b>	<b>4,517.48</b>	<b>-</b>	<b>184.20</b>	<b>12.50</b>
<b>TOTAL</b>	<b>255</b>		<b>4,517.48</b>		<b>196.70</b>	



# Renewable Energy Targets, 2011-2030

Sector	Short Term	Medium Term	Long Term	Total
	2011-2015	2016-2020	2021-2030	
Geothermal	220 MW	1,100 MW	175 MW	1,495 MW
Hydropower	341.3 MW	3,161 MW	1,891.8 MW	5,394.1 MW
Biomass	276.7 MW	0	0	276.7 MW
Biofuels	<ul style="list-style-type: none"> <li>•DC on E10 in 2011</li> <li>•Mandatory E10 to all Gasoline by 2012</li> <li>•PNS for B5 by 2014</li> <li>•DC on B5 by 2015</li> <li>•Mandatory B5 to all Diesel by 2015</li> </ul>	<ul style="list-style-type: none"> <li>•PNS for B20 &amp; E85 by 2020</li> <li>•DC on B10 and E20 by 2020</li> </ul>	<ul style="list-style-type: none"> <li>•DC on B20 and E85 by 2025</li> </ul>	
Wind	200 MW	700 MW	1,445 MW	2,345 MW
Solar	50 MW	100 MW	200 MW	350 MW
Ocean Power	0	35.5	35	70.5
<b>Total</b>	<b>1,088 MW</b>	<b>5,096.5 MW</b>	<b>3,746.80 MW</b>	<b>9,931.3 MW</b>

**Note:** RE Targets under review of NREB to reflect developments on RE sector and the DOE's issuances of new Installation targets



# The Way Forward

- **Full implementation of the Renewable Energy Act**
  - *Review of the National Renewable Energy Program*
  - *Development and implementation of remaining RE Policy mechanisms under the RE Law.*
  - *Establish Energy Investment Coordinating Center and Linkages with other Government Regulatory Agencies*
  - *Resource Inventory and Establishment of RE Database*
  - *Capacity Building / Information, Education and Communication Campaigns*



THANK

YOU

