Philippine Energy Market Outlook and The National Renewable Energy Plan

Renewable Energy and Conference Expo Manila 2010
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PRESENTATION OUTLINE

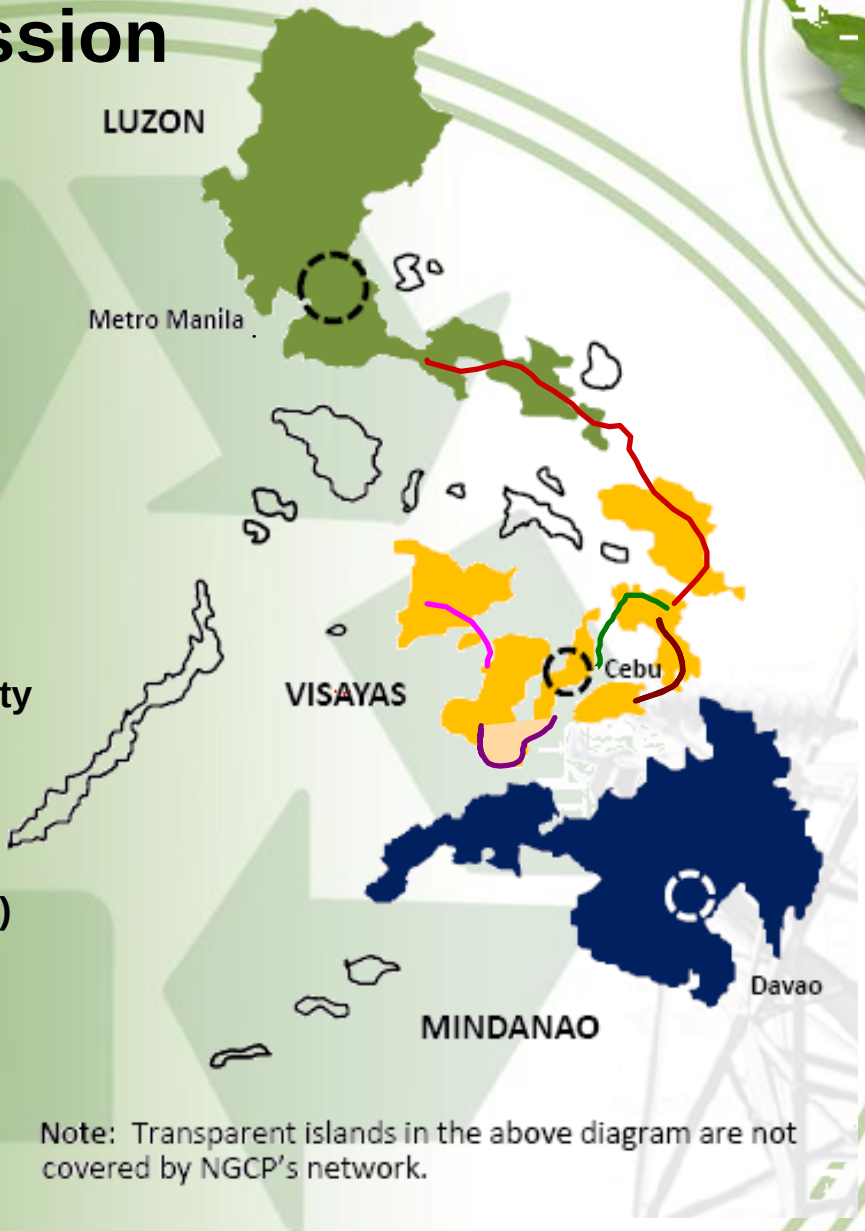
I. Energy Situationer
II. Philippine Power Sector Situationer
III. Energy Reform Agenda
IV. Renewable Energy Sector
V. The 2011 National Renewable Energy Plan

PRIMARY ENERGY MIX (2001 – 2009)

Energy Mix (2001 - 2009, in MTOE)									
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Oil	15.822	15.236	15.317	14.757	14.403	13.61	13.92	13.78	13.49
Coal	4.598	3.933	4.024	4.694	5.033	5.02	5.39	6.36	6.07
Natural Gas	0.115	1.449	2.208	2.039	2.701	2.53	3.03	3.19	3.21
Geothermal	8.980	8.809	8.447	8.843	8.516	9.00	8.78	9.22	8.88
Hydropower	1.769	1.751	1.959	2.140	2.088	2.47	2.13	2.45	2.44
Wind	-	-	-	-	0.002	0.00	0.00	0.01	0.01
Solar	-	-	-	-	0.000	0.00	0.00	0.00	0.00
Biomass	6.490	6.312	0.00	0.00	0.00	0.00	0.04	0.05	5.38
CME/Ethanol	-	-	6.136	5.961	5.768	5.65	5.56	5.52	0.17
TOTAL	**37.775**	**37.489**	**38.091**	**38.433**	**38.510**	**38.288**	**38.867**	**40.574**	**39.639**

Power Sector Situationer

2009 Transmission



Interconnection Line Capacity

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

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

Power Sector Situationer

2009 Power Capacity

PLANT TYPE	PHILIPPINES			
	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
Coal	4,277	3,813	27.40	28.63
Oil Based	3,193	2,528	20.46	18.98
Natural Gas	2,831	2,700	18.14	20.27
Geothermal	1,953	1,321	12.51	9.92
Hydro	3,291	2,914	21.09	21.88
Wind	33	33	0.21	0.25
Solar	1	1	0.01	0.01
Biomass	30	10	0.19	0.07
TOTAL	**15,610**	**13,319**		

Total Installed Clean Generation is 52.15%

Power Sector Situationer

2009 Power Generation and Transmission

Grid	Capacity (MW)		Percent Share (%)		2009 Peak Demand (MW)
	Installed	Dependable	Installed	Dependable	
Luzon	11,863	10,230	76.00	76.81	6,928
Visayas	1,818	1,392	11.65	10.45	1,241
Mindanao	1,921	1,697	12.36	12.74	1,301
TOTAL	**15,610**	**13,319**			**9,470**

Note: Assuming all units of power plants are in operation.
Installed and Dependable capacity as of April 2010
*** Non-coincident peak demand**

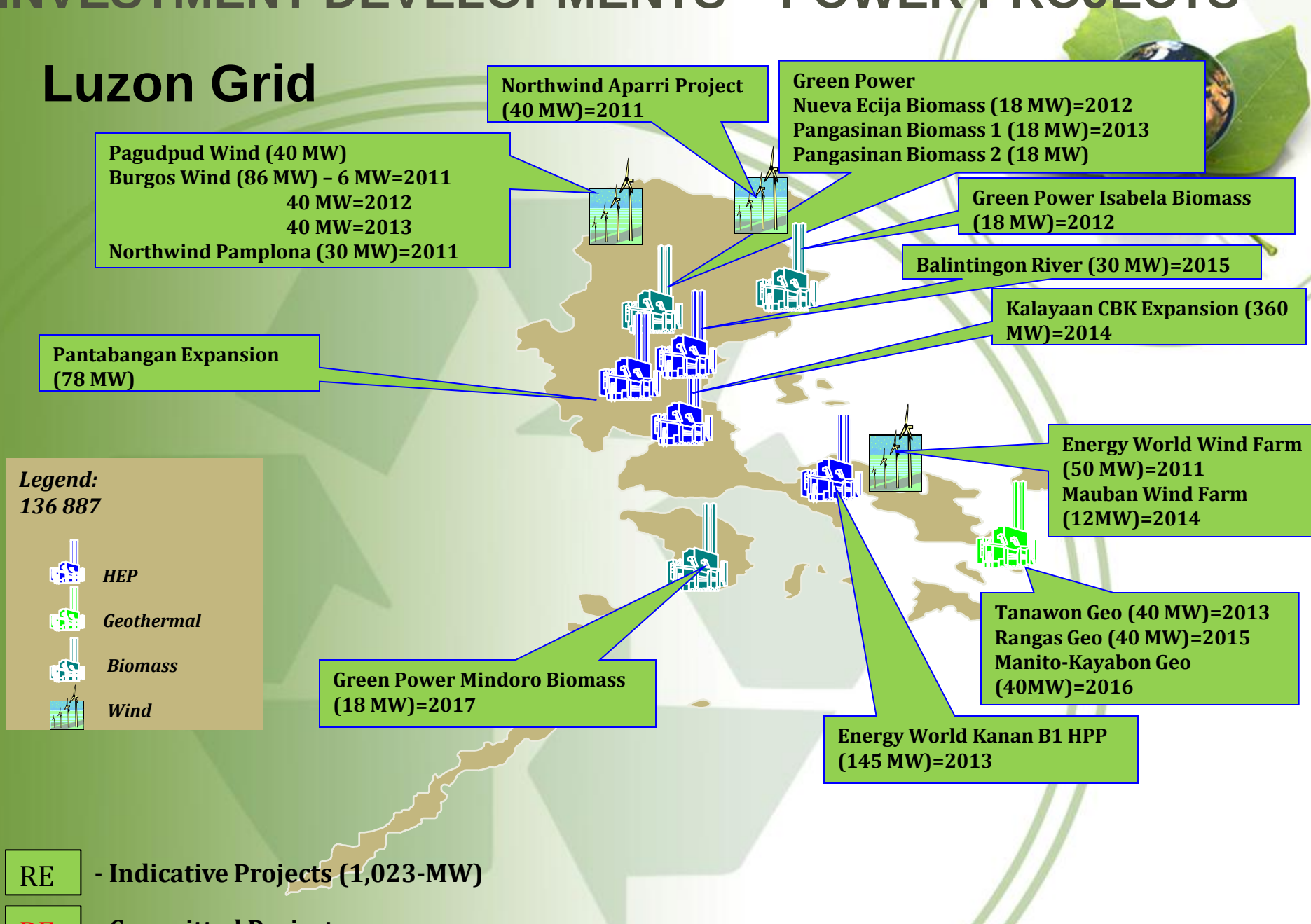
POWER DEMAND AND RE SUPPLY OUTLOOK, 2010-2030

Grid	2010-2015		2016-2020		2021-2030	
	Capacity in MW	Indicative RE Projects	Capacity in MW	Indicative RE Projects	Capacity in MW	Indicative RE Projects
Luzon	1,500	1,023	2,700	58	7,700	-
Visayas		67	350	80	1,650	-
Mindanao	600	338.50	400	18	1,500	-
TOTAL	**2,100**	**1,428.5**	**3,450**	**156**	**10,850**	**-**

Note: Projected Capacity is based on 4.6% AAGR

INVESTMENT DEVELOPMENTS – POWER PROJECTS

Luzon Grid

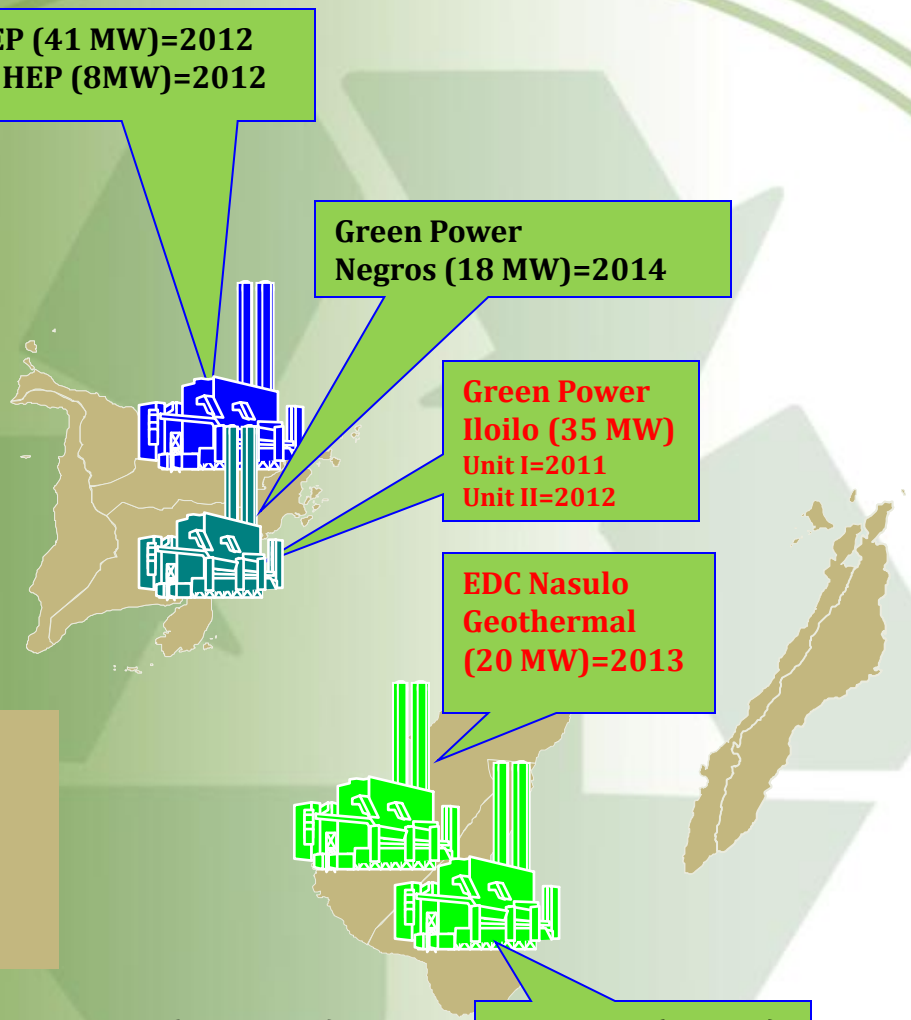


RE - Indicative Projects (1,023-MW)

RE - Committed Projects

INVESTMENT DEVELOPMENTS – POWER PROJECTS

Visayas Grid

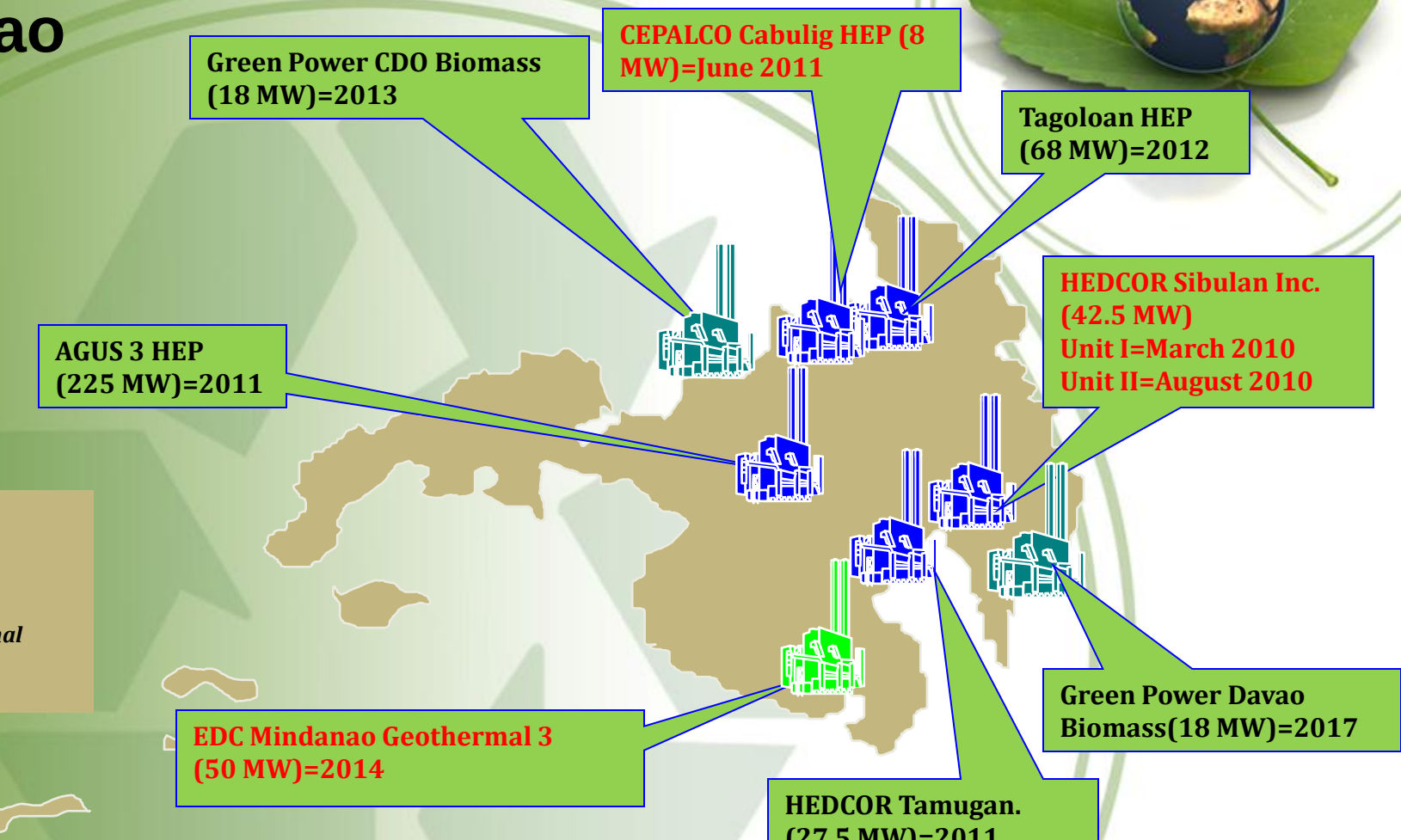


RE - Indicative Projects (147-MW)

RE - Committed Projects (73-MW)

INVESTMENT DEVELOPMENTS – POWER PROJECTS

Mindanao Grid



RE - Indicative Projects (356.5-MW)

RE - Committed Projects (100.5-MW)

Energy Reform Agenda

"Energy Access for More"
A key priority of government to mainstream access of the greater majority to reliable energy services and fuel, most importantly, local productivity and countryside development

Good Governance thru stakeholder participation, transparency, multi-sectoral partnership and use of ICT

Ensure Energy Security	**Achieve Optimal Energy Pricing**	**Develop a Sustainable Energy System**

A QUICK LOOK AT RE: 2009 -2030

Moving Towards Accelerated Development

Approval of RA 9513

2008

Current RE activities 4.6% demand growth rate

1

Policy is in place; salient provision of the law will spur Interest; activities on RE development is expected to accelerate

3-year development of RE database and enhancement of technical expertise of RE stakeholders

2010

2

Small capacity RE projects are added to the grid; big RE projects are expected

5-year continuing RE project packaging and Intensive promotional activities

2015

3

Emergence of ocean energy projects, e.g. OTEC, wave, marine and tidal

Diversification of RE resources; database preparation and Project packaging of emerging technologies

2020

4

Commercialization of ocean energy project options

Development of ocean energy projects

2030

5

Double RE capacity

The 2011 Renewable Energy Plan

- Target Completion: 1st Quarter, 2011
- Collaboration among Renewable Energy Management Bureau (REMB) and all DOE Bureaus
- Outlines Target Dates for RE Policy Mechanisms in 2011
  a. Renewable Portfolio Standards (DOE Draft) – 2nd Quarter
  b. Feed-In Tariff Rates (NREB submission) – 2nd Quarter
  c. Green Energy Option Program – 2nd Quarter
  d. Net-Metering – 3rd Quarter
  e. Transmission System Development – 3rd Quarter
  f. Distribution System Development – 3rd Quarter

The 2011 Renewable Energy Plan

- Creation of Renewable Energy Market and RE Registrar – 1st Quarter, 2012
- Off-Grid Development – 4th Quarter, 2011
- Promulgation of Rules and Regulations
  a. RETF Administration – 2nd Quarter
  b. Mechanism for RE Host Community/LGU Incentives
  c. BIR-DOF Revenue Regulations for Fiscal Incentives

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