



*2015 – 1<sup>ST</sup> Half 2016*

**ACCOMPLISHMENTS**

# ENHANCED INDIGENOUS ENERGY DEVELOPMENT

Fossil Fuels	Production		No. of Contracts Monitored
	2015	1 <sup>ST</sup> Half 2016	
Oil (in MMB)	2.37	1.04	25 SCs
Gas (in BCF)	126.19	73.67	
Condensate (in MMB)	3.73	2.19	
Coal (in MMT @10,000 BTU/lb)	7.38	5.5	78 COCs

*MMB – Million Barrels*  
*BCF – Billion Cubic Feet*  
*MMT – Million Metric Tons*



# PROMOTED CLEAN ENERGY

Renewable Energy	Awarded Projects		Potential Capacity (MW)		Installed Capacity (MW)	
	Grid	Own-Use	Grid	Own-Use	Grid	Own-Use
Hydropower	398	-	8,037.04	-	820.82	-
Ocean Energy	7	-	26.00	-	-	-
Geothermal	41	-	610.00	-	1,906.19	-
Wind	55	1	1,180.80	-	426.90	0.006
Solar	144	16	4,399.71	4.286	538.45	3.218
Biomass	40	22	237.38	3.12	295.07	140.66
<b>Sub-total</b>	<b>685</b>	<b>39</b>	<b>14,490.93</b>	<b>3.12</b>	<b>3,987.43</b>	<b>143.88</b>
<b>TOTAL</b>	<b>724</b>		<b>14,498.34</b>		<b>4,131.31</b>	

# PROMOTED CLEAN ENERGY

Renewable Energy	Capacity (in Million Liters)								No. of Projects Monitored as of 2015
	As of 2015				As of 1 <sup>st</sup> Half 2016				
	Constructi on*	Operatio nal	Producti on	Sales	Constructi on*	Operation al	Productio n	Sales	
Biodiesel	-	584.90	204.03	200.56	90.00	584.90	118.74	111.45	11
Bioethanol	83.00	282.12	167.87	168.42	149.00	282.12	121.91	126.49	12
TOTAL	83.00	867.02	371.90	368.98	239.00	867.02	240.65	237.94	23

\* With Certificate of Registration of Notice to Proceed Construction



90 ML Chemrez Technologies Inc., Biodiesel Plant  
(Bagumbayan, Quezon City)



54 ML Green Future Innovation Inc., Bioethanol Plant  
(San Mariano, Isabela)



# PROMOTED CLEAN ENERGY

## Auto-LPG

- 8,415 taxis running on Auto-LPG
- 192 Auto-LPG stations monitored by DOE (125 – public; 67 – garage based)
- Partnership with Carlos Hilado Memorial State College to build capacity and enhance the supply of technicians on AutoLPG conversion, repair and maintenance
- Joint Administrative Order to establish an Inter-Agency Auto-LPG Technical Working Group

## Natural Gas Vehicle Program for Public Transport (NGVPPT)

- Extension of the Pilot Phase from 2018 to 2023
- Continuous coordination with key stakeholders on the gas supply beyond 2018
- Endorsed franchise applications of NGVPPT-accredited bus operators to DOTr
- Awaiting takeover of the CNG Daughter Station's operation and establishment of new CNG Modular Stations by PNOC-EC



# PROMOTED CLEAN ENERGY

## E-Vehicles

8,000 electric vehicles are being used in major cities and provinces nationwide (Mandaluyong City, Quezon City, Manila, Antipolo, Cavite, Davao, Boracay, etc.) - *Source: Electric Vehicle Association of the Philippines*

## Market Transformation thru Introduction of Energy Efficient Electric Vehicles (DOE-ADB E-Trike Project)

- Supply and delivery of e-trikes
  - 3<sup>rd</sup> Quarter of 2016 - 1,200 units
  - 4<sup>th</sup> Quarter of 2016 - 1,800 units
- Continuous promotional activities/market sounding with LGUs, financial conduits and Transport Operators and Drivers Associations and to address concerns on safety, range anxiety, battery and after sales support



# PROMOTED CLEAN ENERGY

## Downstream Natural Gas

- Granted extension to the Provisional Permit for the construction of LNG terminal (Energy World Corp.) in Pagbilao, Quezon
- Monitored the progress of the proposed Batangas-Manila Pipeline (BATMAN 1) spearheaded by PNOC
  - The Joint NEDA-ICC Cabinet Committee approved the Batangas-Manila Natural Gas Pipeline Project I for NEDA Board confirmation
- Implemented Department Circular 2002-008-005 through the conduct of 11 inspections to the existing natural gas facilities to ensure operator's compliance on health, safety, security and environment during construction, operation and maintenance
- Organized an inter-agency Health, Safety, Security, Environment Inspection Monitoring Team for a holistic approach of inspection to gas facilities
- The draft PNS for Natural Gas Quality has been promulgated by the Bureau of Product Standards



*First LNG Terminal with 650 MW Combined Cycle Gas Turbine Power Plant in Pagbilao, Quezon*

# PROMOTED CLEAN ENERGY

Natural Gas	Production and Consumption, in Million Standard Cubic Feet (MMSCF)			
	1994-2014	2015	Jan – June 2016	Total
<b>Production<sup>1</sup></b>	<b>1,540,493</b>	<b>126,192</b>	<b>73,665</b>	<b>1,740,350</b>
<b>Consumption<sup>2</sup></b>	<b>1,479,825</b>	<b>117,926</b>	<b>70,533</b>	<b>1,668,284</b>
Power <sup>3</sup>	1,452,885	115,788	68,910	1,637,583
Industrial	26,755	2,138	1,623	30,516
Transport	184	0	0	184

*1 Data from 1994-2008 includes production from San Antonio gas field. Libertad gas field started its commercial production at 1400hrs, 03 February 2012*

*2 Submission from gas users*

*3 Commercial operations for Ilijan/SR/SL using natural gas as the primary fuel commenced in 2002. The power plants partly operated on liquid fuel (gasoil, naphtha, and condensate) for start-up operations until the end of 2001. Production and consumption data for 2001 may not reconcile accurately due to rounding off.*



# ENSURED SUFFICIENT SUPPLY

## Downstream Oil Industry

- A total of 270 new players are engaged in various DOI activities and total investments to date has reached PhP 50.73 Billion
  - 23 new players in 2015 with equivalent investment of Php 1.3 Billion
  - 5 new players as of 1<sup>st</sup> Quarter 2016 with equivalent investment of Php 1.5 Billion
- Formulated/Amended technical standards for fuel quality (CME and B5 specifications) and facilities (Code of Safety Practice of Auto LPG)
- Monitored and inspected the following facilities for compliance to quality and quantity standards:

Petroleum Products Facilities	No. of Facilities Inspected		Total Number of Facilities
	2015	1 <sup>st</sup> Half 2016	
Liquid Petroleum Products (LPP) Outlets	2,483	1,394	6,264
LPG Establishments	2,341	951	15,000*
Bulk Depots	81	45	163

# ENSURED SUFFICIENT SUPPLY

- Monitored the following activities of the industry:

	2015	1 <sup>st</sup> Half 2016
Witness Bio-ethanol Denaturing	1,786	771
Acknowledge Import Notices Filed	4,303	2,596

- Acknowledged/Issued Certificate of Compliance (COC) and Standards Compliance Certificate (SCC) to the downstream oil industry players
- Ensured availability of biofuels blend in compliance with the Biofuels Law

Petroleum Product	Volume, in Million Liters (as of 1 <sup>st</sup> Half 2016)		
	Petroleum Product Sales	Biofuel Requirement	Locally Produced Biofuel
Diesel (B2)	28,206.75	564	118.74
Gasoline (E10)	15,068.98	1,506	121.91

# ENSURED SUFFICIENT SUPPLY

Grid	Capacity as of Dec 2015			1 <sup>st</sup> Half 2016
	Installed	Dependable	Available	New Installed Capacity
Luzon	13,686*	12,179	9,624	662
Visayas	2,683	2,228	2,001	281
Mindanao	2,414	2,025	1,563	328
<b>TOTAL</b>	<b>18,783*</b>	<b>16,432</b>	<b>13,188</b>	<b>1,271</b>

\*updated 2015 installed capacity



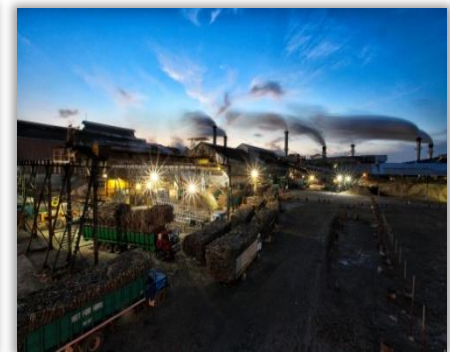
45 MW SACASOL I  
(Negros Occidental)



54 MW PILILLA WIND FARM  
(Pililla, Rizal)



140 MW PETRON REFINERY SOLID FUEL-  
FIRED BOILER (RSFFB) POWER PLANT  
(Limay, Bataan)

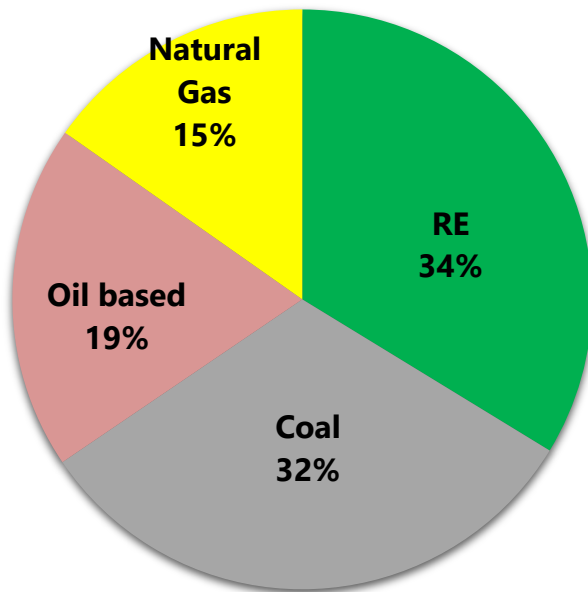


34 MW VMC BiomassPower Plant  
(Victorias City, Negros Occidental)

# ENSURED SUFFICIENT SUPPLY

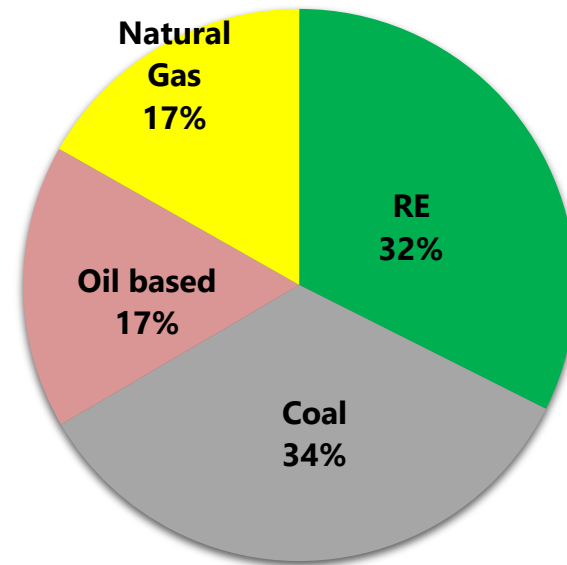
## 2015 CAPACITY MIX

### INSTALLED



Total Installed Capacity = **18,783 MW**  
RE Share = 34%

### DEPENDABLE



Total Dependable Capacity = **16,432 MW**  
RE Share = 32%

# ENSURED SUFFICIENT SUPPLY

- **Facilitated potential investment in power generation**
  - DOE endorsements and clearances issued to existing and potential private investors in power generation
- **Implemented Mitigation Measures to address the impacts of El Niño**
  - Facilitated coordination with other energy agencies and stakeholders and National El Niño Task Force to ensure security of supply
- **Inter-Agency Task on Securing Energy Facilities (IATSEF)**
  - Served as the lead agency in securing energy facilities in relation to bombing incidents in Mindanao
- **Power Task Force Election 2016**
  - Served as the lead agency in securing supply security before, during and after 09 May 2016 National and Local Elections



# ENSURED SUFFICIENT SUPPLY

- **Power Development Planning**

- Conducted workshops and focus group discussions to power generators and distribution utilities in relation to Power Development Plan and Distribution Development Plan

- **Interruptible Load Program**

- Luzon: 826.25 MW signed ILP capacity (422 participants)
- Visayas: 68.2 MW signed ILP capacity (28 participants)
- Mindanao: 42 MW signed ILP capacity (16 participants)

- **Facilitated competition and customer choice in power sector**

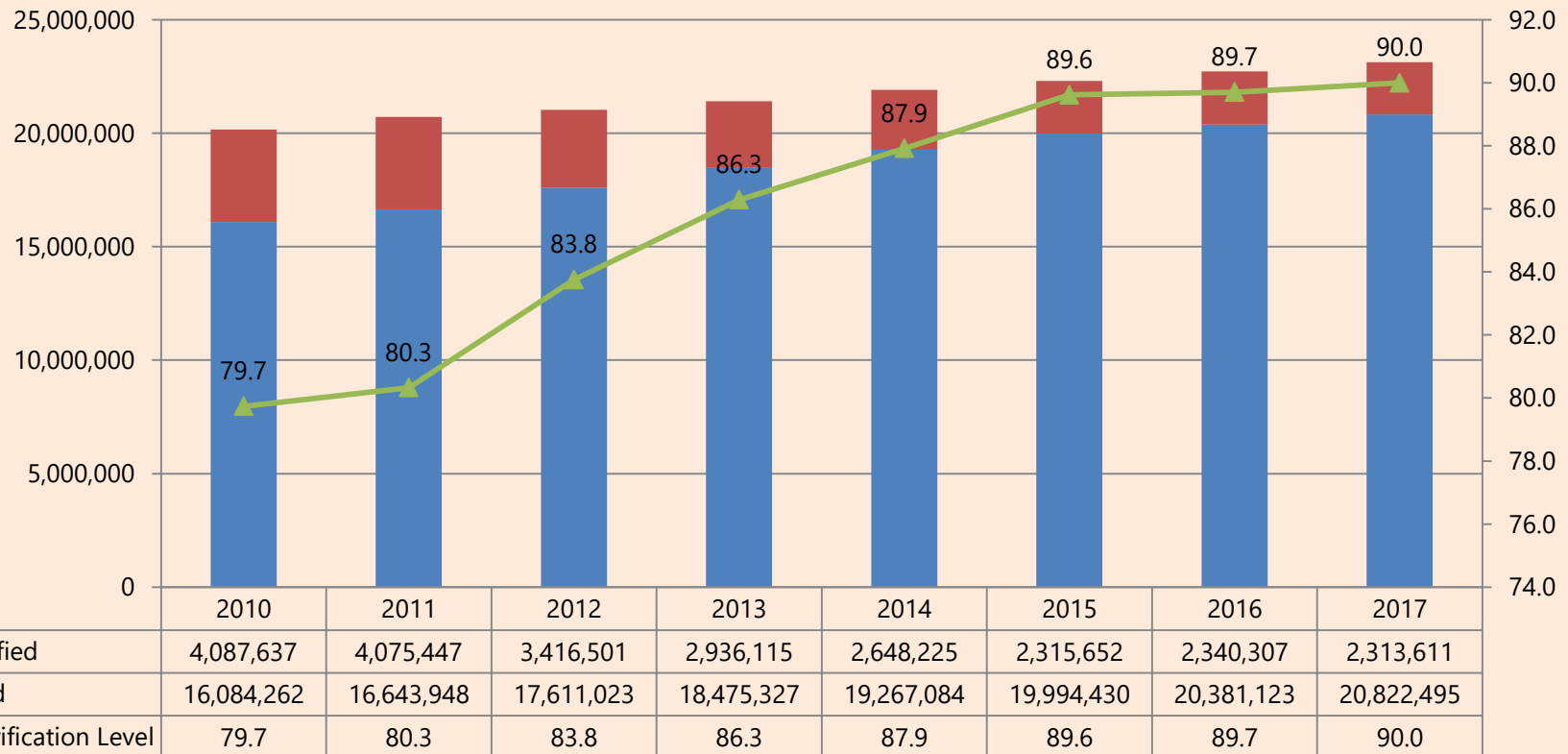
- Prescribed timelines for full implementation of Retail Competition and Open Access (RCOA)

- **Conducted activities for institutional strengthening**

- Conducted Information, Education and Communication Campaigns on EPIRA Implementation

# EXPANDED ENERGY ACCESS

**Household Electrification 2010 - 2017**



Note: 2010 – 2015 are actual HH electrification level data. 2016-2017 were computed based on the HEDP sub-program household targets for said years.

- Household electrification level stands at 89.6 percent as of December 2015
- Attaining 90 percent household electrification by 2017 entails providing electricity access to 828,065 households (2016 – 386,693; 2017 – 441,372).

# PROMOTED ENERGY EFFICIENCY AS A WAY OF LIFE



## ■ Government Energy Management Program

- Issued 33 Certificates of Energy Savings
- Conducted energy audits in 179 government agencies and 17 commercial/industrial establishments

	2010 – 2014	2015
Deferred Capacity from Energy Savings (in MW)	2,351.13	590.57

## ■ Don Emilio Abello Efficiency Awards

- Awarded 376 companies from 2010 to 2015 for reported generated savings of 523,967,591 liters of oil equivalent (136,755,541.25 kWh)

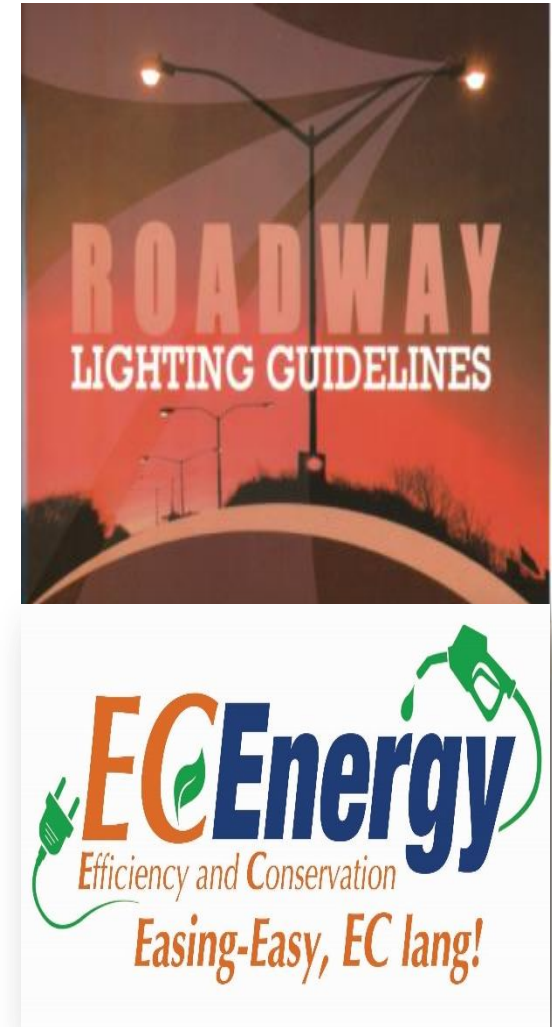
# PROMOTED ENERGY EFFICIENCY AS A WAY OF LIFE

## ▪ Policy Development

- Issued Department Circular No. DC 2016-04-0005, entitled "Philippine Energy Standards and Labeling Program"
- *Issued Memorandum Circular No. MC2016-06-0001, entitled "Directing the Use of Energy Efficient Lightings in Roadways"*

## ▪ Advocacy

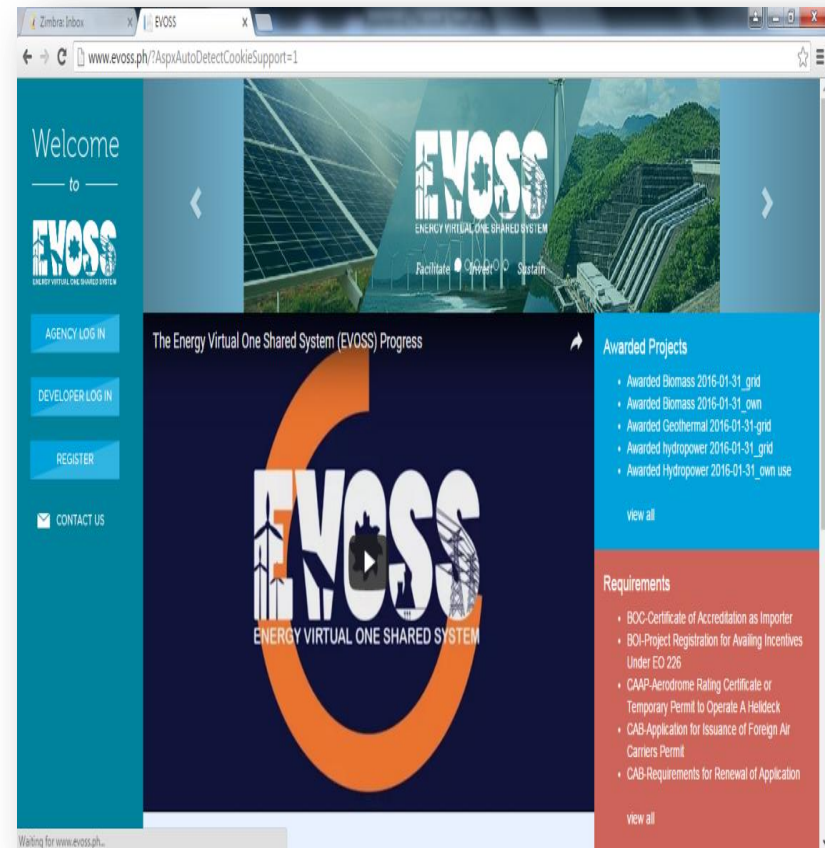
- To launch the "EC Energy" campaign with the slogan phrase, "**EC Energy: Easing-Easy, EC Lang!**"



# PROMOTED TRANSPARENCY INITIATIVES

## ENERGY VIRTUAL ONE SHARED SYSTEM (EVOSS)

- Web-based monitoring system to facilitate approval process of applications the energy sector and contains a database of processes, existing forms, fees, project related information and permits issued
  - Conducted hands-on training to 50 pilot companies





# STRENGTHENED INTERNATIONAL COOPERATION

- Philippine hosting of the 12<sup>th</sup> APEC Energy Ministers Meeting (EMM12) and Associated Meetings (12-14 October 2015, Shangri-la Mactan, Cebu)

