

# International Forum on Unlocking Investment Opportunities in Renewable Energy for the ASEAN Region

## *Session 2: Regulatory Incentives to Promote Investment in Renewable Energy in ASEAN Toward 21st Century*

# Renewable Energy Policies and Investments in the Philippines

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**PHILIPPINES DEPARTMENT OF ENERGY**

22 July 2019 / The Imperial Hotel and Convention Centre / Korat, Nakhon  
Ratchasima Province, Thailand



Department of Energy  
*Empowering the Filipino*

# Presentation Coverage



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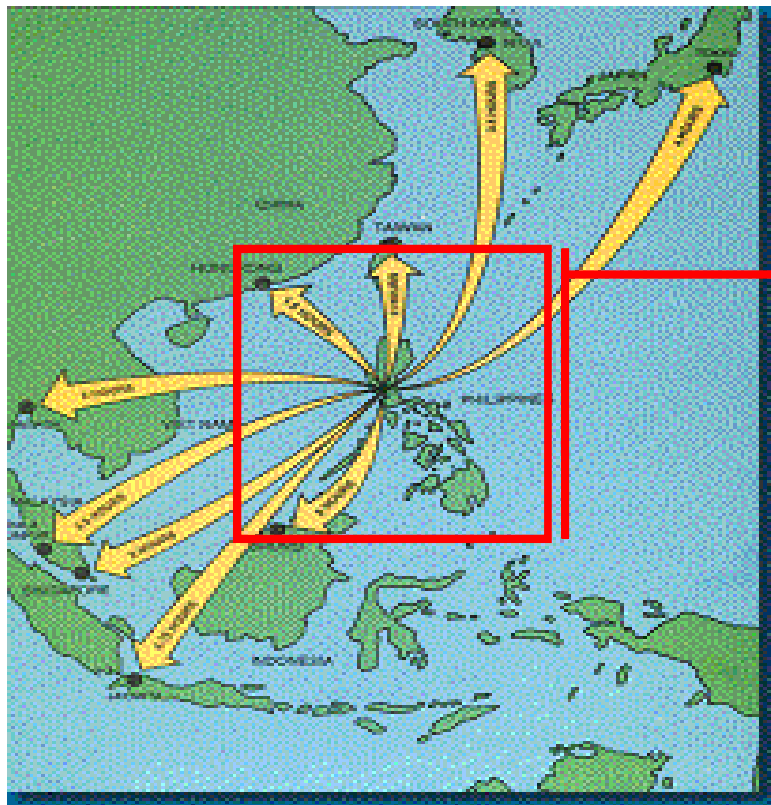


## The Philippines At A Glance



# The Philippines At A Glance

**Population:** 104.9 million (as of 2017)  
**Total Land Area:** 298,170 sq. km.  
(115,124 sq. mi.)



1

3<sup>rd</sup> country most vulnerable to climate change in a survey by HSBC

2

For four consecutive years, ranked 1st in the World for Environmental Sustainability out of 125 countries

3

As of end-2018, electrification level reached 22.09 million households or 96.11 percent of the potential 22.98 million households

4

82% of Filipinos are open to new energy options (2018 Pulse Asia Survey)

With more than 7,600 islands, providing sustainable energy and electricity services remains to be the biggest challenge to the Government ...



# Renewable Energy Potentials



Hydropower > 10,000 MW

Geothermal > 4,000 MW

Wind Resource > 76,600 MW

Ocean > 170,000 MW

Biomass > 500 MW (*Bagasse & Rice Hulls only*)

- Largest producer of coconut oil
- Ranks 10th in world sugarcane production

Solar > 5 kWh/m<sup>2</sup>/day



# Presentation Coverage



## Governing Laws, Policies and Other Market Development Support Mechanisms



# RA No. 9513: The Renewable Energy Act of 2008

S. No. 2046  
H. No. 493

Republic of the Philippines  
Congress of the Philippines  
Metro Manila  
Fourteenth Congress  
Second Regular Session

Began and held in Metro Manila, on Monday, the twenty-eighth day  
of July, two thousand eight.

— ■ —

[ REPUBLIC ACT NO. 9513 ]

AN ACT PROMOTING THE DEVELOPMENT, UTILIZATION AND  
COMMERCIALIZATION OF RENEWABLE ENERGY  
RESOURCES AND FOR OTHER PURPOSES

Be it enacted by the Senate and House of Representatives of the  
Philippines in Congress assembled.

CHAPTER I  
TITLE AND DECLARATION OF POLICIES

SECTION 1. *Short Title.* – This Act shall be known as  
the “Renewable Energy Act of 2008”. It shall hereinafter be  
referred to as the “Act”.

SEC. 2. *Declaration of Policies.* – It is hereby declared  
the policy of the State to:

Signed: 16 December 2008

**An Act Promoting the Development, Utilization, and Commercialization of Renewable Energy Resources and for Other Purposes**

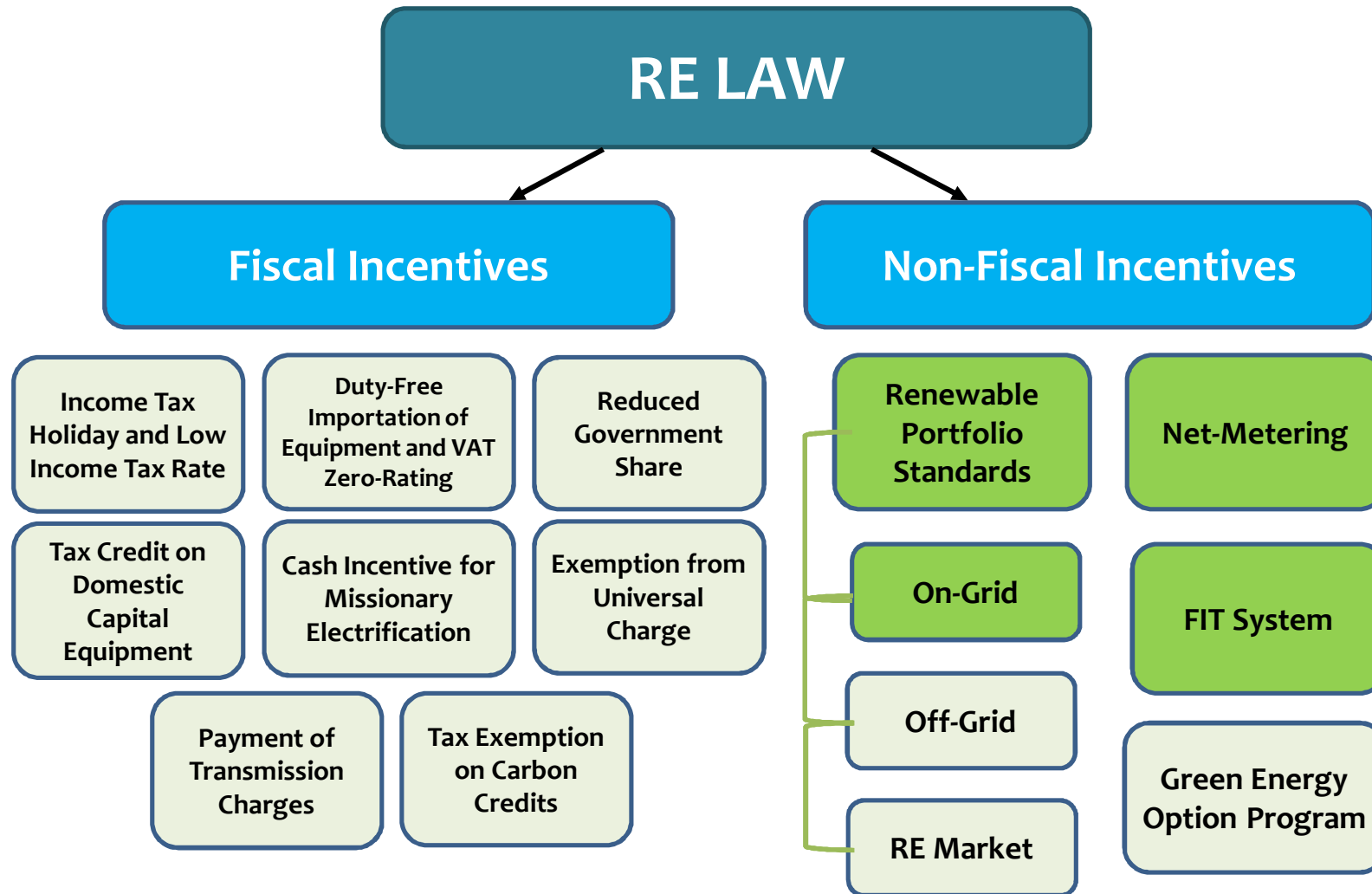
## Declared Policies:

- Accelerate the exploration and development of RE resources
- Achieve energy self-reliance
- Adoption of clean energy to mitigate climate change
- Promote socio-economic development in rural areas

**BiGSHOW: Biomass, Geothermal, Solar, Hydro, Ocean, and Wind, including Hybrid Systems.**



# Incentives under the RA 9513



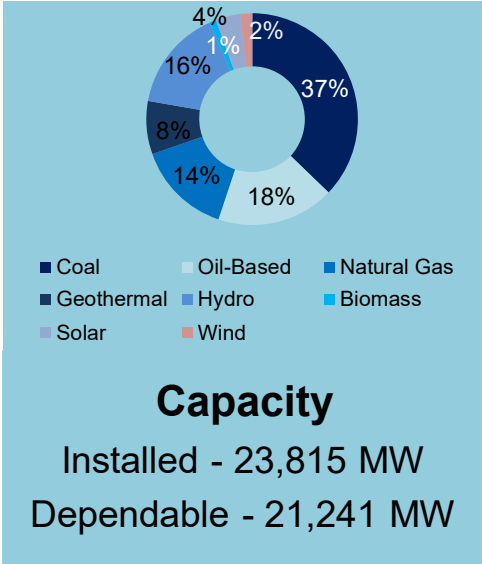
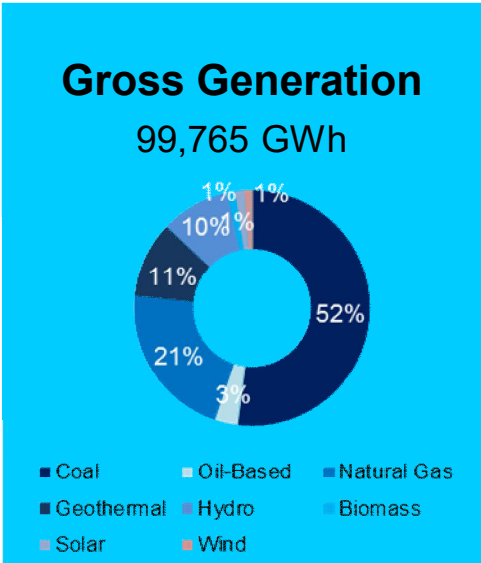


# 2018 Power Demand and Supply Snapshot

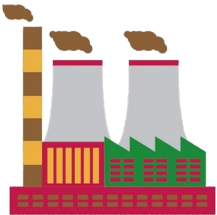


**Peak Demand**  
14,782 MW

**Electricity Sales and Consumption**  
99,765 GWh



**Newly Operational Installed Capacity**  
934 MW



**Power Project Capacity**  
Committed - 6,329 MW  
Indicative - 33,199 MW



# Presentation Coverage



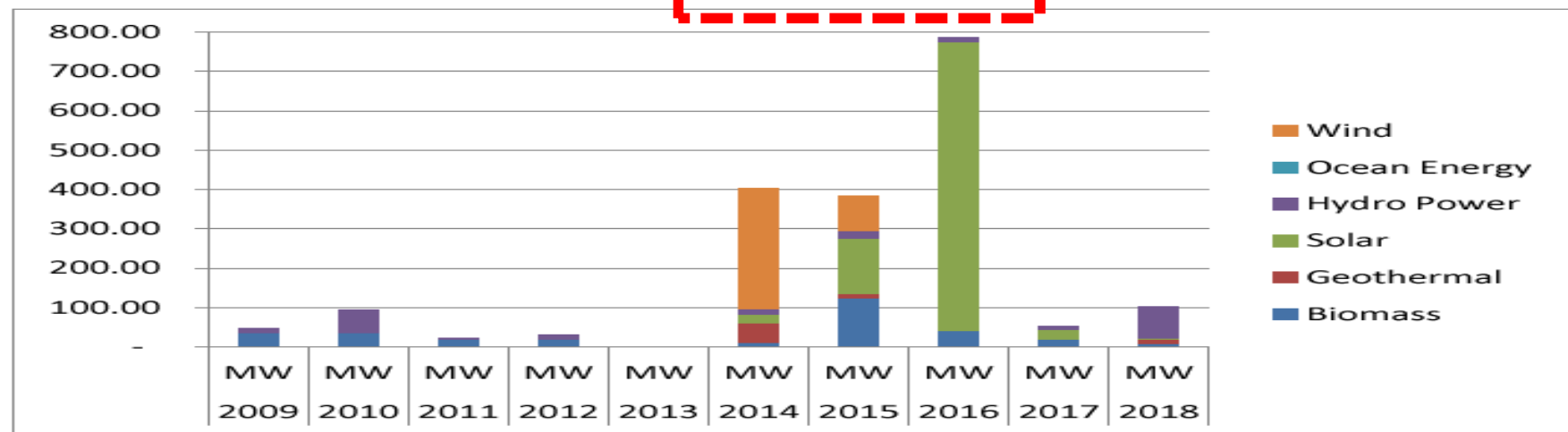
## Status of RE Development



# Where We Are Now ...

Renewable Energy Additional Capacity Installations under RA 9513 (as of 31 December 2018)

RESOURCES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Own-Use	Net Metering	Total
	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW
Biomass	37.33	35.90	19.00	19.00	0.876	12.00	124.50	40.80	18.14	7.70	119.86		435.11
Geothermal	-	-	-	-	-	50.00	10.00			12.00			72.00
Solar	-	-	-	-	-	22.00	141.77	735.72	25.20	3.90	7.03	17.57	953.18
Hydro Power	10.40	57.30	4.20	11.80		13.65	17.82	10.45	8.50	78.92			213.04
Ocean Energy	-	-	-	-	-	-							-
Wind	-	-	-	-	-	303.90	90.00						393.90
<b>TOTAL</b>	<b>47.73</b>	<b>93.20</b>	<b>23.20</b>	<b>30.80</b>	<b>0.88</b>	<b>401.55</b>	<b>384.09</b>	<b>786.97</b>	<b>51.84</b>	<b>102.52</b>	<b>126.89</b>	<b>17.57</b>	<b>2,067.23</b>



# Where We Are Now (2009-2018) ...

## Renewable Energy Cost of Investment: Php185.090 Billion

2009-2018	BIOMASS	SOLAR	WIND	HYDROPOWER	GEOTHERMAL	TOTAL
Additional Capacity	435.11 MW	928.58 MW	393.91 MW	213.04 MW	72.00 MW	2,067.23 MW
Cost of Investment (in Billion Pesos)	21.678	77.405	49.720	29.758	6.529	185.090

Note: Approximately US\$3.7 Billion

**Jobs Created:  
102,090 Green  
Jobs**

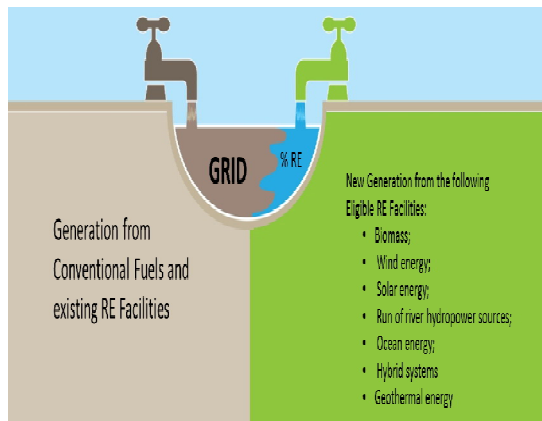


**9,497,272.33 t- CO<sub>2</sub>  
Reduction (2009-2017)**



# Promulgated Rules under RE Law (As of End-2018)

## Renewable Portfolio Standards (RPS) for On-Grid and Off-Grid Rules



A mandatory policy requiring a minimum sourcing of RE generation to the total supply of electricity by load serving entities operating in main grids.



A mandatory policy requiring a minimum sourcing of the total annual generation by power generators in missionary areas from available RE resources in the area concerned, based on optimal supply mix.



# Promulgated Rules under RE Law (As of End-2018)

## Green Energy Option Program (GEOP) Rules



A voluntary policy prescribing a non-regulated activity that empowers the Electricity End-Users to choose RE Resources.

Draft Operating Permits for Renewable Energy Suppliers in its final stage.



Provided the General Guidelines for the Operationalization of the Renewable Energy Trust Fund (RETF) and for other Purposes.

Created the Committee to administer the RETF.

On-going drafting of guidelines for collection, remittance and utilization.



# Feed-in-Tariff (FIT) System

RESOURCE	INSTALLATION TARGET	WITH CERTIFICATE OF ENDORSEMENT TO ERC		INSTALLATION TARGET BALANCE
	Capacity (MW)	No. of Projects	Capacity (MW)	Capacity (MW)
Hydro	250	5	34.60	206.90
		1	8.50	-
Wind	200	3	249.90	6.10
	200*	3	144.00	
Solar	50	6	108.90	-
	450*	17	417.05	
Biomass	250	15	125.16	110.28
		4	14.56	
Ocean	10	-	-	-
<b>TOTAL</b>	<b>1,410.00</b>	<b>54</b>	<b>1,102.68</b>	<b>323.28</b>

- The DOE extended the FIT System for Biomass and ROR Hydro until end-2019
- Awaiting the regulator's determination of the FIT Rates

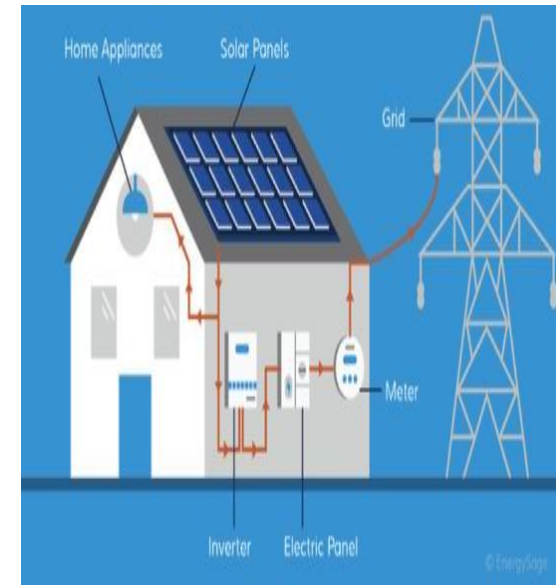
As of 30 June 2018

\* - Additional Installation Targets



# Net Metering for RE

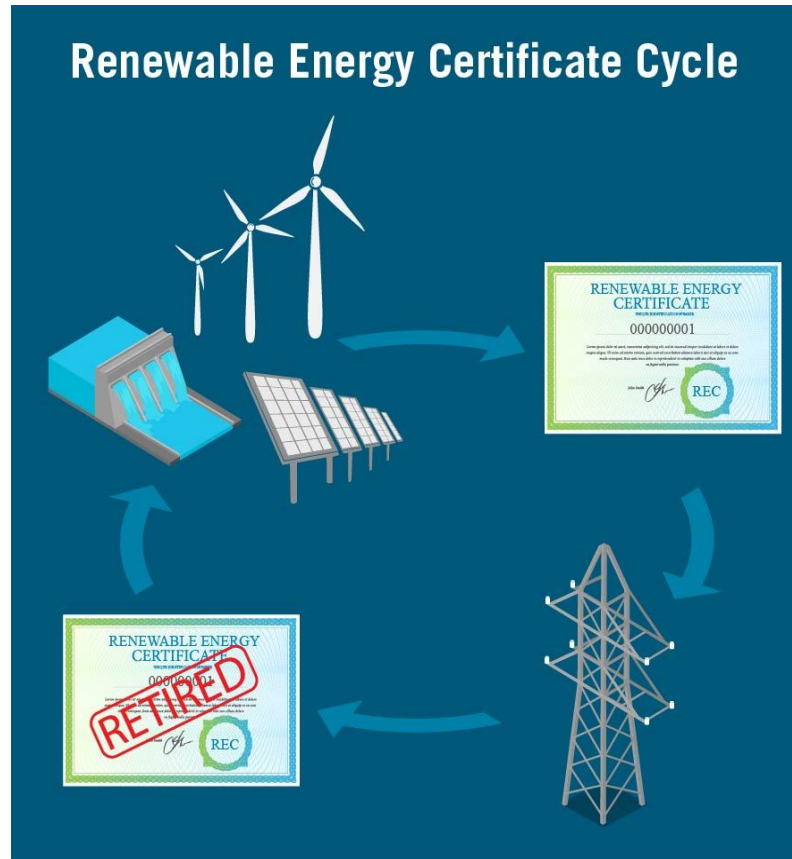
As of 14 February 2019, a total of 2,232 Qualified End-Users were registered with total rated capacity of 17,569.6 kW





# Forthcoming Issuances

## Renewable Energy Market (REM)



- A market for the trading of RECs between and among REM Trading Participants.
- Intended venue for RPS Mandated Participants to comply with their minimum RPS requirements.



The establishment of the RE Market (REM), RE Registrar and the REM Rules is now on its final stage.



# Other On-Going Support Programs and Projects

## Support to Total Electrification Program

- Solar PV Electrification Program
- Solar PV Grid-Tied Program
- Hybridization of Small and Isolated Islands

## Competitive RE Zones (USAID/NREL)

- Identify “Renewable Energy (RE) Zones” towards cost-effective delivery of electricity generated in regions with abundant RE resources
- Enhance transmission development planning to enable the development and utilization indigenous RE resources.

## Development for Renewable Energy Applications Mainstreaming and Market Sustainability (DREAMS) – (GEF/UNDP)

Promote and facilitate the commercialization of the RE markets through the removal of barriers to increase investment in RE based power generation projects.



# Other On-Going Support Programs and Projects

## Distributed PV Study [USAID Clean Power Asia, NREL, LBNL and Chulalongkorn University (Thailand)]

- Customer Economic Impacts;
- Utility Revenue and Rate Impacts; and
- Technical Impacts.

As a result, a new policy is being drafted to enhance customers' participation in the Net-Metering Framework:

- Proposed revision of the existing 100 kW cap;
- Develop different compensation mechanisms; and
- Simplify and streamline the interconnection and permitting processes including local ordinances.



# Presentation Coverage

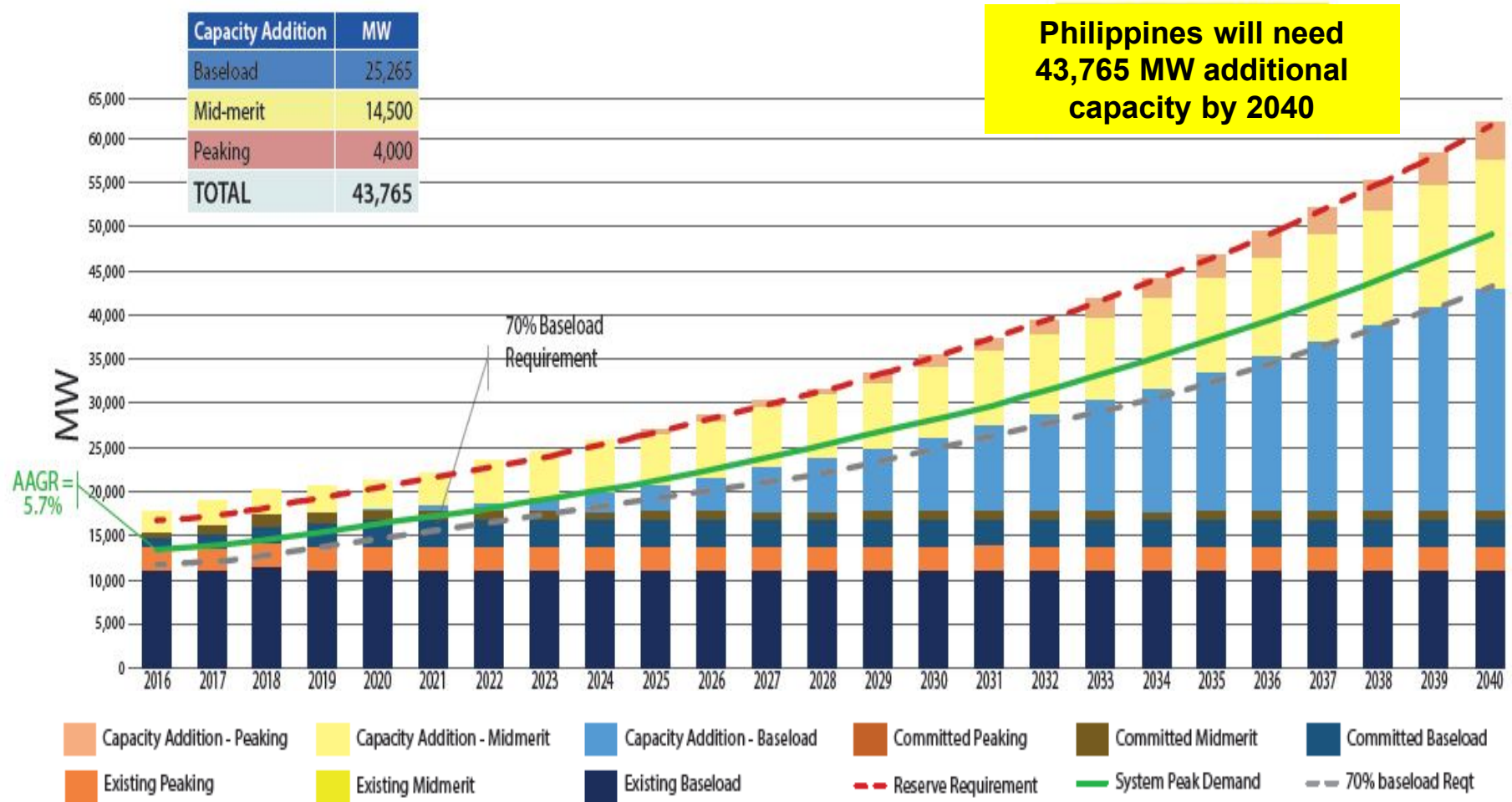


## Challenges and Way Forward



# Challenges and Way Forward: Meeting Electricity Demand

## Demand and Supply Outlook, 2016-2040



# Challenges and Way Forward

- With increasing penetration of RE, requires flexibility in the power systems and timely implementation of T/D projects
- Tedious Government Permitting Process
- Market development policy and provision of adequate network facilities for site specific REs
- Provision of reliable and least-cost power delivery supply and services to consumers



# Enhance Partnerships on RE Development

**DOE**

- Lead agency to implement RE projects

**NWRB**

- Water Rights (Phil. Water Code 1976)

**DENR**

- Environmental Protection (RA 7586 & PD 1586 EIS)

**ERC**

- Approval of Tariff (RA 9136)

**BOI**

- Fiscal Incentives (EO 226 & RA 9513)

**NCIP**

- Facilitation of FPIC (RA 8371)

**BIR**

- Tax Collection and Tax Incentives (NIRC, RA 9337)

**LGU**

- Local Regulations and Approvals (RA 7160)

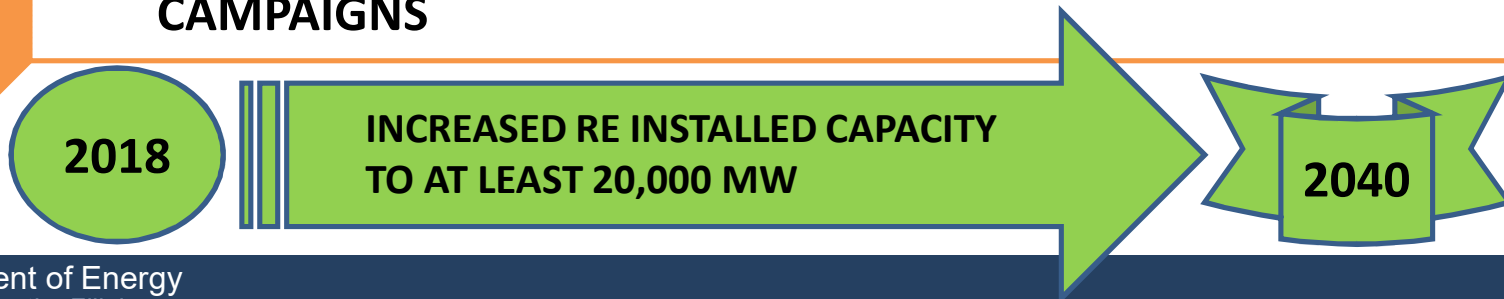
**NGCP**

- Provide Interconnections (Rule 9, IRR; Sec. 11, RA 9513)



# Way Forward: RE Sectoral Roadmap

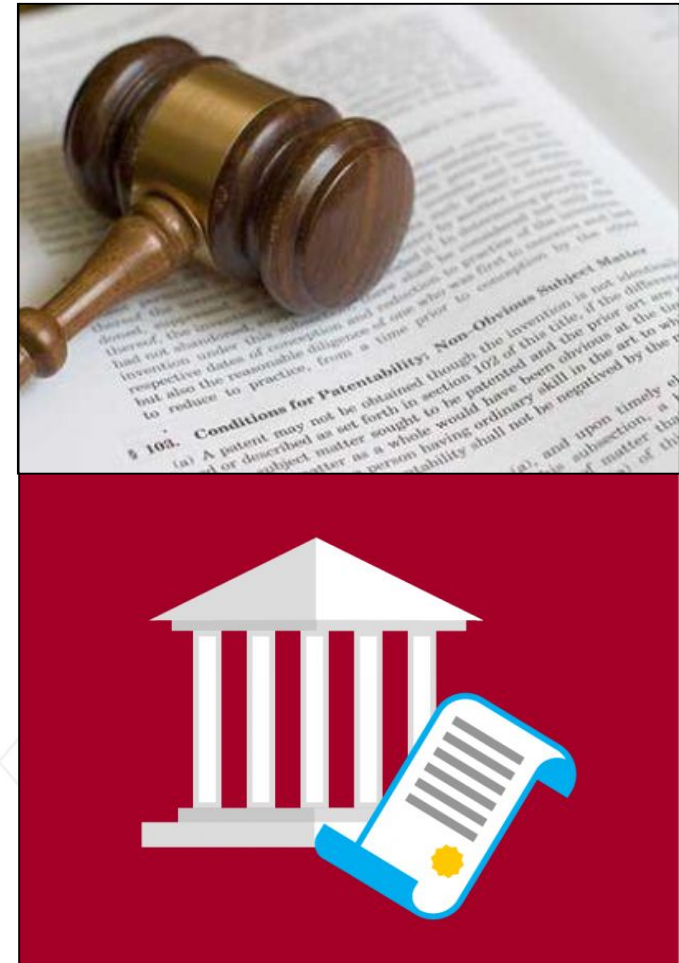
- 1 • ACCELERATE RE POSITIONING
- 2 • CREATE AN ENVIRONMENT CONDUCIVE BUSINESS/INVESTMENTS
- 3 • RELIABLE AND EFFICIENT INFRASTRUCTURE
- 4 • PROMOTE AND ENHANCE RD&D AGENDA
- 5 • STAKEHOLDERS ENGAGEMENTS AND INFORMATION, EDUCATION CAMPAIGNS





# Enabling Policies and Laws for Investors

- ❑ **Executive Order No. 30** Creating the Energy Investment Coordinating Council in order to Streamline the Regulatory Procedures affecting Energy Projects
- ❑ **Republic Act No. 11032** Ease of Doing Business Act of 2018
- ❑ **Republic Act No. 11234** Energy Virtual One-Stop Shop (EVOSS) Act
  - Department Circular No. DC2019-05-0007 (Implementing Rules and Regulations)
- ❑ **Republic Act No. 11285** Energy Efficiency and Conservation Act



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# Thank You!



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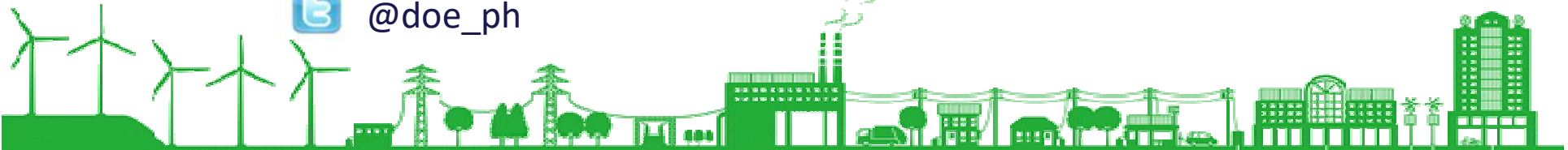
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