





**ENERGY TRANSITION DIALOGUE 2022** 

ASEAN Outlook for Zero Carbon Energy

9th February 2022

# Philippine Energy Transition Policies and Efforts

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DEPARTMENT OF ENERGY























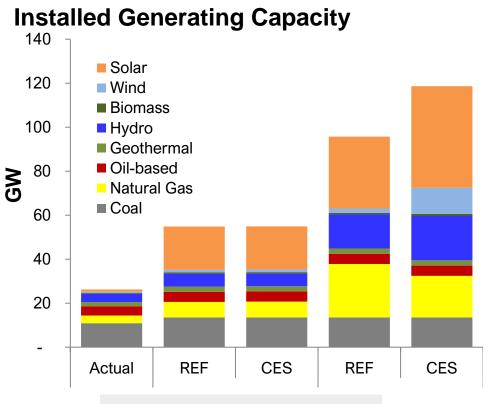
ASEAN Outlook for Zo

#### OVERVIEW OF THE ELECTRICITY SECTOR

■ Coal ■ Natural Gas ■ Oil-based ■ Geothermal ■ Hydro ■ Wind ■ Solar ■ Biomass

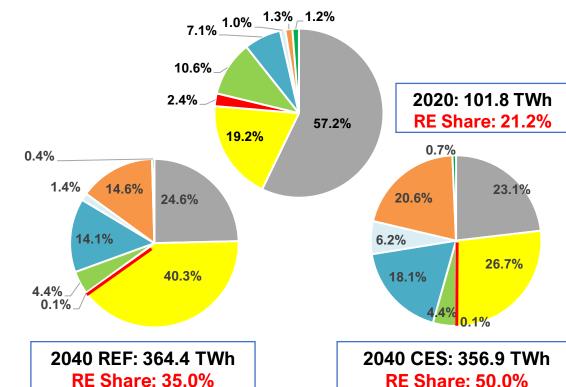
2040 Energy Outlook: Capacity and Generation

#### **Power Generation**



2020: 26,286 MW

2040: 95,670 MW (REF) 2040: 118,570 MW (CES)









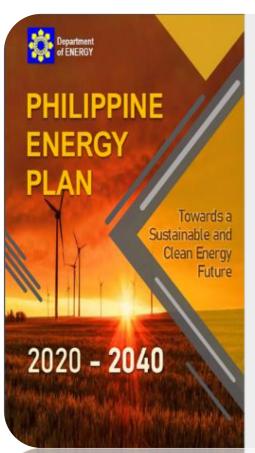






#### STATUS OF THE ENERGY TRANSITION:

#### Sustainable Path Towards Sustainable Energy



Reference Scenario

- + RE
- + EE and C
- + Other Energy Technologies
- + ICT
- + Resiliency

Clean Energy Scenario

**Energy Security** 

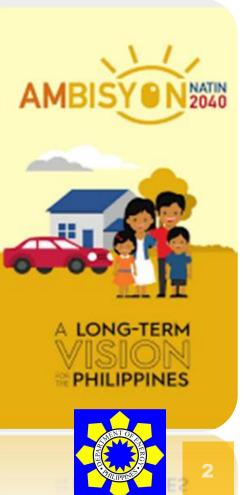
Sustainable Energy

Resilient Infrastructure

Competitive Energy Sector

**Smart Homes and Cities** 

**Empowered Consumers** 













# 2020-2040 Philippine Energy Plan

#### **Clean Energy Scenario**

- 35.0 percent and 50.0 percent RE share in the power generation mix by 2030 and 2040
- 5.0 percent blending for biodiesel starting 2022
- 1.5 percent increase in aggregated natural gas consumption from the transport and industry sectors between 2020 and 2040
- 10.0 percent penetration rate of electric vehicles for road transport (motorcycles, cars, jeepneys) by 2040;
- 5.0 percent energy savings on oil products and electricity by 2040
- At least 12.0 percent reduction in the GHG emission for the Nationally Determined Contribution (NDC)











NREP 2020-2040

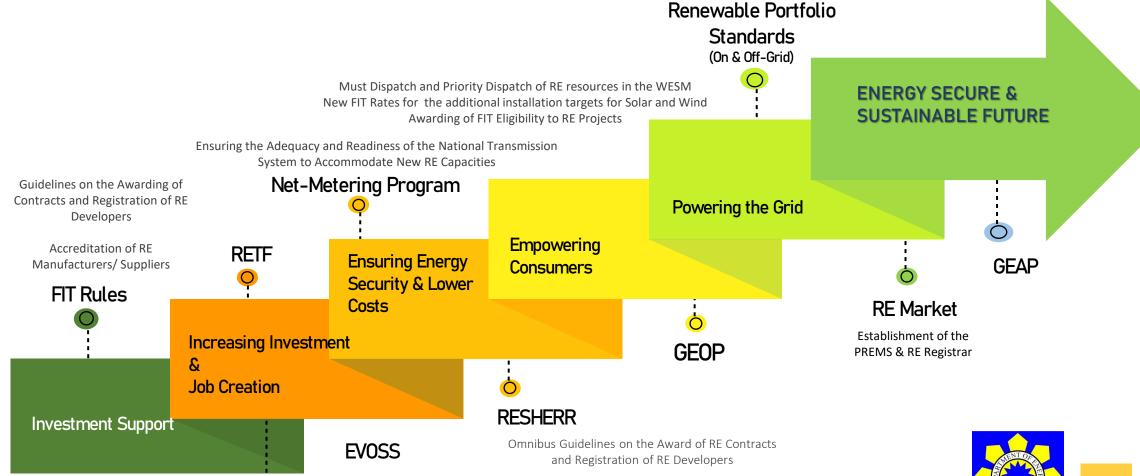




ASEAN Outlook for Zero Carbon Energy 2022

# ACHIEVEMENTS

#### Renewable Energy Policy Mechanisms













## National Renewable Energy Program

#### Goals and Objectives

- ❖ NREP sets a target of at least 35% RE Share in the power generation mix (MWh) by 2030
- ❖ NREP works to drive RE share to greater than 50% by 2040 dominating the mix



#### **Energy Security**

Accelerate exploration and development of RE resources to achieve energy self-reliance and reduce dependence on fossil fuels



#### Sustainable Development

- Contribute to the SDG Goals
- Balance economic growth with protection of health and environment



#### Climate Change Mitigation

Reduce Greenhouse Gas and other harmful emissions



#### Capability Building

Institutionalize the development of capabilities in the use of RE systems



#### Inclusive Growth

Catalyze solutions to cross-cutting social issues including poverty, gender, and access to basic needs













### Energy Efficiency and Conservation Act



Formulation of National and Local Energy Efficiency and Conservation Plan (NEECP/LEECP)



Designation of Certified Energy Conservation Officer (CECO) for Type 1 and Certified Energy Manager (CEM) for Type 2



Creation of the Inter-Agency Energy Efficiency and Conservation Committee (IAEECC)



Development and compliance to Minimum Energy Performance (MEP) Standards (appliances, lighting, electrical equipment, machinery, etc.)



Establishment of Energy Efficiency Conservation Office (EECO)



Energy Efficiency Rating and Labelling System (aircon, refrigerator, television, lighting products)



Categorization of Establishments

■ Type 1 : 0.5 to 4.0 GWh annual consumption

■ Type 2 : above 4.0 GWh annual consumption



Provision of Fiscal and Non-fiscal Incentives for Energy Efficiency Programs and Projects



Enhanced Demand Side Management (DSM) Mechanism









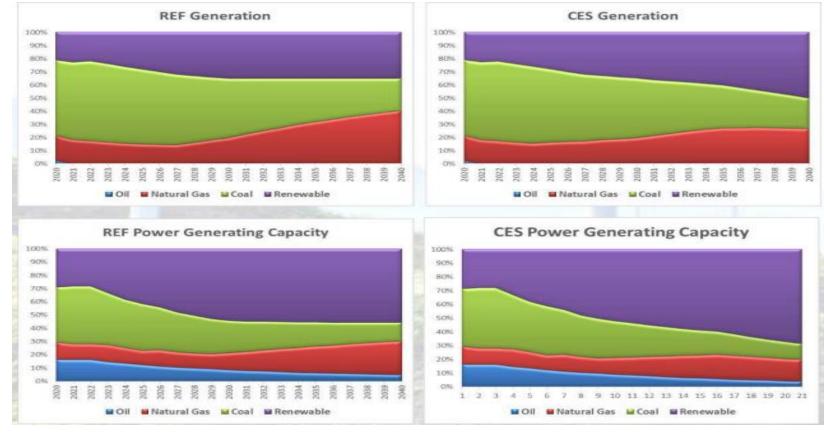




#### **CHALLENGES AND BARRIERS**

#### **Power Sector Transition**

The energy sector welcomes and is open into fast tracking the transformation and transition. What remains as a **fundamental** requirement in this bold move is that it should stem to affordability of energy services to consumers, expand energy access, advance energy security, and ensure reliability.







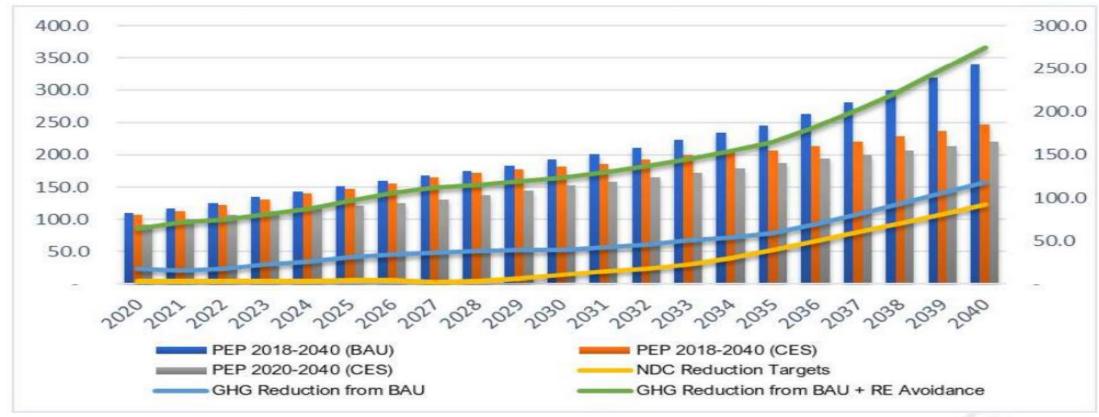








# GHG Emissions and Avoidance (NDC Targets vs 2020-2040 PEP Targets)















# Investment Requirements

TOTAL ENERGY INVESTMENT REQUIREMENTS BY SCENARIO, 2020-2040 (USD Billion @ 2020 Prices)		
SECTOR	SCENARIO	
	Reference Scenario (REF)	Clean Energy Scenario (CES)
UPSTREAM	23.53	23.68
Oil and Gas	10.05	10.05
Coal	13.12	13.12
Renewable Energy (Pre-Development)	0.36	0.51
DOWNSTREAM	7.70	7.09
Oil Depot	2.07	1.88
Import Terminal	1.36	1.06
LNG Terminal	1.78	1.78
Biodiesel	0.01	0.10
Bioethanol	2.49	2.28
POWER	111.64	122.22
Generation	104.67	115.25
Transmission	6.97	6.97
TOTAL	142.87	152.99











# Thank you!



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