



# Philippines Power Sector Action Plan

Strengthening Power Sector Resilience and Advancing  
Decarbonization

Department of Energy, Republic of the Philippines  
October 2026



# The Philippine Energy Landscape



## PRIMARY ENERGY MIX

- In 2025, the total primary energy supply of the Philippines stands at 68.3 MTOE, with 48.5% (33 MTOE) sourced domestically and 51.5% (35 MTOE) is imported.
- Renewable energy accounts for 31.2% of the overall energy mix, equivalent to 21 MTOE.
- As more than half of the country's energy demand depends on imported sources, the Philippines remains highly exposed to external supply disruptions and geopolitical risks.

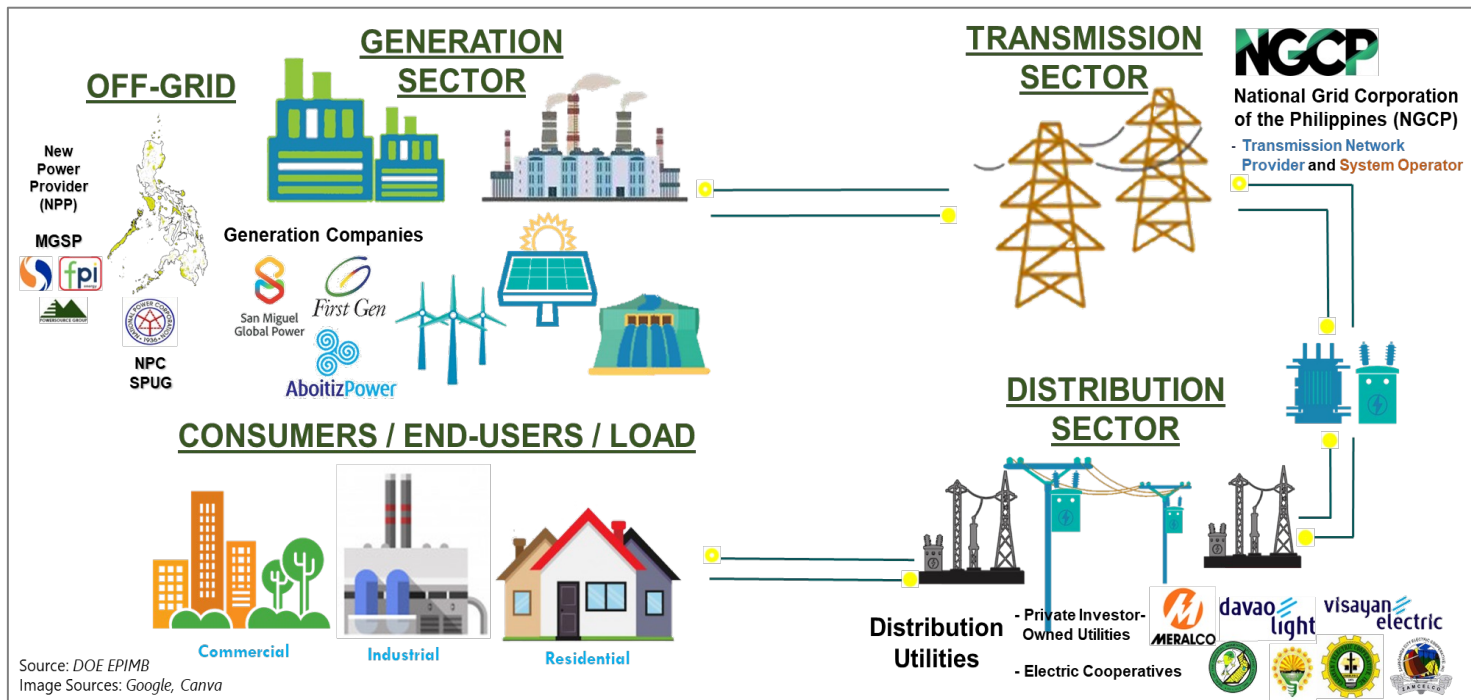
## ENERGY CONSUMPTION

- The total final energy consumption of the country reached 41 MTOE in 2025
- The transport and household sectors continued to be the largest energy consumers, accounting for 35% and 32% of total demand, respectively
- Oil and petroleum products continued to dominate with a share of 48%

## POWER CAPACITY AND GENERATION MIX

- In 2025 total power generation in the Philippines reached 126,376 GWh, with coal accounting for the largest share at 57.2% (72,303 GWh)
- The country's total installed capacity stands at 32,037 MW, while dependable capacity is slightly lower at 27,886 MW

# The Philippine Power System





# Players in the Philippine Energy Sector



**Department of Energy**

- Supervises the restructuring of the industry
- Established the Wholesale Electricity Spot Market (WESM)
- Develops/implements energy policies and programs



**National Electrification Administration**

- Supervises electric cooperatives operating in a competitive market
- Reviews and upgrades regulatory policies to enhance the viability of electric cooperatives



**Power Sector Assets and Liabilities Management Corporation**

- Manages NPC assets and liabilities and transmission company pending privatization
- Manages NPC Privatization process
- Assumes NPC debt and IPP Contracts
- Administers Universal Charge



**National Transmission Corporation (TransCo)**

- Prior to National Grid Corporation of the Philippines (NGCP) as Concessionaire (2009 Agreement)



- Assumes the transmission function of NPC
- Acts as the System Operator of the nationwide electrical transmission and sub-transmission system, transferred to it by NPC
- Administers the FIT-All Fund



**National Power Corporation**

- Generates and sells electricity from undisposed generating assets and IPP contracts of PSALM
- Performs Missionary Electrification



**Philippine National Oil Company**

- Explores the country's indigenous oil & non-oil energy resources
- Expanded its operations to include total energy development, including indigenous energy sources



**Energy Regulatory Commission**

- Independent, quasi-judicial regulatory body
- Promotes competition
- Ensures customer choice
- Penalizes market abuse



**Philippine Electricity Market Corporation (PEMC)**

- Governs the Wholesale Electricity Spot Market (WESM)



**Independent Electricity Market Operator of the Philippines (IEMOP)**

- Market Operator



# Section 1. Planning

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## **Philippines Action Plan for Power Sector Resilience and Decarbonization**



# Philippine Energy Strategic Direction

The **Philippine energy strategic direction** is anchored on ensuring that energy development remains secure, sustainable, accessible, and affordable for all Filipinos.



PHILIPPINE DEVELOPMENT  
PLAN 2023-2028

CHAPTER 12:  
EXPAND AND UPGRADE  
ENERGY INFRASTRUCTURE



PHILIPPINE ENERGY PLAN  
2023-2050

## ENERGY SECTOR STRATEGIC FRAMEWORK

Access to  
Affordable Energy

A

Reliability and  
Resiliency

R

Clean and  
Sustainable Energy

C

Reaching all communities, including remote and off-grid areas, through hybrid and microgrid solutions.

Ensures stability of supply, strengthened transmission and distribution networks, and integration of energy storage to manage variability from renewables

Underscores the transition to low-carbon sources such as solar, wind, hydro, geothermal, biomass, and emerging fuels like hydrogen and green ammonia.



# Philippine Energy Plan (PEP) 2023-2050 Targets



## Reference Scenario

- ✓ 35% RE share in power generation mix by 2030
- ✓ 50% RE by 2040-2050



## Clean Energy 1

High RE with low OSW + Nuclear  
+ Coal Repurposing

- ✓ 35% RE share by 2030, 50% by 2040, more than 50% by 2050
- ✓ Coal repurposing
- ✓ Nuclear capacity of 1,200 MW by 2032, 2,400 MW 2035 and 4,800 MW by 2050
- ✓ 19 GW of OSW by 2050
- ✓



## Clean Energy 2

High RE with high OSW + Nuclear  
+ Coal Repurposing

- ✓ 35% RE share by 2030, 50% by 2040, more than 50% by 2050
- ✓ Coal repurposing
- ✓ Nuclear capacity of 1,200 MW by 2032, 2,400 MW 2035 and 4,800 MW by 2050
- ✓ 50 GW of OSW by 2050
- ✓



# Philippine NDC Policies



REPUBLIC OF THE PHILIPPINES  
Nationally Determined Contribution  
Communicated to the UNFCCC on 15 April 2021

The Republic of the Philippines submits its Nationally Determined Contribution (NDC) in accordance with Decision 1/CP.21 of the Conference of Parties of the United Nations Framework Convention on Climate Change (UNFCCC).

The Philippines' NDC supports the country's national development objectives and priorities of sustainable industrial development, poverty eradication and inclusive growth, energy security, and social and climate justice, and the transformation of its socio-economic sectors towards a climate and disaster-resilient and low carbon economy.

The Philippines shares the view that the NDC is a means to communicate opportunities for transforming our world with gender-responsive sustainable development options through the commitment of Parties to support and complement each other's endeavors in accordance with the partnership arrangement under the UNFCCC and the Paris Agreement.

Developed through a whole-of-government-and-society approach, the Philippines' NDC upholds the importance of meaningful participation of women, children, youth, persons with diverse sexual orientation and gender identity, differently abled, indigenous peoples, elderly, local communities, civil society, faith-based organizations, and the private sector, and recognizes the indispensable value of inclusion and collaborative participation of local governments in implementing climate actions. It shall enable a market signal to support local and foreign direct green investments. The NDC recognizes the private sector as the country's main engine of economic growth and transformation, and promotes its full engagement in climate change adaptation and mitigation.

## Philippines' Nationally Determined Contribution (NDC)

- Submitted in 2021, The Philippines' Nationally Determined Contributions (NDCs) remain the cornerstone of our shared vision of **limiting the global temperature rise to 1.5 degrees Celsius** and meet the goals of the Paris Agreement.

Peaking Year:

**2030**

Sectors Covered



**Agriculture**



**Waste**



**Industry**



**Transport**



**Energy**

**75% GHG emission reductions / avoidance commitment**

**72.29% - conditional commitment**

**2.71% - unconditional commitment**

2020-2030 cumulative BAU emissions:

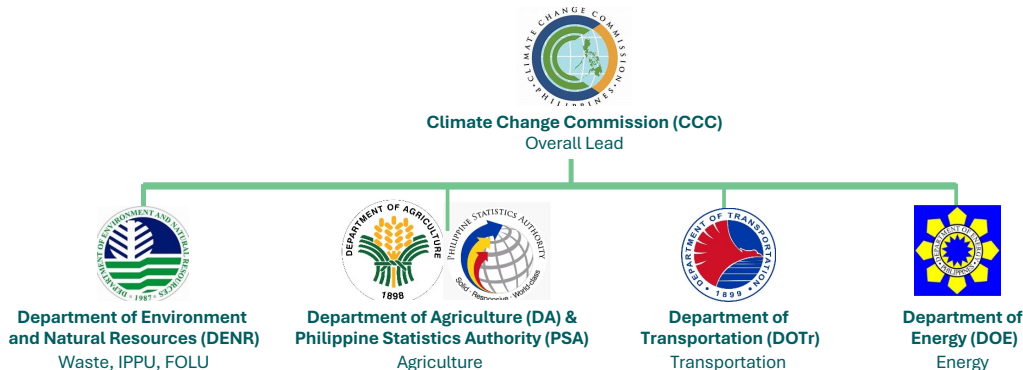
**3,340.3 MTCO<sub>2</sub>e**



# Philippine NDC Policies



**Executive Order No. 174** was signed by the President in 2014 to establish a national GHG inventory system to support climate-resilient development. It enables government agencies to conduct, document, archive, and monitor sector-specific GHG inventories.

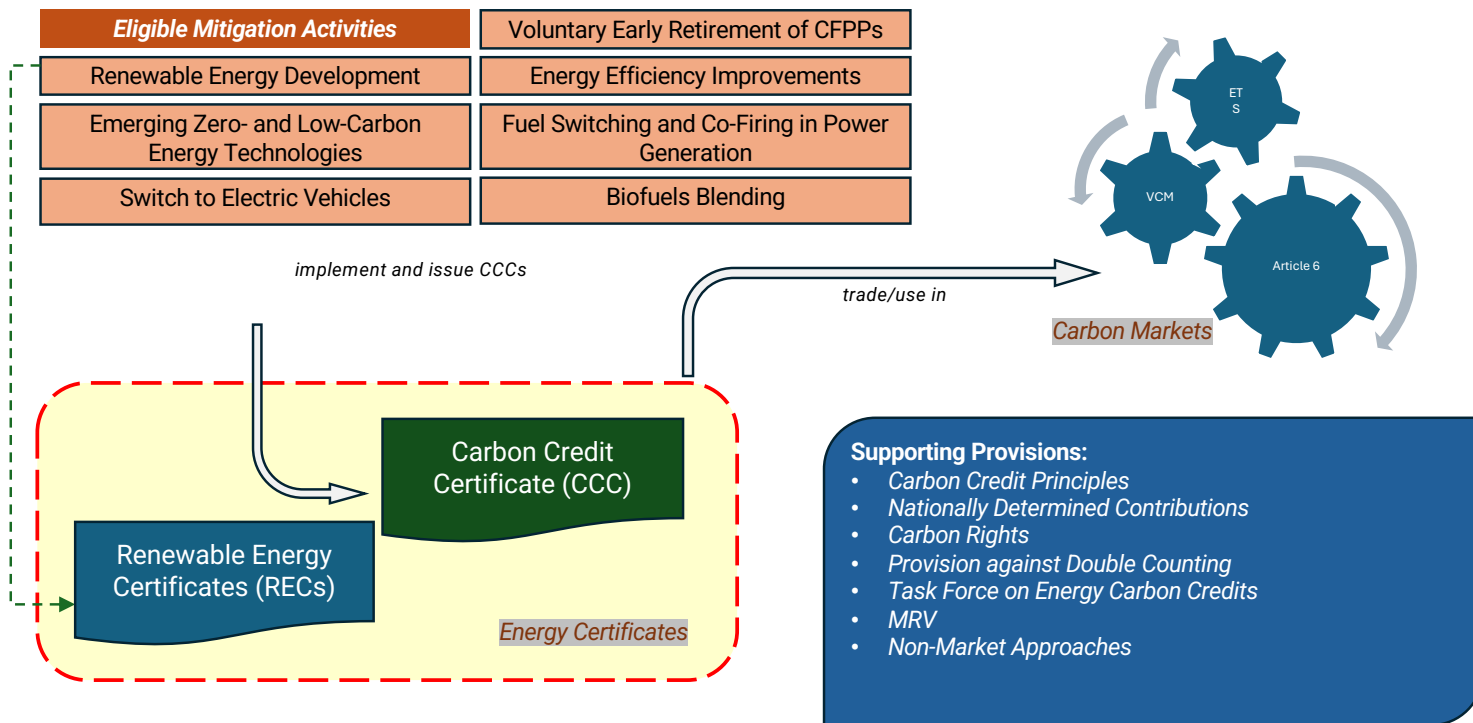


**Whole-of-society approach:** The Philippines convenes a National Panel of Technical Experts (NPTE) composed of academicians and practitioners in climate change and disaster risk reduction to support and strengthen the national GHG inventory process

# Carbon Credit Policy

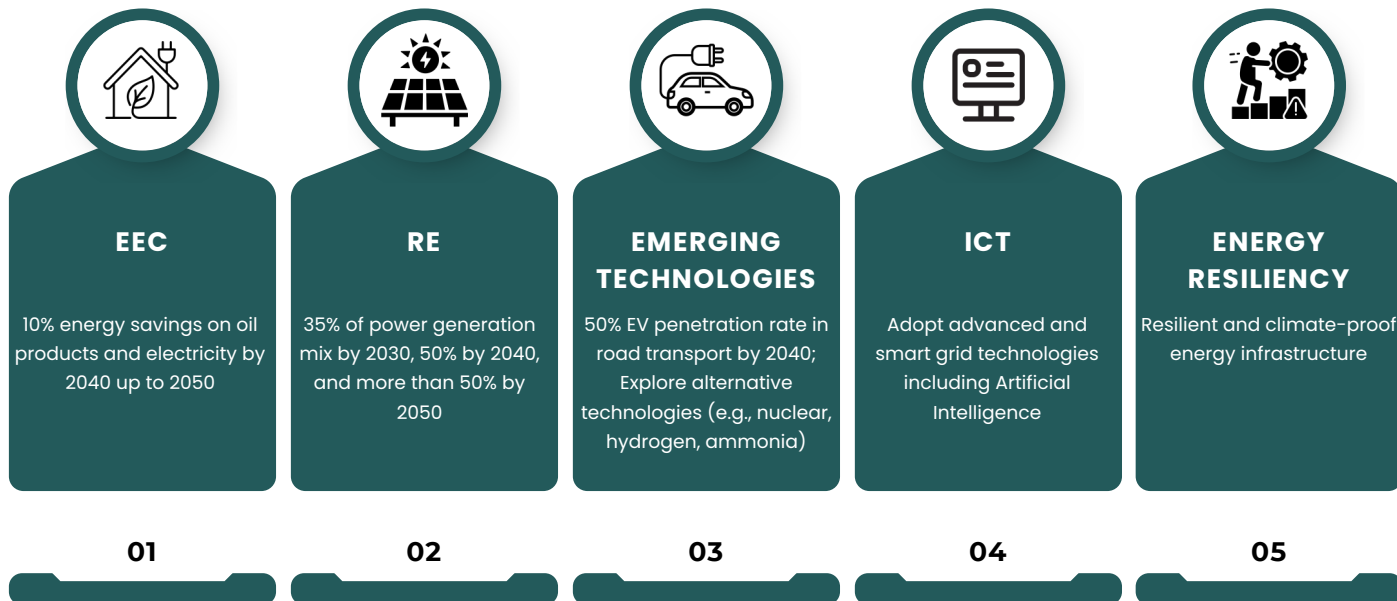


The DOE issued the Guidelines for the Generation, Management and Monitoring of Carbon Credits in the Energy Sector to enable carbon credits in the energy sector





# Future Energy Scenario



## PH Contribution to Global Energy Transition:

Offshore Wind Development and Support Port Infrastructure | Marine-based Energy Resource Development | Rightskilling of Filipino Workforce & International Accreditation Initiative | Mining and Manufacturing of Green Materials | Voluntary Retirement and Repurposing of CFPPs



## **Section 2. Building**

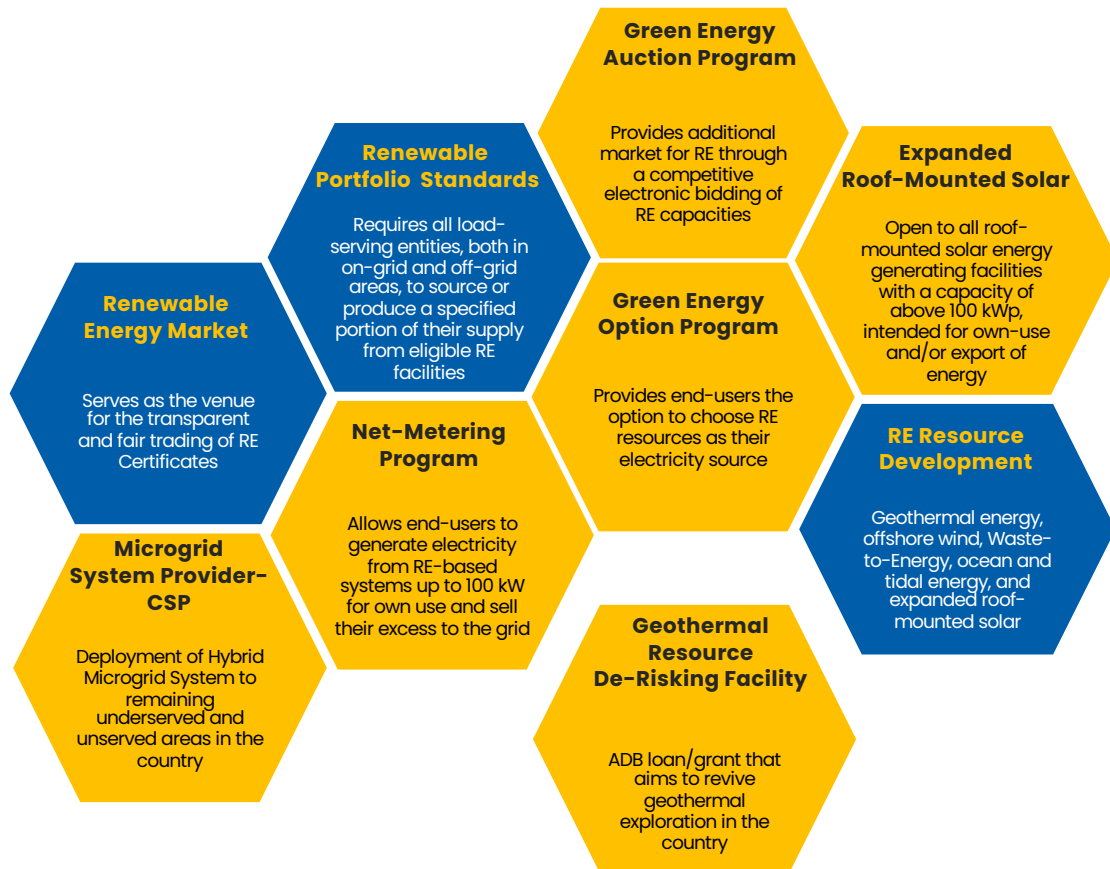
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**Philippines Action Plan for Power Sector  
Resilience and Decarbonization**



# Accelerating RE Deployment

Policy Mechanisms for RE Market development are in place, encompassing both mandatory and voluntary measures



Blue: Mandatory; Yellow: Voluntary



# Enabling Investments in RE



## Easing Foreign Ownership Limit in RE Investments

The foreign ownership restriction that hampers the flow of RE-sector investments has been liberalized in 2022. Prior to this issuance, foreign companies were already allowed to participate in large-scale geothermal projects through Financial and Technical Assistance Agreements and to operate biomass power plants in the Philippines.



## Preferential Dispatch of RE Resources in the WESM

On 05 October 2022, all RE generating units are given preference in the Wholesale Electricity Spot Market (WESM) dispatch schedule to ensure its maximum output injection in the grid. This is to encourage additional investments because of guaranteed dispatch in the grid at their full available capacity, allowing recovery of investments.



## Policy Framework for Offshore Wind

Following Executive Order No. 21 issued by the President, the DOE issued the Policy and Administrative Framework for the Efficient and Optimal Development of the Country's Offshore Wind (OSW) Resources on 16 June 2023. Studies such as Marine Spatial Planning, Grid Readiness, and Permitting and Consenting are being undertaken to hasten the development of OSW resources.



# Green Energy Auction Programme



## 20.7 GW

RE Capacities awarded  
from 4 GEA rounds  
in 2022–2026



## 25 GW

Additional RE Capacities  
will be offered for Auctions  
to deliver power in 2027–2035

### UPCOMING AUCTIONS

|             |                                                    |
|-------------|----------------------------------------------------|
| GEA 5       | 3,300 MW Offshore Wind Fixed Bottom Technology     |
| SPECIAL GEA | 400 MW Waste-To-Energy                             |
| GEA 6       | Biomass                                            |
| GEA 7       | IRESS, Rooftop Solar and Run-of-River for Mindanao |
| GEA4NPC     | Off-grid Areas                                     |
| GEA 8       | Onshore Wind                                       |
| GEA 9       | Solar on Canals/ Agrisolar/ Solar on Stilts        |
| GEA 10      | All RE                                             |



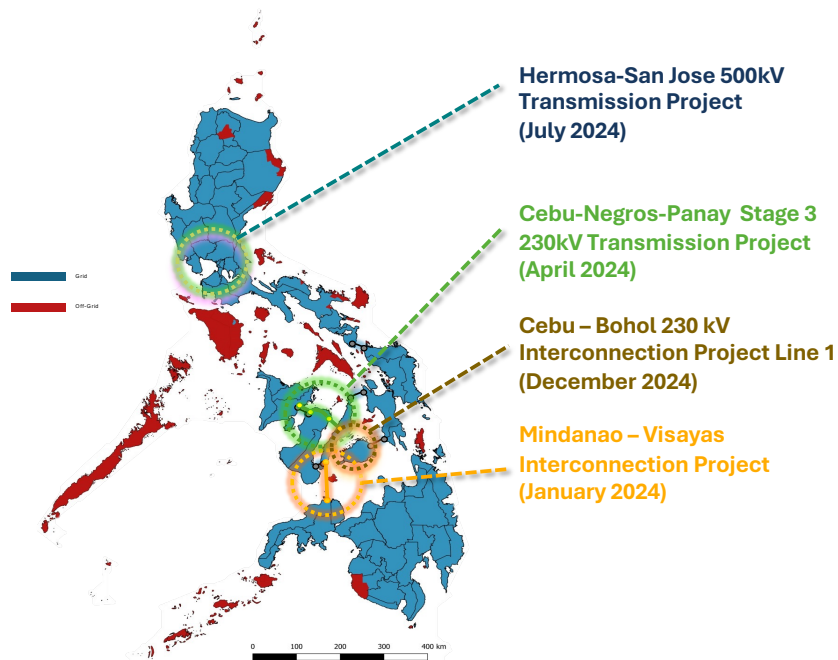
# Hydrogen Energy Roadmap



- A national policy and general framework issued by the DOE for developing hydrogen energy, with fiscal and non-fiscal incentives and support for projects
- Targets large-scale green hydrogen production and infrastructure for storage and distribution
- Aims to integrate hydrogen into power, transport, and industry to reduce emissions and dependence on fossil fuels
- Supports decarbonization, energy security, and economic growth through innovation and investment in hydrogen technologies



# Transmission Development



## TRANSMISSION PROJECTS FOR COMPLETION BY 2035

- Cebu-Lapu Lapu 230 kV T/L Project (May 2027)
- Tuy 500/230 kV Substation Project (June 2027 - Stage 1)
- Kabacan 138 kV Substation Project (February 2028)
- Marilao 500 kV Substation Project (March 2028)
- Bolo-Balaoan 500 kV T/L Project (August 2035)
- Batangas-Mindoro Interconnection and Backbone Project (October 2029-Stage 1; June 2035-Stage 2)
- Northern Luzon 230 kV Loop Project (August 2031)



# Modernize Infrastructure

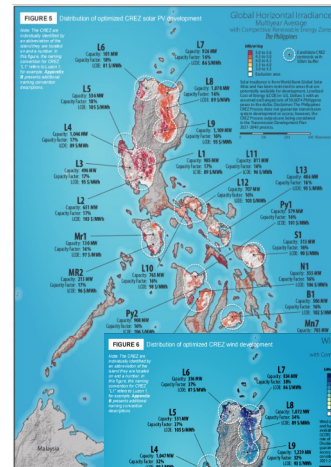


## Smart and Green Grid Plan (SGGP)

- A rapid expansion of the grid is needed to accommodate new sizeable RE capacity and connect demand centers with new sources of supply
- DOE to establish policies and mechanisms to ensure the efficient implementation of the SGGP

## Competitive Renewable Energy Zones (CREZ)

Develop CREZ to identify high-potential renewable energy areas, prioritize transmission investments, and enable faster, more cost-efficient grid integration of RE projects.





# Voluntary Early Decommissioning &/or Repurposing of Coal Power Plants

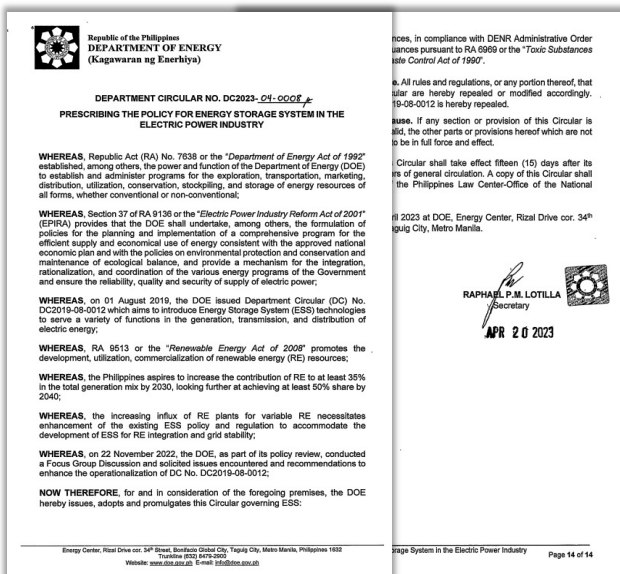


- Formulation of a long-term program to facilitate the voluntary early decommissioning or repurposing of existing coal plants, over 3.9 GW of which are at least 20 years old
- Criteria for prioritization:
  - Security of supply
  - Plant performance
  - Grid reliability contribution
  - Emissions-intensive plants/Environmental compliance
  - Contractual readiness





# Energy Storage and Flexibility Solutions



The Energy Storage Policy was issued by the DOE in 2023 to provide fiscal incentives for energy storage system projects paired with renewable energy and to ensure that storage solutions are integrated directly into the country's expanding clean energy portfolio

A supplemental policy was issued in 2026 requiring prospective VRE power plants\* to integrate an energy storage system of at least 20% of the installed capacity

A total of 214 MW of committed ESS projects are expected by 2027

\* Installed capacity of 10 MW and above



# Mainstreaming Energy Efficiency and Conservation



## Government Energy Management Program

Mandates public offices to reduce electricity and fuel consumption by at least 10% through efficient energy use, cost-saving measures, and sustainable practices.



## Designated Establishments

Requires businesses or entities with significant energy consumption to comply with energy efficiency standards, submit energy reports, and appoint energy conservation officers.



## Energy Service Companies

Offers energy efficiency solutions, including design, implementation, and financing of energy-saving projects, with payment often based on the actual energy savings achieved.



## Philippine Energy Labeling Program

Requires energy labels on appliances and devices to inform consumers about their energy efficiency, helping them make informed, cost-saving choices and promoting the use of energy-efficient products.



## Philippine Transport Vehicles Fuel Economy Labeling Program

Implements the mandatory fuel economy labeling of motor vehicles. It provides consumers with standardized fuel economy information to support informed purchasing decisions, promote the adoption of fuel-efficient vehicle technologies, and reduce fuel consumption and GHG emissions in the transport sector.



# Electric Vehicle Industry



- The **Electric Vehicle Industry Development Act (EVIDA)** encourages the adoption and utilization of EVs.
- **Executive Order No. 121 s. 2026** signed by the President on 29 July 2026 established the **Electric Vehicle Incentive Strategy (EVIS) Program** which provides targeted, time-bound, and performance-based fiscal support for strategic investments in domestic EV manufacturing and parts and components.

## CREVI TARGETS



**10%**

EV Fleet Share by 2040  
Business-As-Usual



**50%**

EV Fleet Share by 2040  
Clean Energy Scenario





# Financing the Transition



## Mobilizing Public and Private Capital

Strengthen investment flows through public funding, private sector participation, and public-private partnerships

## Green and Sustainable Finance Instruments

Promote green bonds and sustainable finance aligned with frameworks of the Central Bank of the Philippines and the Securities and Exchange Commission

## Policy and Fiscal Incentives

Leverage incentives under the Renewable Energy Act, Green Energy Auction Program (GEAP), and DOE-led initiatives to attract investments

## International & Development Partner Support

Utilize concessional financing, grants, and technical assistance from partners such as the Asian Development Bank and the World Bank

## De-risking Mechanisms

Improve bankability through transparent procurement, stable regulations, and mechanisms that reduce currency, market, and project risks



# Regional and International Collaboration



## ASEAN Power Grid (APG)

A regional initiative aimed at boosting energy security and renewable energy expansion across Southeast Asia

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The 10 ASEAN Member States endorsed the enhanced MOU on APG during the 43<sup>rd</sup> AMEM in Malaysia in October 2025

## Bilateral Cooperations

Philippines entered into bilateral partnerships with Japan, Korea, United Arab Emirates, MASDAR, etc. on energy cooperation

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Bilateral agreements under negotiation with Denmark, Laos, Morocco, Papua New Guinea, Canada, Brazil, and India

## Knowledge Exchange

Technical cooperation and capacity building with international organizations such as Asia Zero Emission Community (AZEC)



## Section 3. Operating

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**Philippines Action Plan for Power Sector  
Resilience and Decarbonization**



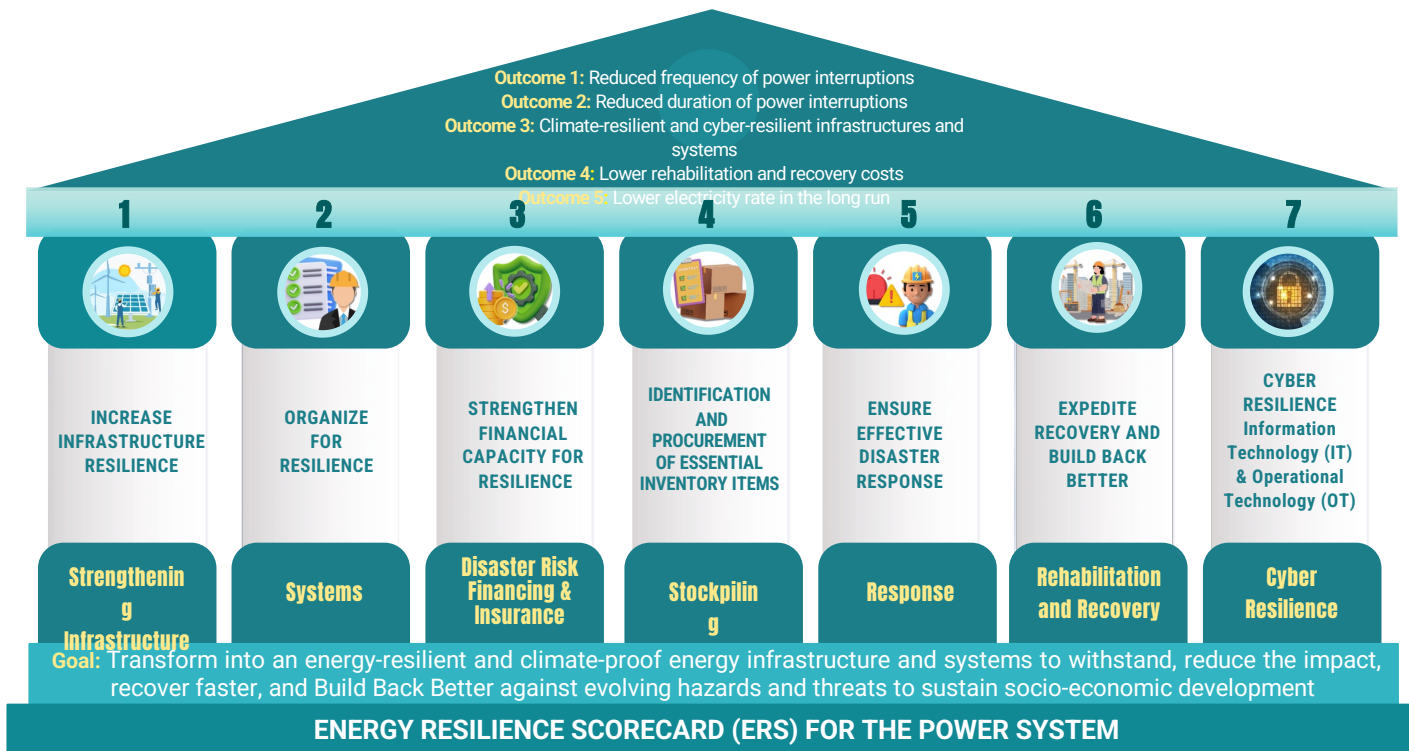
# Enhancing System Reliability and Resilience



- The **Energy Sector Emergency Operations Center** serves as a centralized hub for real-time monitoring, assessment, and emergency response coordination within the energy sector.
- The **Mobile Energy System (MES)** is a rapidly deployable, solar-powered energy solution that provides reliable electricity for disaster response, unserved households, and underserved areas
- Institutionalized the **Energy Sector Cybersecurity and Cyber Resilience Framework** through DC2025-01-0001 signed on 23 January 2025



# Energy Resiliency Scorecard





# Modern Power Market Operations



## Modern Power Market Operations

### Wholesale Electricity Spot Market (WESM) Reforms

01

- Transition to co-optimized energy and ancillary services market
- Full integration of Luzon, Visayas, and Mindanao into a unified WESM
- Continuous improvements led by the Independent Electricity Market Operator of the Philippines

### Renewable Energy Trading Mechanisms

02

- Implementation of the Renewable Portfolio Standards to mandate RE share in supply
- Operationalization of the Renewable Energy Market for trading Renewable Energy Certificates (RECs)
- Green Energy Option Program (GEOP)

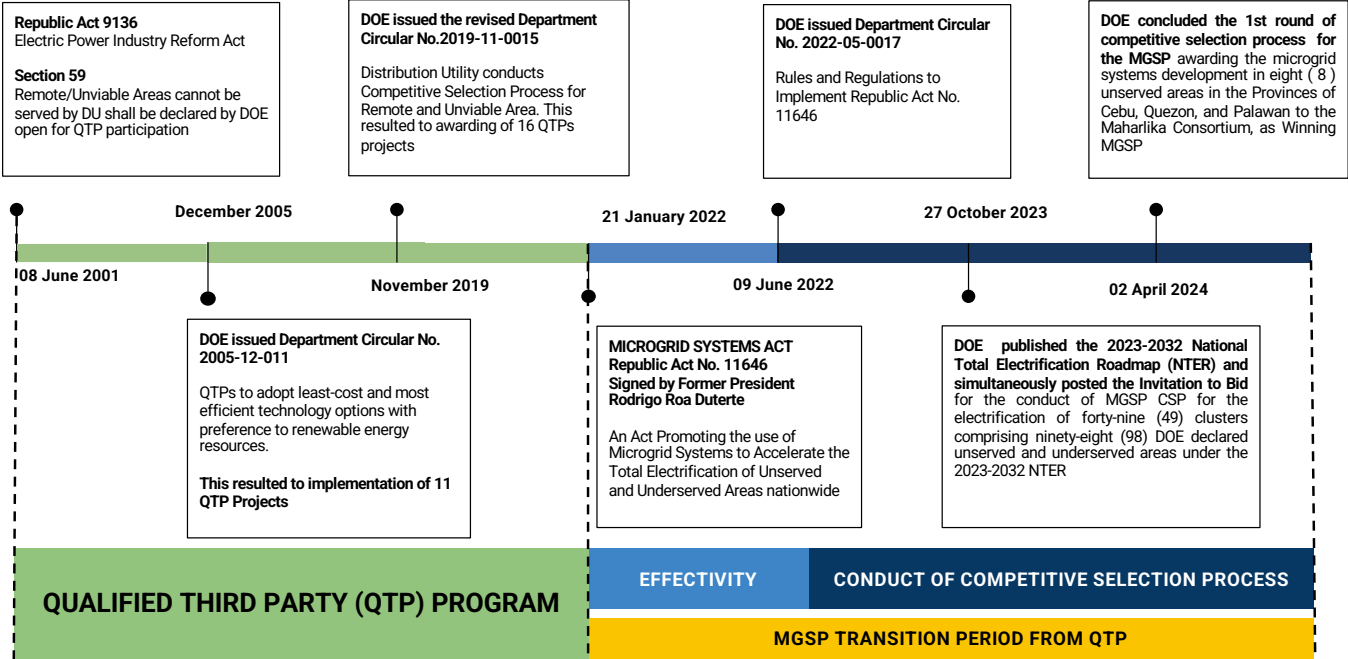
### Ancillary Services and Reserve Market Development

03

- Establishment of a co-optimized ancillary services market
- Procurement reforms by the National Grid Corporation of the Philippines for reserves
- Development of competitive reserve markets to enhance grid flexibility and reliability



# Distributed Energy and Off-Grid Electrification

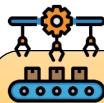




# Capacity Building and Workforce Development



Administrative, legal, and technical/digital



Engineering, digital, automation and scientific



Installation, operation and maintenance of renewable technologies



Circular economy



Surveying locations, and places for RE



Exploration, drilling, operations and maintenance of geothermal energy plants



Planning skills for renewable energy developers



Integration of clean energy solutions in buildings



# CONCLUSION



1

## **Strengthen Enabling Policies and Investments**

Develop and implement clear regulatory frameworks, fiscal incentives, and investment mechanisms to accelerate clean energy deployment.

2

## **Ensure an Equitable and Secure Transition**

Promote inclusive access to energy, protect vulnerable communities, and maintain system reliability while transitioning to a low-carbon energy future.

3

## **Deepen Regional and International Partnerships**

Leverage collaboration under CEM and ASEAN to share technical expertise, drive innovation, and attract investment in clean energy projects.



*Thank you!*



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