



# The Philippines' GHG Reduction Potential and Mitigation Strategy in the Energy Sector

Department of Energy  
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# Outline of Presentation

- 1 GHG Reduction Potential and Mitigation Strategies in the Energy Sector
- 2 How to Utilize the Joint Crediting Mechanism













# GHG Reduction Potential and Mitigation Strategies in the Energy Sector



# Commitment of the Philippines to the NDC

<b>75%</b>	<b>GHG EMISSIONS REDUCTION AND AVOIDANCE</b>
<b>2.71%</b>	<b>UNCONDITIONAL</b>
<b>72.29%</b>	<b>CONDITIONAL</b>






**2020 - 2030**

	<b>AGRICULTURE</b>	
	<b>ENERGY</b>	
	<b>IPPU</b>	
	<b>TRANSPORT</b>	
	<b>WASTE</b>	



# Energy Sector NDC Policies and Measures

Emission reductions from unconditionally NDC Policies and Measures, under the Philippine Development Plan 2023-2028

	AGRICULTURE	0%
	<b>ENERGY</b>	<b>9%</b>
	IPPU	8%
	TRANSPORT	69%
	WASTE	14%

Renewable Energy

Biofuels

Energy Efficiency

Smart Grids

Fuel Switch

Other Technologies



# Energy Sector's Mitigation Strategies

## ENERGY EFFICIENCY & CONSERVATION

10% energy savings on oil products and electricity by 2040 up to 2050

## RENEWABLE ENERGY

35% of power generation mix by 2030, 50% by 2040, and more than 50% by 2050

## ALTERNATIVE FUELS

Natural gas and nuclear energy as transition fuels; exploring hydrogen and ammonia as alternatives

## EMERGING TECHNOLOGIES

50% EV penetration rate in road transport by 2040; exploring energy storage systems to support RE

## MODERN T&D SYSTEM

Smart grids; total electrification; hybridized power system; microgrids

## ENERGY RESILIENCY

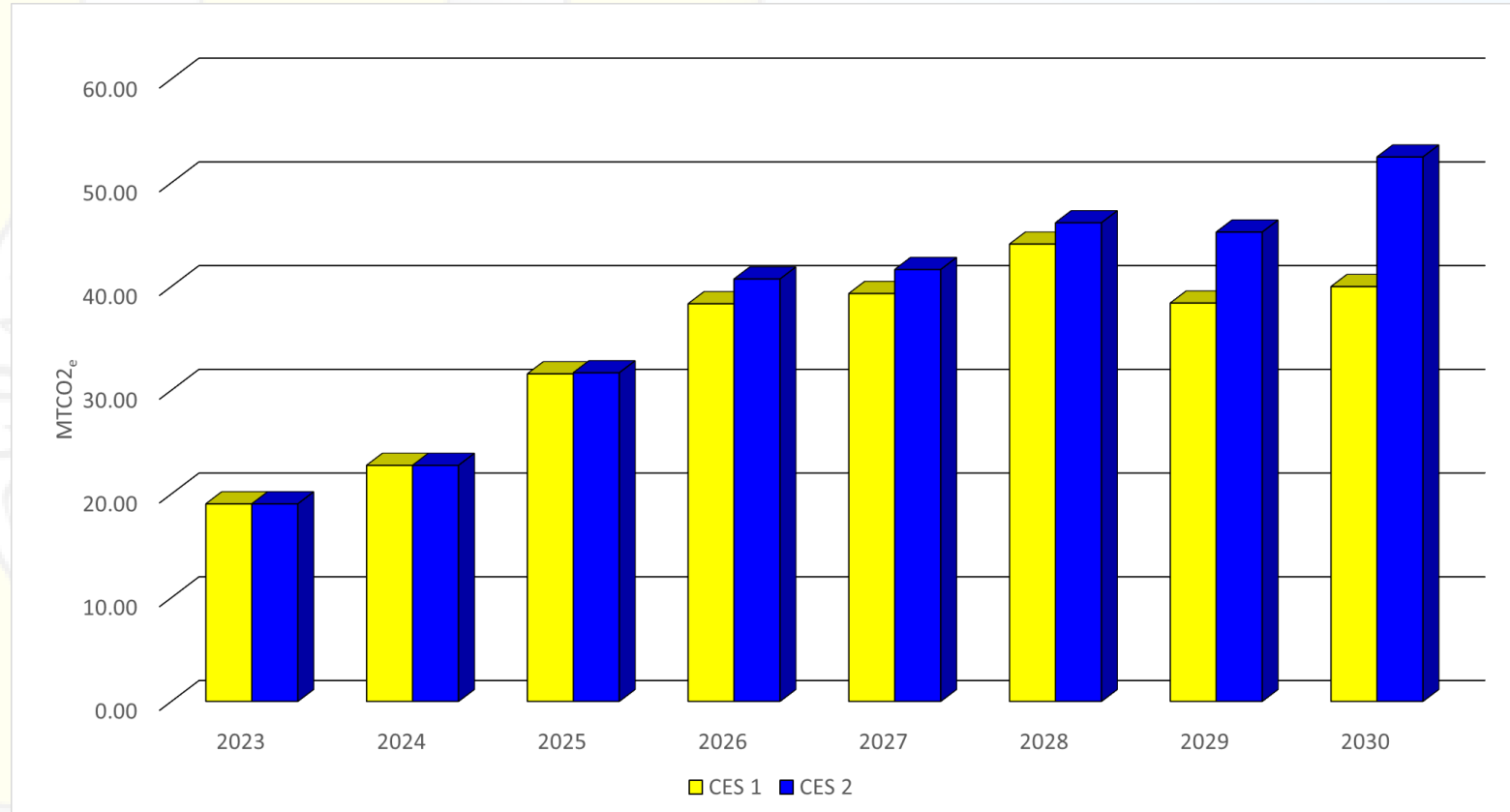
Resilient and climate- and disaster-proof energy infrastructure



# Energy Sector's Mitigation Strategies

## Clean Energy Scenario Greenhouse Gas Emission Reduction by Measure

Mitigation Measures	GHG Emission Reduction 2023-2030 (in MTCO2e)
Increased biofuels blend	135.63
EE&C Program	32.97
NREP Target	27.65
Nuclear Energy Program	-
19 GW OSW + Coal Repurposing	77.23
31 GW OSW	26.21
<b>Total (CES 1)</b>	<b>273.48</b>
<b>Total (CES 2)</b>	<b>299.69</b>



# List of Potential JCM Projects





# Philippine Experience on JCM

Selected JCM Projects 2017-2019

<b>PROJECT</b>	<b>AREA OF INVESTMENT</b>	<b>PROJECT PARTICIPANTS</b>
<b>Introduction of 1.53MW Rooftop Solar Power Systems and Auto Parts Facilities</b>	Solar Power	<ul style="list-style-type: none"><li>• Tokyo Century Corporation</li><li>• Enomoto Philippine Manufacturing Inc.</li><li>• Aikawa Philippines Inc.</li></ul>
<b>Introduction of 1MW Rooftop Solar Power System in Vehicle Assembly Factory</b>	Solar Power	<ul style="list-style-type: none"><li>• Toyota Motor Corporation</li><li>• Toyota Motor Philippines Corporation</li></ul>
<b>Installation of 1.2MW Rooftop Solar Power System to the Cold Storage for Power Supply</b>	Solar Power	<ul style="list-style-type: none"><li>• Tokyo Century Corporation</li><li>• Transnational Uyeno Solar Corporation</li></ul>
<b>Introduction of 4MW Rooftop Solar Power System in Tire Factory</b>	Solar Power	<ul style="list-style-type: none"><li>• Sharp Energy Solutions Corporation</li><li>• Yokohama Tire Philippines Inc.</li></ul>
<b>18MW Solar Power Project in Collaboration with Power-supply Company</b>	Solar Power	<ul style="list-style-type: none"><li>• Tokyo Century Corporation</li><li>• Mspectrum Inc.</li></ul>
<b>Biogas Power Generation and Fuel Conversion Project in Pineapple Canneries</b>	Bio Power	<ul style="list-style-type: none"><li>• ITOCHU Corporation</li><li>• METPower Venture Partners Holdings Inc.</li><li>• Surallah Biogas Ventures Corporation</li></ul>
<b>33MW Wind Power Project in Caraga Region, Mindanao</b>	Wind Power	<ul style="list-style-type: none"><li>• Chodai Co. Ltd.      Shizen Energy Inc.</li><li>• Equi-Parco Construction Company</li><li>• Equi-Parco Holdings Corporation</li><li>• Caraga Wind Energy Corporation</li></ul>



# Philippine Experience on JCM

Selected JCM Projects 2017-2019

PROJECT	AREA OF INVESTMENT	PROJECT PARTICIPANTS
<b>29MW Binary Power Generation Project at Palayan Geothermal Power Plant</b>	Geothermal Power	<ul style="list-style-type: none"><li>• Mitsubishi Heavy Industries Ltd.</li><li>• Bac Man Geothermal Inc.</li></ul>
<b>Tanawon 20MW Flash Geothermal Power Plant Project</b>	Geothermal Power	<ul style="list-style-type: none"><li>• Mizuho-Toshiba Leasing Company Ltd.</li></ul>
<b>28MW Binary Power Generation Project at Mahanagdong Geothermal Power Plant</b>	Geothermal Power	<ul style="list-style-type: none"><li>• JGC Corporation</li></ul>
<b>14.5MW Mini Hydro Power Plant Project in Siquil River in Mindanao</b>	Hydro Power	<ul style="list-style-type: none"><li>• Toyota Tsusho Corporation</li></ul>
<b>Energy Supply Project by 9MW Solar Power System to Ceramic Factory and Cement Plant</b>	Solar Power	<ul style="list-style-type: none"><li>• Marubeni Corporation</li><li>• Team Philippines Energy Corporation</li></ul>
<b>5.6MW Geothermal Binary Power Generation Project in Northern Negros</b>	Geothermal Power	<ul style="list-style-type: none"><li>• GC Corporation</li></ul>



# Recommended JCM Approaches

## Recommended JCM Approaches:

- Ensure the robust methodologies, transparency and the environmental integrity;
- Maintain simplicity and practicality of the process;
- Promote concrete actions for global GHG emission reductions or removals;
- Prevent the use of any mitigation projects registered under the JCM for the purpose of any other international climate mitigation mechanisms to avoid double counting of GHG emission reductions or removals;
- Continue the consultation for the JCM transition to the tradeable credit type mechanism under Paris Agreement





# Thank you!



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