



DIRECTORATE GENERAL OF NEW, RENEWABLE ENERGY AND ENERGY CONSERVATION
MINISTRY OF ENERGY AND MINERAL RESOURCES
REPUBLIC OF INDONESIA

The 7th Clean Energy Future Initiatives for ASEAN Forum

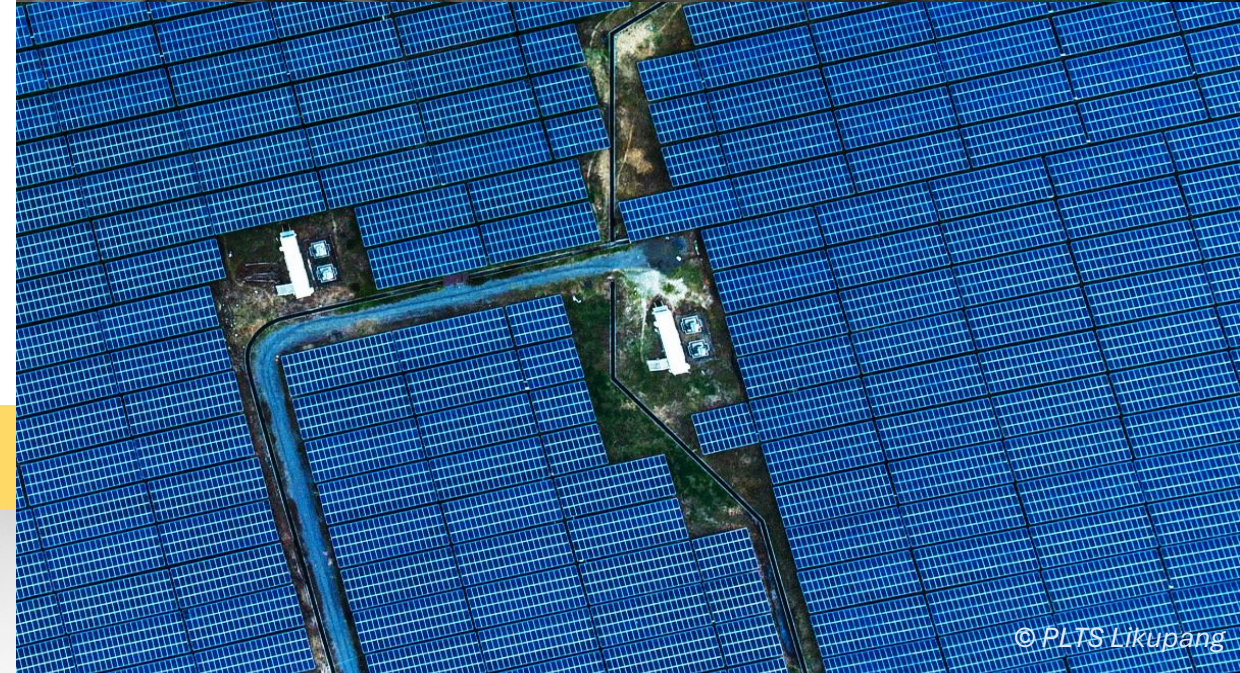
Indonesia's National Priorities in Renewable Energy and Energy Efficiency & Conservation

DG of New, Renewable Energy, and Energy Conservation

February 13th, 2025



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ENDC 2030: INDONESIA EMISSION REDUCTION COMMITMENT

Enhanced NDC 2030

No	Sector	GHG emissions 2010 (Million Ton CO2e)	GHG emissions in 2030			Emission Reduction	
			BaU	CM1	CM2	CM1	CM2
1.	Energy	453,2	1.66G	1.311	1.223	358	446
2.	Waste	88	296	256	253	40	45,3
3.	IPPU	36	70	63	61	7	9
4.	Agriculture	111	120	110	108	10	12
5.	Forestry	647	714	217	-15	500	729
	TOTAL	1.334	2.86G	1.G53	1.632	G15	1.240

Energy Sector
358 million ton CO2

ENERGY EFFICIENCY
132.25 million ton CO2

RENEWABLE
181.45 million ton CO2

CLEAN POWER TECHNOLOGY
21.53 million ton CO2

LOW CARBON FUELS
16.83 million ton CO2

MINE RECLAMATION
5.84 million ton CO2

Activity	million ton CO2
Energy Management	36.14
Efficiency at Household Utensils	83.84
Energy Saving Solar Road Lamp	1.76
Electric Vehicle	7.23
Energy Efficiency Improvement for Cooking	3.23
JCM Indonesia	0.032

Activity	million ton CO2
RUPTL NRE PP	97.01
Rooftop PV, Solar PP PPU, Hydropower PPU, Off Grid NRE PP	27.59
Biofuel	47.53
Direct Utilization	0.44
Cofiring	8.88

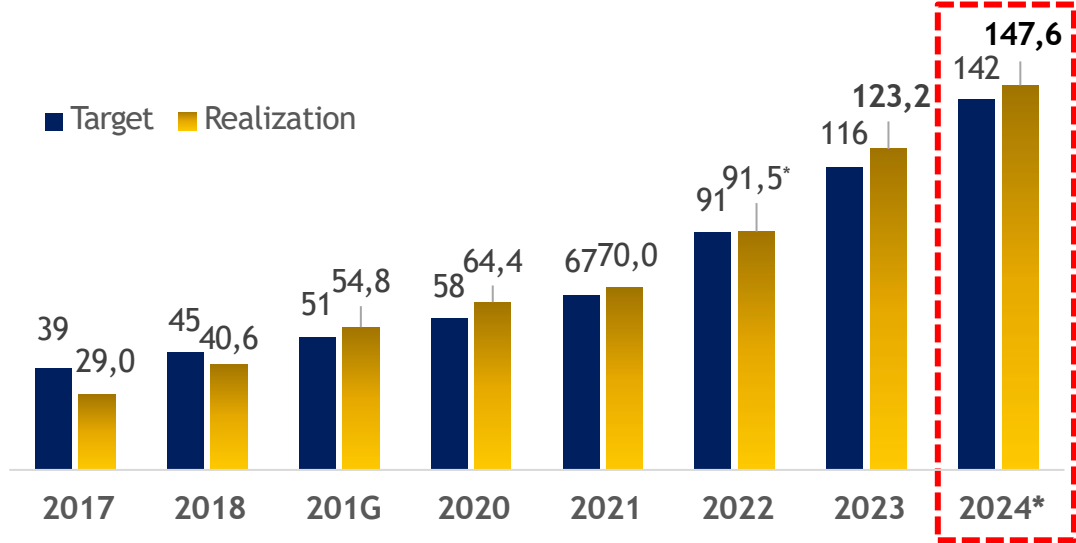
Activity	million ton CO2
CCT for CFPP	7.42
New Gas PP	14.12

Activity	million ton CO2
Fuel Switching on Transportation Sector	0.14
Oil to LPG Conversion	15.39
Natural Gas for local public transportation	0.003
City Gas Network	1.29

Note:
CM : Counter Measure
CM-1 : Self Effort

Note: The implementation of CCS/ CCUS is outside of the targets planned in the e-NDC document

Realization of GHG Emission Reduction in the Energy Sector



Unit | MillionTon CO2e

No	Mitigation Actions	2024		Target 2030	% Achievement of 2030 Target
		Target	Achievements		
1	Energy efficiency	41.3G	30.25	132.25	23.1%
2	New and Renewable Energy	62.85	74.73	181.45	41.1%
3	Low Carbon Fuel	16.05	15.18	16.83	90.1%
4	Use of Clean Generation Technology	17.4G	15.16	21.53	70.4%
5	Other Activities	4.22	12.28	5.84	201%
	TOTAL	142.00	147.61	358.00	41.2%

IMPLEMENTATION and CHALLENGES OF EE&C



Energy Management must be carried out if energy consumption in one year **exceeds a certain threshold**.

Changes of Treshold (PP 33/2023)

Energy Suppliers
≥ 6000 TOE

Industrial Sectors
≥ 4000 TOE

Transport Sectors
≥ 4000 TOE

Building Sectors
≥ 500 TOE

Government (National & Regional)
Mandatory

TOE = Tonnes Oil Equivalent

Estimation of the Impact of Threshold Changes on Energy Management

Note: Compared to the single initial value in **PP 70/2009**, which was **≥6000 TOE** for all energy users.

Potential Savings (in 2030)	Energy Provider	Industry	Transport	Buildings	TOTAL
Energy	3,56 Mil. TOE	5,28 Mil. TOE	0,4 Mil. TOE	66 Thousands TOE	9,9 Mil TOE
Cost	602 Mil. USD	1.3 Bil. USD	269 Mil. USD	57 Mil. USD	2.2 Bil. USD

Realization of Energy Management (2023)

Note: Total of **331 companies** (industry and upstream sector)



10,42 Mil. BOE
Energy Savings



Rp 8,1 Trillion
Cost Savings



8.4 Mil. tCO2e
Emission Reduction

Challenges in EE&C Implementation



Some of EE&C projects need high investment and have a long payback period



Financial Institutions are not yet familiar with EE projects, increasing their perceived risks



The non-existent of Energy Services Company (ESCO) regulations that could offer alternative financing schemes



The collateral requirements from banks hinder the growth of ESCO business



The existing incentives for EE&C are mostly non-fiscal incentives

(1 USD exchange rate = 15,600 IDR)



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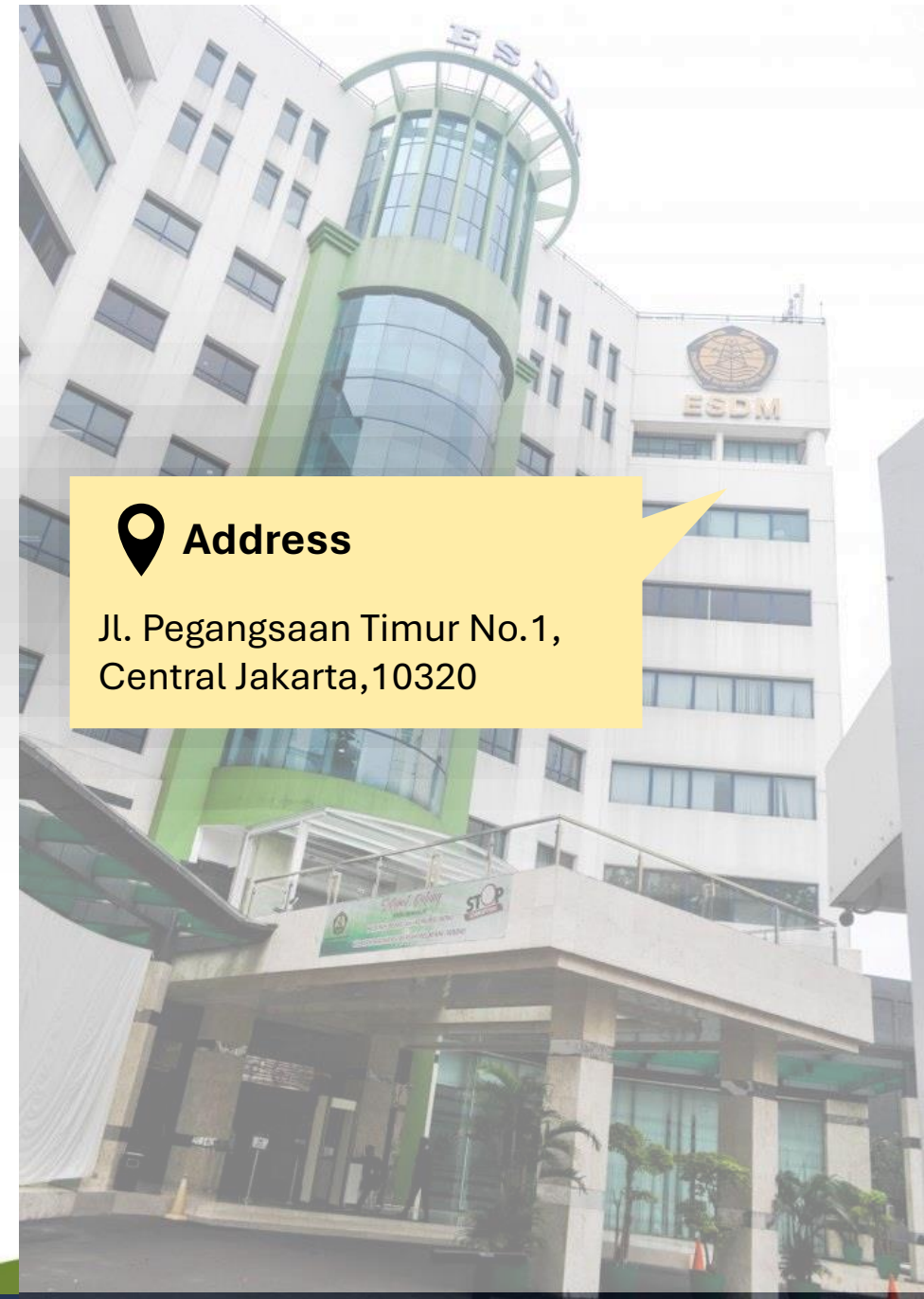
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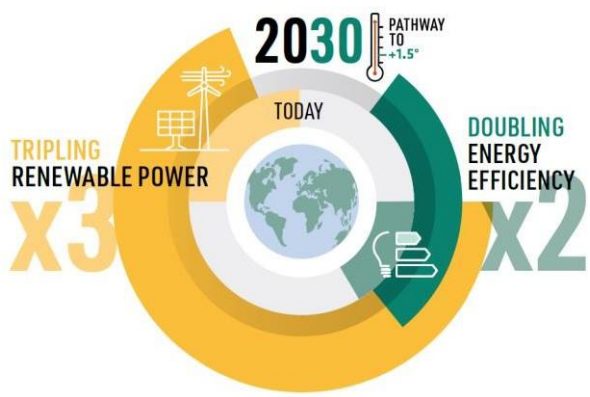
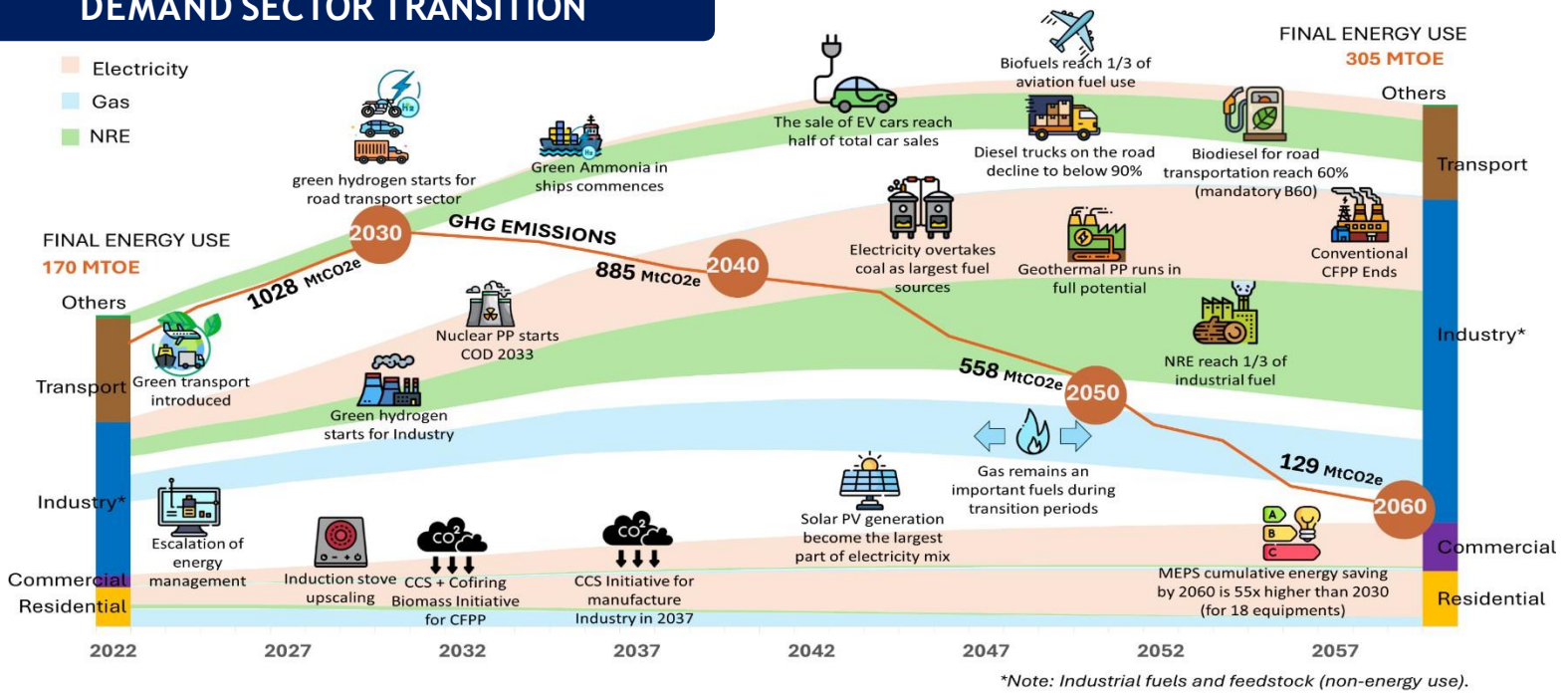


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ENERGY SYSTEM TRANSITION TO NET-ZERO EMISSION (NZE)

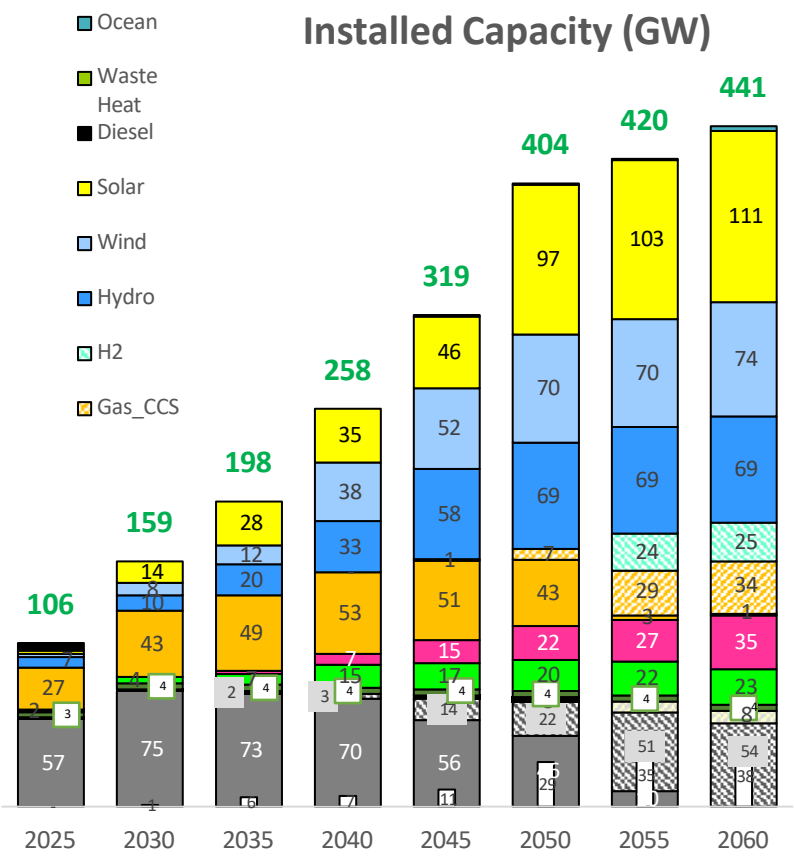
DEMAND SECTOR TRANSITION



STRATEGIES TO ACHIEVE NZE 2060

- 1 Energy Efficiency**
- 2 Electrification** (EV, electric for cooking, agriculture, etc)
- 3 Moratorium for New Coal-Fired Power Plant & phase down**
- 4 Renewable energy** (on-grid, off-grid & biofuel)
- 5 New Energy** (nuclear, hydrogen, ammonia)
- 6 CCS/CCUS**

SUPPLY SECTOR TRANSITION



Installed Capacity (DMN) 2060 is 441 GW consist of

- **42% VRE with storage 38 GW**, and
- **58% Non VRE (dispatchable)**