

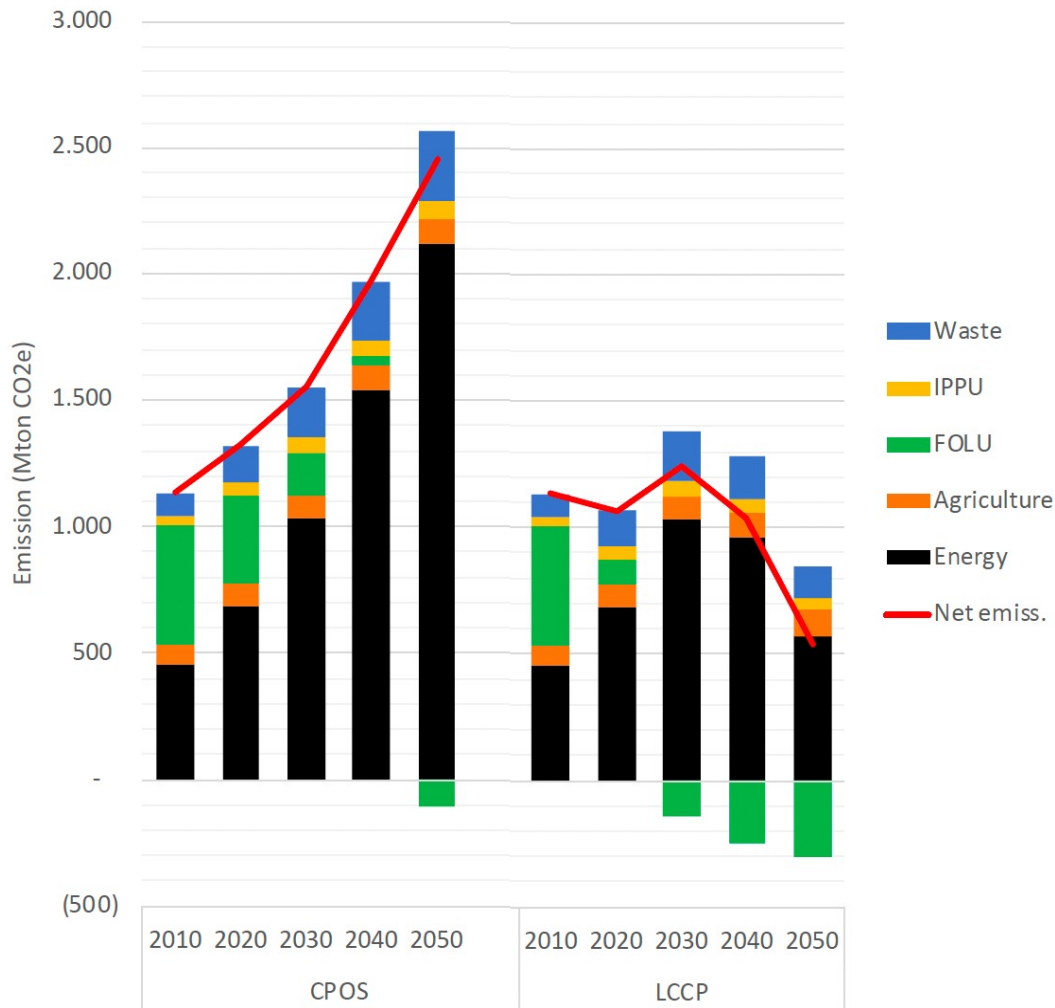
**COP 26 Event: Country Analysis on Long-term Strategies in Emerging Economies**

**Lessons from Deep Decarbonization in  
INDONESIA**

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# Indonesia's LTS



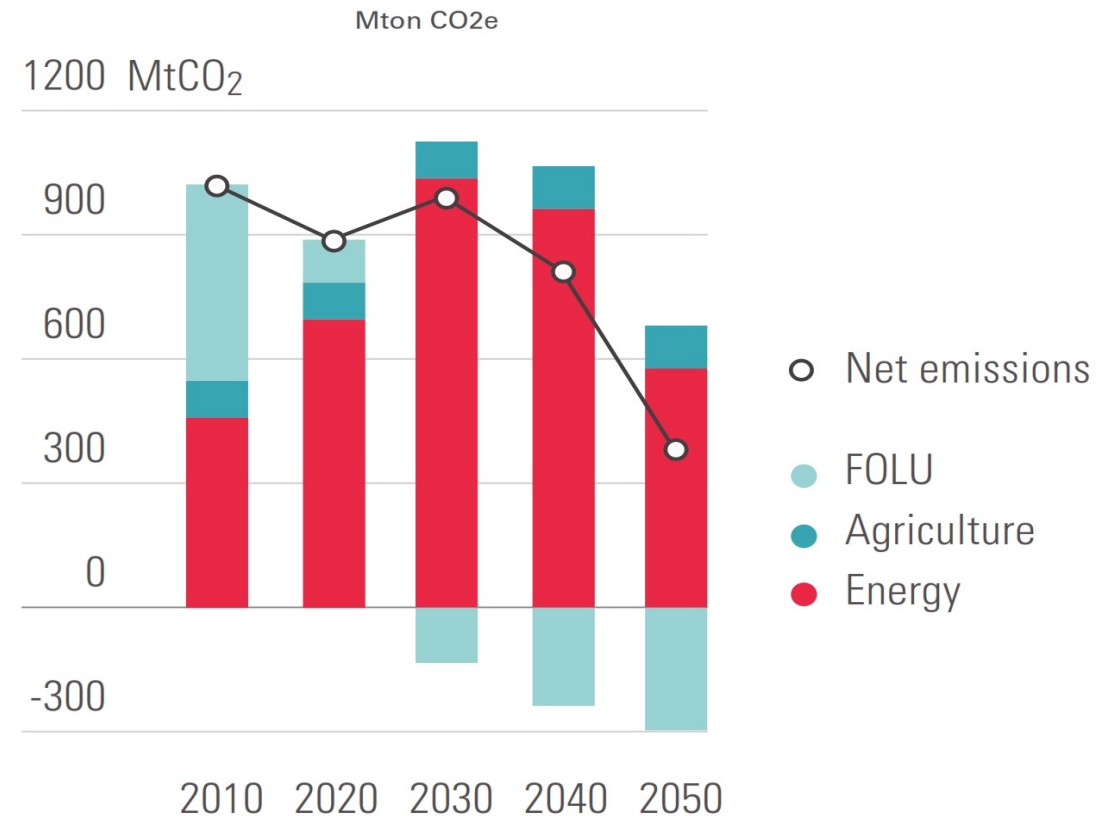
- Government of Indonesia has submitted its updated NDC along with the LTS last July 2021.
- The government does not pledges more ambitious mitigation targets in the NDC
  - Unconditional target: 29%
  - Conditional target: 41%
- Indonesia envisions a progression beyond its existing commitment to emission reductions.
- CPOS (extended of NDC) and LCCP as Deep Decarbonization Scenario (DDS)
- Achieving NDC Target relies very much on FOLU sectors, and the DDS FOLU is expected to reach net sink by 2030

# Key Decarbonization Factors

Key decarbonization factors:

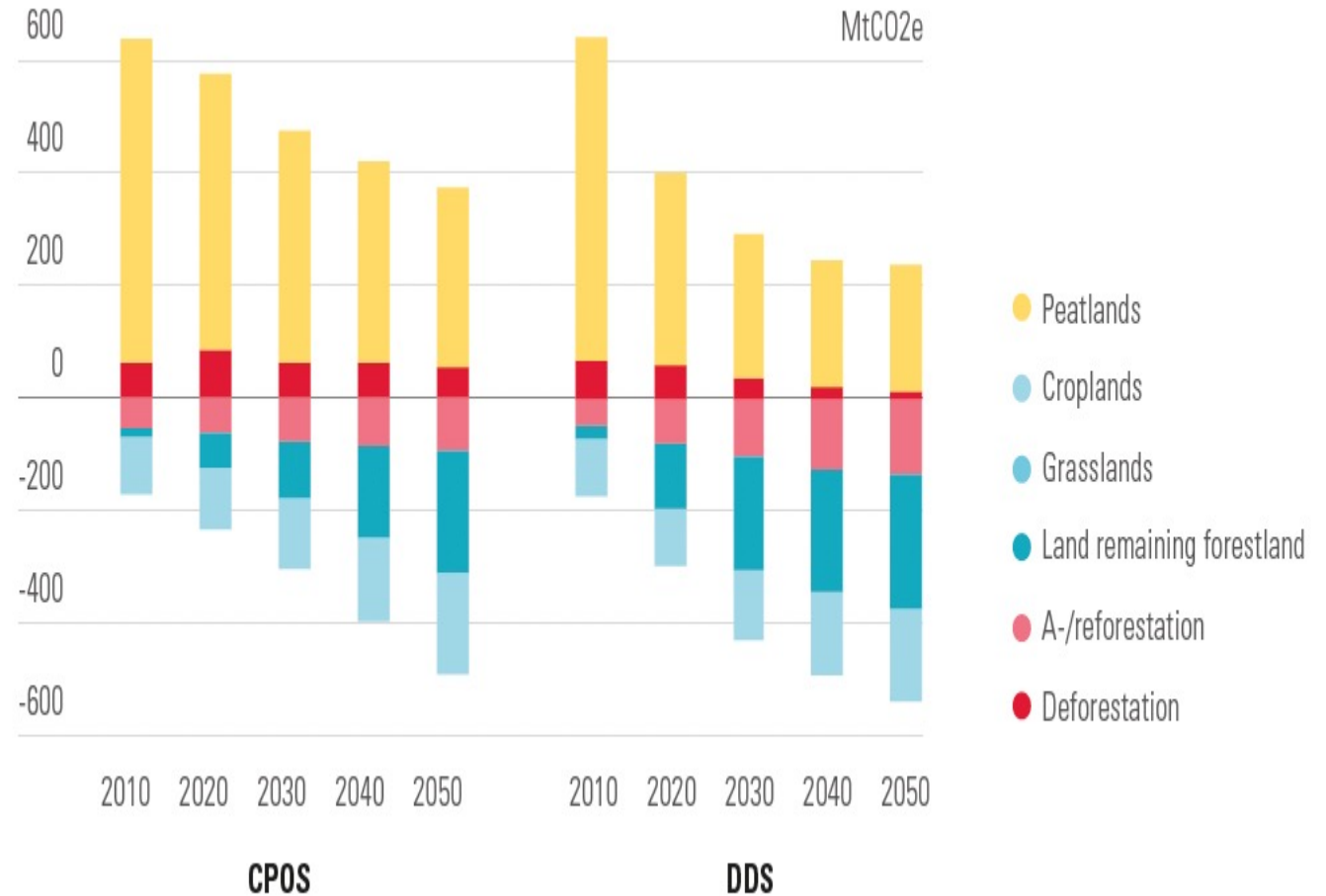
- Efficiency measures,
- Decarbonization of power: RE and coal with CCS/CCUS,
- Biofuel in transport
- Massive cut in deforestation
- Practicing sustainable use of land and forest
- Financing Policy

**Figure 2.** Net emissions, energy + AFOLU



# Priority Short Term Policy and Actions: AFOLU

- Reaching for AFOLU net-sink demands a massive-scale paradigm change to perceive forest and a carbon-rich ecosystem as part of a nature-based solution.
- Indonesia's land-based policies have been growing remarkably and aligned with Indonesia's vision for the DDS scenario.
- The only thing that distinguishes the existing policies (CPOS) and the ambitious DDS scenario is the implementation rate of the policies, which includes all the enablers and implementation schemes.



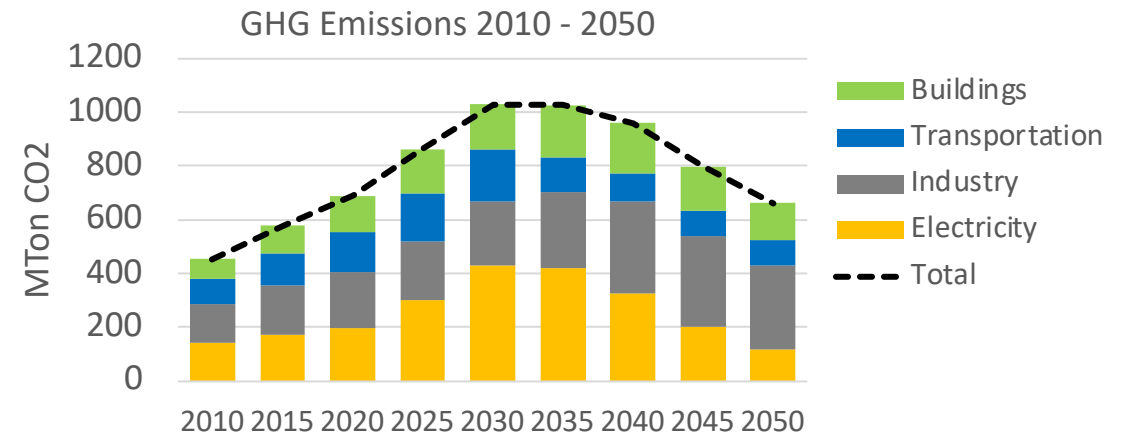
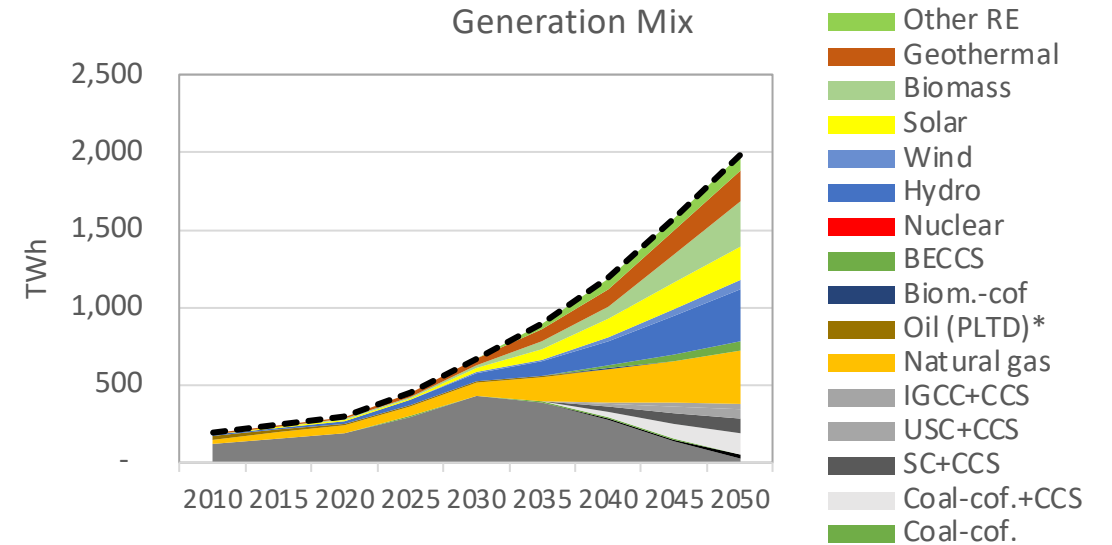
# Priority short-term policies and actions: AFOLU

- Social forestry as a scheme aimed to allocate forest area legally for the community and to provide an access to incentive and/or capacity building programs to increase land productivity (targeted by 12 Mha in 2030)
- Forest and Peatland Moratorium Policy
- Multi-permit scheme that allows any entities to have multiple business activities and partner with communities, particularly in the disputed land (under profit-sharing mechanism), to establish mixed farming
- Enhancing integrated farming system and optimizing use of unproductive lands
- Responsible consumption and production
- Incentive and disincentive system (Ecosystem-based Fiscal Transfer, PES, Carbon Tax/Carbon pricing)

# Priority short-term policies and actions: ENERGY

## Major transformation:

- Focus on power sector decarbonization:
- Coal phase down, replaced by gas, remaining coal+ CCS, increase share of RE (hydro, solar PV, geothermal)
- Transport: shift to mass transport, increase biofuel and EV
- Industry: replace coal by gas and biomass
- Building: electrification of end-use, efficiency measures



# Priority short-term policies and actions: ENERGY

The government policy that is used as reference in formulating the NDC is Government Regulation No. 79/2014 on National Energy Policy. This policy set out the ambition to transform, by 2025 and 2050, the primary energy supply mix with shares as follows:

- (a) new and renewable energy at least 23% in 2025 and at least 31% in 2050;
- (b) oil should be less than 25% in 2025 and less than 20% in 2050;
- (c) coal should be minimum 30% in 2025 and minimum 25% in 2050; and
- (d) gas should be minimum 22% in 2025 and minimum 24% in 2050.

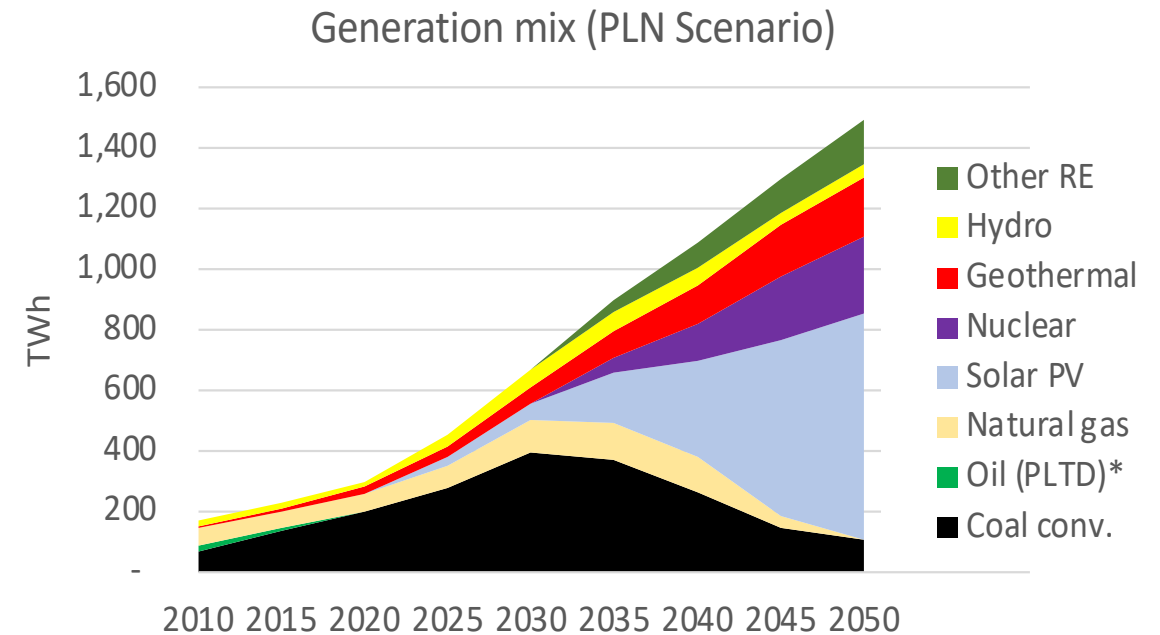
# Biofuels Development Policies

- Sector wise, the main focus of Indonesian GHG mitigation targets in energy activities are power and transport sectors.
- Government policies that are in support to the achievement of Indonesian emission targets:
- Increased use of biofuels to replace oil fuels used in transport as well as in industry.
- Began to be enacted in 2008, which is called “biofuel mandatory” (Energy Minister Regulation No.32/2008). The regulation mandates the use of 20% biodiesel in transport and 30% biodiesel in industry
- This regulation was amended through Energy Minister Regulation No.12/2015, which gives more clarity on the biofuel use target for different sectors.
- Financial incentives for the development of biofuel technology and supplies (the biofuel development fund are collected from the levy applied to biofuel producers). The provisions of biofuel fund are described in Energy Minister Regulation No.41/2018).



# Power sector policies

- The government has enacted renewable-for-electric-power regulation (Energy Minister Regulation No.50/2017), then ammended in Energy Minister Regulation No.4/2020, with more provisions that are expected to **attract investment in renewable power**.
- To promote solar PV development, Energy Minister Regulation No 13/2019.
- Electricity utility business plan for 2021-2030: **RE in power** generation is targetted to increase to **48%** in 2030
- Early June this year the electric utility (PLN), announce a bold and surprising statement that it has set a target to reach carbon neutral in 2060.
- Some plans of coal power plant retirement has been announced—it practically will become 100% fossil-fuel free in 2060. Coal power retirement will begin in 2030. Complete coal phase out will be reached in 2056. The power supply will be mainly from renewable and nuclear. A large renewable proportion would be solar PV with batteries



# Electric Vehicle Development Policies

Other policy development that is considered relevant to GHG mitigation actions are policies for promoting electric vehicle development. It should be noted that electric vehicle will reduce GHG emission only when the electricity source is decarbonized.

The policies/regulation related to battery electric vehicle (BEV) includes:

- Presidential regulation No.55/2019 concerning acceleration of programs for BEV development
- Government Regulation No. 73/ 2019 concerning taxation provisions that make BEV exempt from luxury goods taxation
- Minister of Transportation Regulation No.45/2020 concerning BEV.
- Energy Minister Regulation No.13/2020 concerning infrastructure for BEV recharging.
- Home Affairs Minister Regulation No.8/ 2020 concerning vehicle taxation based on vehicle emission performance.
- Industry Minister Regulation No. 27/2020 concerning specification and roadmap of BEV development.
- Industry Minister Regulation No. 28/2020 concerning provisions of BEV imports.

# EPILOGUE

- Huge investment is needed for DDP
  - International flows finance for non-Annex 1 countries (e.g. finance tools in UFCCC such as GCF-RBP) and financial scheme for green investment for the private
- Technology transfers is in the area of low carbon technology (e.g. efficient solar cell manufacturing).
- International cooperation on research (e.g. Agriculture technologies-boosting productivities, precision farming, IOT)
- Modelling and quantifying the co-benefit (SDGs) of climate actions