

The Webinar Fossil Fuel Subsidy Reform: Moving from Commitment to Action in 2022

Friends of Fossil Fuel Subsidy Reform & International Institute for Sustainable Development

Fossil Fuel Subsidy Reform and Broader Actions Towards a Clean Energy Transition Fits into the Agenda of Indonesia's G20 Presidency

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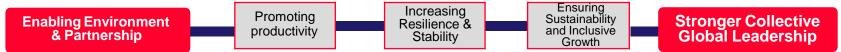






Indonesia G20 Presidency **Recover Together, Recover Stronger**

"At the G20 Presidency, Indonesia carries the theme '*RecoverTogether, Recover Stronger*'. And in the G20 Presidency Indonesia will focus on working on three things: First, inclusive health care. Second, digitaleconomic transformation. Third, the transition to sustainable energy."



G20 Comprehensive Recovery Action Plan

GLOBAL HEALTH

Post-pandemic global health governance and architecture

Improving Supply of vaccines & essential medical products

DIGITAL ECONOMIC TRANSFORMATION

Post-pandemic global economic order with digitalization

Creating Economic Values for Digital Technology

ENERGY TRANSITION

Global Cleaner Energy Systems and Just Transitions

Achieving Global Deal to accelerate energy transitions

"ENERGY TRANSITIONS" was firstly introduced as a tagline by G20



National Commitment to Climate Change Issues

- Indonesia is committed to reducing GHG emissions by 29% from BaU by 2030 and 41% with international assistance.
- Indonesia has ratified the Paris Agreement in October 2016 (Law No. 16 of 2016), and submitted it to the UNFCCC on 6 November 2016.

Paris Agreement Target: Maintain global temperature rise not exceeding 2°C, strive to be 1.5°C

| Νο | Sector | GHG Emission 2010 | GHG Emission in 2030 (Million Ton CO ₂ e) | | | Reduction (Million Ton CO ₂ e) | | 38% |
|----|-------------|------------------------------------|---|--------|--------|--|-------|--------|
| | | (Million Ton CO ₂ e) | BaU | CM1 | CM2 | CM1 | CM2 | |
| 1 | Energy | 453.2 | 1,669 | 1,335 | 1,271 | 314 | 398 | |
| 2 | Waste | 88 | 296 | 285 | 270 | 11 | 26 | |
| 3 | IPPU | 36 | 69.6 | 66.85 | 66.35 | 2.75 | 3.25 | |
| 4 | Agriculture | 110.5 | 119.66 | 110.39 | 115.86 | 9 | 4 | |
| 5 | Forest | 647 | 714 | 217 | 64 | 497 | 650 | |
| | Total | 1,334 | 2,869 | 2,034 | 1,787 | 834 | 1,081 | Source |

| Sub Sector | Target of mitigation 2030 (Million Ton CO ₂ e) | | |
|-------------------------|---|--|--|
| Renewable energy | 170,42 | | |
| Energy efficiency | 96,33 | | |
| Clean power | 31,80 | | |
| Fuel switching | 10,02 | | |
| Post mining reclamation | 5,46 | | |
| Total | 314,03 | | |

Source: Ministry of Energy and Mineral Recources, 2021



Energy Sector's Long Term Strategy for Carbon Neutral

Massive Development of Renewable Energy

- Solar Power Plant (Rooftop PP, Solar Farm, Floating Solar PV)
- PP (on-shore and off-shore)
- Biomass
- Geothermal (include small scale)
- Hydro (include pumped storage)
- Ocean energy
- Nuclear
- Hydrogen
- Battery Energy Storage System (BESS)

Reducing Fossil Fuels or Utilization Of CCS/CCUS Technology

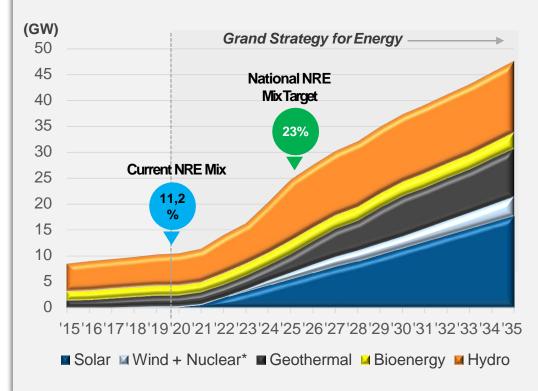
- Implementation of the Coal PP *Biomass Co-firing* program.
- Coal PP and Gas PP retired.
- There are no additional Gas PP except those that have been contracted or under construction.
- Additional fossil generator only with CCS/CCUS (Gas PP+CCS/CCUS from 2031 and IGCC+CCS from 2038).
- Diesel PP is converted to NRE generator.

Development of Interconnection Transmission and SMART GRID

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Interconnection for Electricity Transmission in Sumatera, Jawa, Kalimantan, and Sulawesi in 2024 and support for *smart grid* development.

Enhancing Renewable Energy's Power Plant Capacity until 2035



Indonesia is developing Long Term Strategy to Net Zero Emission in which energy utilization will be at peak at 2040 and reach Net Zero in 2050.

Source: Ministry of Energy and Mineral Recources, 2021



Energy Transition toward Net Zero Emmision

- To maintain national energy security, it is necessary to have a source of energy besides fossil fuels, for instance biofuel.
- To support the national commitment in reducing carbon emissions through efforts to reduce motor vehicle exhaust emissions and optimize the supply and distribution of fuel oil throughout Indonesia, the Presidential Regulation no. 117 of 2021 has been issued, where a clean and environmentally friendly fuel road map will be established.

Mandatory Biodiesel



- The biofuel program is one of the government's efforts to develop renewable energy and reduce dependence on highly
 volatile petroleum. Since early 2016 Indonesia has implemented a mandatory use of 20 percent blended biodiesel (B20)
 and B30 in 2020. The funding program is managed by the Oil Palm Estate Fund Agency (BPDPKS). B30 incentives
 disbursed only to biofuel companies to cover the price differentiation.
- The realized of B30 in 2021 reached 9.3 million kiloliter or saving of foreign exchange from the use of B30 amounted to Rp 66.54 trillion (USD 4,6 billions).
- Beyond B30, the Indonesia Government trough the Ministry of Energy and Mineral Resources has planned to conduct a road test of B40 (B30 + 10% DFAME 10% and B30 + D10/10% HVO), starting February 2022.



Electric Vehicle (EV) Battery Inc

Electric Vehicle (EV) Battery Industry Development

chemicals using raw materials from oil and gas.

• EV Roadmap, construction and development EV Charging Stations, penetration EV into market

RDMP: Balongan, Balikpapan Phase I & Phase II (produce high-quality fuel of the Euro V standard)

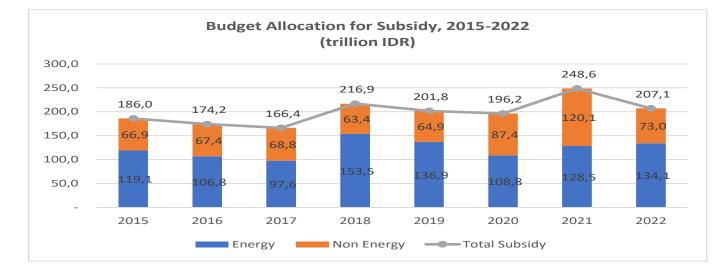
• The Ministry of Industry's roadmap for two and four-wheeled electric vehicles targets two million units by 2025 (20 percent of car production).

GRR Tuban, Petroleum purification and refinery that produce fuels and organic basic chemical industry that produces



Government Policy on Energy Subsidies

- Subsidy Program is the provision of support in the form of budget allocation to state companies, government agencies, or third parties based on
 applicable laws and regulations to provide goods or services of a strategic nature or control the lives of many people, or distributed directly to
 beneficiaries, in accordance with the financial capabilities of the state.
- To maintain people's purchasing power during the economic recovery, the government will still provide energy subsidies. For 2022, the government continues the provision of fixed subsidies for diesel and price difference subsidies for kerosene.
- Fossil Fuel Subsidy Reforms:
 - 1) Fuel subsidies were given based on a price gap between fuel retail price and price determination (government intervention). The price setting process takes into consideration factors such as macroeconomic developments, purchasing power, and current social and political conditions.
 - 2) Several policies have been implemented recently, such as the following: (i) Removal of subsidy for gasoline and applying fixed subsidy for diesel; (ii) One fuel price policy; (iii) Encouraging the use of biofuel as an alternative energy; and (iv) Switching to gasoline use to a more qualified and environmentally friendly category.



Energy Subsidy, 2021-2022 (Rp trillion)

| Allocation | Outlook 2021 | APBN 2022 |
|-------------------------|--------------|-----------|
| 1. Fuel and LPG Subsidy | 66,9 | 77,5 |
| a. Fuel Subsidy | 17,0 | 11,3 |
| b. 3 kg LPG Subsidy | 49,9 | 66,3 |
| 2. Electricity Subsidy | 61,5 | 56,5 |
| Total | 128,5 | 134,0 |



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