



Indonesia, a major IEA association country at the heart of our efforts

Deep policy dialogue between the IEA and the world's fourth most populous country covers power sector transmissions, energy efficiency, and support to Indonesia's JETP



Our Net Zero Roadmap, developed with the Ministry of Energy and Mineral Resources (MEMR) of Indonesia, directly informed the country's Just Energy Transition Partnership (JETP)



The Agency is identified as a key partner in the JETP's implementation, leading the Technical Working Group and participating in the Policy Working Group



Strategic partner to the Indonesian government's presidency of the G20 in 2022 and ASEAN in 2023



The IEA's Energy Sector Roadmap to Net Zero Emissions in Indonesia reflects the IEA's status as the global authority and was conducted hand-in-hand with my Ministry"

Arifin Tasrif
Minister of Energy and Mineral Resources of Indonesia


Key facts

4th most populous country in the world


4th  | 2050

Expected to become the 4th biggest economy in the world by 2050

Largest energy producer and consumer in Southeast Asia

18% 

current share of renewables in power generation (2022)

1 Gt /Year 

Energy emissions to grow about 1 Gt/year by 2050 if no further policy action

► **IEA Net Zero Roadmap underpins the Indonesia JETP**

The Roadmap, jointly developed with the MEMR, directly contributed to the JETP's ambitious objectives. The key targets in the JETP were developed alongside the roadmap, notably the commitments to reach peak emissions in the electricity sector at 290 Mt and to achieve a 34% share of renewables in electricity generation by 2030.

Following a formal request from the Government of Indonesia to serve as Strategic Advisor in the JETP Secretariat and to chair the Technical Working Group, the IEA has been working extensively with various stakeholders, including the MEMR, the Coordinating Ministry for Maritime Affairs and Investment (MARVES), the government-owned power generator PLN and international partners, to support the implementation of the JETP. The IEA was commended by the Indonesian government for its multiple and sustained contributions to the work that allowed the JETP process to advance towards funding and implementation in 2024. In part due to the IEA's advice, Indonesia expanded the JETP to add the Energy Efficiency and Electrification Working Group in 2024. The IEA is providing significant analysis and project development support to this new group, including a roadmap for off-grid power, energy efficiency and electrification.

► **Inputs to the JETP Comprehensive Investment and Policy Plan (CIPP)**

The IEA provided a techno-economic analysis of different possible power systems for the CIPP as well as inputs on the development of solar PV supply chains. This topic has been identified by the Indonesian government and other JETP stakeholders as a key focus area for investment and policy action and was therefore central to the energy transition process envisioned in the JETP. The CIPP, including the IEA's recommendations, was published in November 2023. The IEA has also supported Indonesia in the development of the 2024 CIPP, which includes a section on energy efficiency.



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► **Designing energy efficiency standards**

In March 2023, the MEMR announced plans to introduce fuel economy standards for trucks, with the IEA providing policy guidance and analytical support. Freight transport by road plays a central role in Indonesia's economy and is a major source of energy demand, in particular from oil. Improved energy efficiency from trucks could help decouple Indonesia's transport activity from energy consumption. Fuel economy and CO₂ emissions standards could reduce fleet-wide average fuel consumption of Indonesia's heavy trucks by 17% by 2030. Coupled with increased electrification, this could reduce the country's oil demand by over 70 million barrels by 2030 and around 420 million barrels by 2050. This translates to savings of approximately USD 5.6 billion and USD 33.6 billion, respectively, based on current oil prices. In 2023, the IEA supported Indonesia in initial data analysis to start this work and throughout 2024 the IEA provided support in developing the market assessment, additional data collection, policy options and simulation and testing options needed to drive forward the work to develop fuel economy standards for heavy duty vehicles.

► **Power sector transitions – direct support for policy and implementation**

The IEA was invited by the MEMR to support the implementation of a presidential regulation on renewable energy. The Agency delivered extensive policy advice on Indonesia power system enhancement and renewables integration in liaison with the MEMR, PLN and other national institutions. The IEA also delivered a detailed analysis of the Java-Bali power system and supported the delivery of a 145 MW Cirata floating solar project. The Agency's work on attracting private investment in transmission systems provided input for a renewable energy law in Indonesia issued at the end of 2022.

Opportunities for engagement

- **Integrating variable renewables** - The IEA is helping to enhance PLN's ability to manage and integrate a greater share of variable renewable energy into the grid.
- **Implementation of fuel economy standards for trucks** – The IEA continues to support the development of policies that will help Indonesia to achieve the efficiency and electrification in transport needed to advance towards its net zero objectives.
- **Increasing energy efficiency in the country** – The IEA has ambitious plans to continue to support Indonesia in policy, regulatory and exploratory work on increasing energy efficiency across sectors. It will also continue to support the Energy Efficiency and Electrification Working Group of Indonesia's JETP.

This work is supported by the **Clean Energy Transitions Programme**, the IEA's flagship programme for taking action to achieve a clean energy transformation worldwide.

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