



India can provide a model of green economic development for other emerging and developing countries

IEA policy solutions and support for multilateral engagement help accelerate clean energy transitions in India



Supported India's first-ever presidency of the G20 and Clean Energy Ministerial in 2023



Provided policy advice on solar PV, decentralised solar programmes and bioenergy in liaison with India's government and major think tanks



Worked with the Government of India on a clean and just energy transition, selecting topics and sectors with the most direct impact on decarbonisation and people's lives

Key facts



2023

In 2023, India became the **world's most populous country**

3rd

world's third-largest **energy consuming country**, thanks to rising incomes and improving standards of living

0

2070

India announced ambitious **energy transition plans** at COP26, including reaching net **zero emissions by 2070**



Energy use has more than doubled since 2000

with around **90% of demand** being met by **coal, oil and solid biomass**

2023 electricity generation



+6%

Solar has grown to 6% (from 0% in 2010)



73%

Coal is currently close to 73%

➤ Energy efficiency

The IEA works closely with the Government of India and other stakeholders to provide policy advice and training for Indian officials and to facilitate exchanges between India and other emerging economies. Our report detailing a strategic plan for advancing energy efficiency across demand sectors by 2030 served as a critical input for the energy efficiency discussions of India's G20 Energy Transitions Working Group. We also led the development of the Voluntary Action Plan on Doubling the Global Rate of Energy Efficiency Improvement by 2030, acknowledged in a joint declaration by the leaders at the G20 Summit. We also held the Energy Data and Policy Training workshop in New Delhi in June 2024 in partnership with the World Energy Council India, and the Energy Efficiency Policy in Emerging Economies Training Week in New Delhi in December 2023 with the Bureau of Energy Efficiency. The Training Week brought together more than 150 policy makers and energy experts from across the country.

➤ Renewable energy and biofuels

The collaboration between the IEA and the Government of India reflects a strategic partnership to advance renewable energy policies – particularly solar PV, a linchpin for clean energy transitions. The IEA actively engages with the Ministry of Natural Resources and Energy, the Ministry of Power and other key stakeholders to help shape and implement solar PV and renewable energy policies, and to address critical issues in the global solar PV supply chain. As part of its G20 Presidency in 2023, India proposed a Global Biofuel Alliance to bring countries together to expand sustainable biofuels production and use. As the coordinator and facilitator of the Clean Energy Ministerial Biofuture Platform, the IEA has played an integral part in informing the new Alliance's work.

➤ G20

The IEA directly supported India's first-ever presidency of the G20 and the Clean Energy Ministerial in 2023. We worked with the Government of India to develop G20 workstreams, notably:

- **Energy** – Collaborated with the Ministry of Power, Ministry of New and Renewable Energy, Ministry of Petroleum and Natural Gas, Ministry of Mines and NITI Aayog on issues including energy security and clean energy supply chains, "fuels for the future", energy efficiency and industrial decarbonisation, low-cost financing for energy transitions, just energy transitions, and critical clean energy technology gaps.
- **Disaster Risk Reduction** – Contributed to the G20 working group by adding a focus on the importance of energy infrastructure in disaster and climate resilience work.
- **Development** – Contributed to an analysis of the impact of India's Lifestyle for Environment initiative on reducing emissions and supporting sustainable development.
- **Finance track** – Provided analytical input to inform both the Sustainable Finance Working Group on clean energy investment and the Framework Working Group on the macroeconomic impact of energy insecurity, climate change and transition pathways.

➤ Lifestyle for Environment (LiFE) Initiative

The IEA supported India's LiFE initiative with a report on the impacts of measures of behavioural change and sustainable consumer choices, which was presented to Prime Minister Narendra Modi to inform G20 discussions. IEA Executive Director Fatih Birol was invited to brief the G20 Development Ministers Meeting held in Varanasi in June 2023 about the IEA's analysis. As a result, key findings were incorporated into the Varanasi G20 Development Ministers' Declaration.

Opportunities for engagement

- **Future fuels** – The IEA is assessing the techno-economic aspects of biofuels and hydrogen, as well as synergies between them, to support India in its goals to reduce fossil fuel imports and decarbonise hard-to-abate sectors.
- **Enhancing energy efficiency** – The IEA is working to evaluate innovative financing models to promote premium efficiency electric motors in India. We are also assessing opportunities for the deployment of heat pumps for boosting energy efficiency and the electrification of Indian industries.
- **Enhancing grid security** – Grid expansion is a critical step toward India's 2030 renewable energy target. The IEA supports India in improving grid security and expansion through analysis of variable renewable integration (VRE), peak load and supply adequacy in the Indian power system.



— IEA Executive Director Dr. Fatih Birol with Prime Minister Modi of India, presenting the LIFE Lessons from India report, Varanasi, June 2023

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.

Last updated: October 2024

Want to know more?

- **Bookmark the CETP webpage** | <https://bit.ly/iea-cetp>
- **Subscribe to the CETP Newsletter** | www.iaea.org/newsletter
- **Engage with IEA social media** |
- **Contact** | cetp@iaea.org

