

India Energy Outlook 2021

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In news : As per report of International Energy Agency, India is set to experience the largest increase in energy demand in the world over the next 20 years as its economy continues to develop

Key Highlights of the report

This special report maps out possible energy futures for India, the levers and decisions that bring them about, and the interactions that arise across a complex energy system. Following are the key highlights of the report:

- Prior to the global pandemic, India's energy demand was projected to increase by almost 50% between 2019 and 2030, but growth over this period is now closer to 35% in the STEPS(Stated Policies Scenario), and 25% in the Delayed Recovery Scenario
- **Solar power** is set for explosive growth in India, matching coal's share in the Indian power generation mix within two decades in the STEPS – or even sooner in the Sustainable Development Scenario.
- **In the STEPS**, India exceeds the goals set out in its Nationally Determined Contribution (NDC) under the Paris Agreement. The emissions intensity of India's economy improves by 40% from 2005 to 2030, above the 33-35% set out in its existing NDC
- As per the IEA's report, **India will make up the biggest share of energy demand growth at 25% over the next two decades**, as it overtakes the European Union as the world's third-biggest energy consumer by 2030
- According to it, India's energy consumption is expected to nearly double as the nation's gross domestic product (GDP) expands to an estimated \$8.6 trillion by 2040 under its current national policy scenario

- **More reliant on fossil fuel:** India's growing energy needs will make it more reliant on fossil fuel imports as its domestic oil and gas production has been stagnant for years despite government policies to promote petroleum exploration and production and renewable energy.
- **India's oil demand:** It is expected to rise to 8.7 million barrels per day (bpd) in 2040 from about 5 million bpd in 2019, while its refining capacity will reach 6.4 million bpd by 2030 and 7.7 million bpd by 2040, from 5 million bpd.
- **More import:** The world's **second-biggest net oil importer after China** currently **imports about 76% of its crude oil needs**. That reliance on overseas oil is expected to rise to 90% by 2030 and 92% by 2040, the IEA said.
- Rising oil demand could double India's oil import bill to about \$181 billion by 2030 and nearly treble it to \$255 billion by 2040 compared with 2019
- **Building space:** India is set to more than double its building space over the next two decades, with 70% of new construction happening in urban areas.
- **Liquefied natural gas (LNG):** India, the **world's fourth-largest LNG importer**, which ships in about half of its natural gas needs by tanker currently, is spending billions of dollars to build infrastructure to boost use of the cleaner fuel.
 - **LNG imports are expected to quadruple to 124 billion cubic metres (bcm)**, or about 61% of overall gas demand by 2040.
 - That would be up from imports of 76 bcm, or about 58% of gas consumption by 2030.
- The market for natural gas is growing fast in India, but its role varies by sector, by scenario and over time. The 6% share of natural gas in India's current energy mix is among the lowest in the world.

About the India Energy Outlook 2021

- The India Energy Outlook 2021 is a new special report from the International Energy Agency's World Energy Outlook series.
- The report explores the opportunities and challenges ahead for India as it seeks to ensure reliable, affordable and sustainable energy for a growing population.
- Using the latest available energy data, incorporating recent impacts of the Covid-19 pandemic, the report examines different pathways out of the crisis and the longer-term impacts on India's energy supply, demand and investment.
- The India Energy Outlook is based on detailed modelling of a set of scenarios exploring how India's energy sector might evolve between now and 2040.

The report is presented as a series of in-depth 'deep dives' exploring cross-cutting issues such as:

- **The effects of economic growth and industrialisation on India's fuel** and sector-level demand trends
- The evolution of mobility, including electrification, in the context of growing urbanisation
- The prospects for **expanding energy access**, especially in rural areas
- Flexibility requirements in the power sector under ambitious renewable capacity targets and a significant rise in electricity demand, especially from air conditioners
- **Challenges and opportunities for clean energy finance**, including investments in solar and batteries
- The supply and infrastructure required for an expanded role for natural gas, along with a sector-level assessment of its potential
- **Prospects for developing modern bioenergy supply chains** and taking advantage of India's growing volumes of organic waste

- **Impacts of India's energy policy choices on energy access,** air pollution and carbon emissions
- **India's growing importance in global energy issues,** and the implications of its development trajectory on international energy supply, trade and investment