



India's energy policy: Key findings of the IEA's In-Depth Review 2020

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India and IEA launch new era of collaboration on path to membership

- 1998 - **Declaration of Cooperation** (energy security and statistics)
- 2011 - **Memorandum of Understanding** (MoPNG and the IEA) on emergency oil security
- 2017 - India becomes **IEA Association Member**
- 2019 - **Milestone year for the IEA-India relationship**
 - January Government of India expresses interest in exploring IEA membership
 - June India participates in IEA Governing Board
 - December IEA Ministerial leads to mandate for **strategic IEA-India partnership**
- January 2020 – Launch of **IEA In-Depth Review of India's energy policy**

Highlights of the IEA-India relationship

India becomes Association Member of IEA (2017)



India participates to the IEA Ministerial



An ever closer cooperation strengthens global energy security and energy collaboration.

Overview of IEA In-Depth Policy Reviews

- Carried out for member countries of the IEA family
- Are independent and evidence-based peer reviews by international senior experts from governments
- Prepared in consultation with all energy sector stakeholders
- Make detailed recommendations to governments on energy market designs, clean energy transitions & energy security

Latest IEA reviews:

- India 2020 (first time)
- United Kingdom 2019
- United States 2019
- Sweden 2019
- Upcoming: Germany, EU, Korea and Japan.

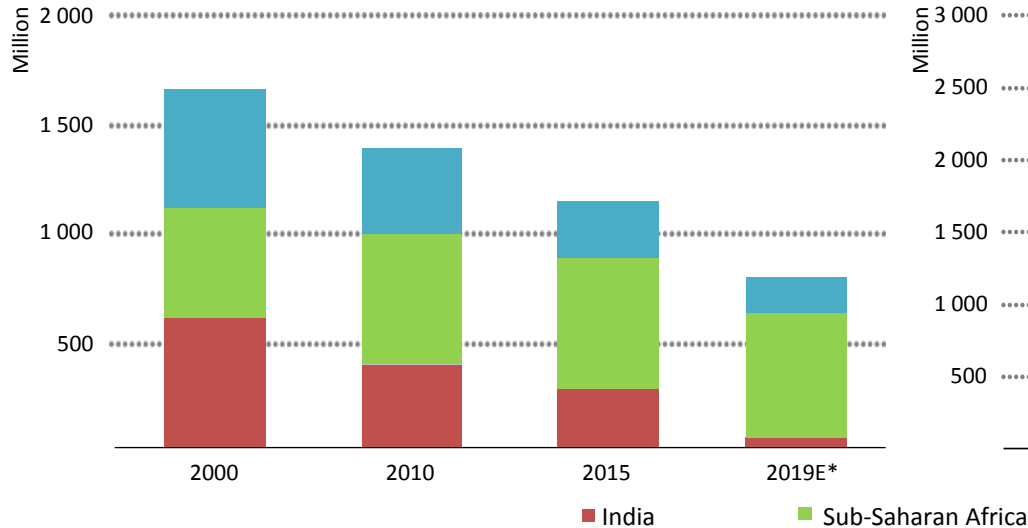
India has made outstanding progress against its goals

- **Energy access**
 - Electricity: 99.9% household electrification
 - Cleaner cooking: +80 million LPG connections, #GiveItUp
- **Renewables**
 - Progress towards the targeted 175 GW by 2022
 - Ambitions for 450 GW
- **Energy efficiency**
 - National Mission for Enhanced Energy Efficiency
 - UJALA campaign: +370 million LEDs, 7 million LED tubelights
 - Perform Achieve Trade (PAT) scheme

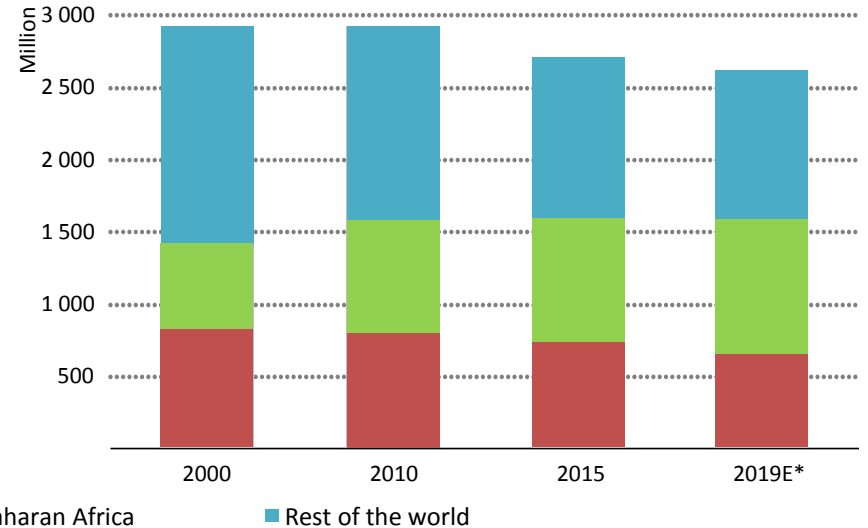


India has achieved electricity access for all and is tackling air pollution and clean cooking

World: Number of people without access to electricity



World: Number of people relying on traditional use of biomass

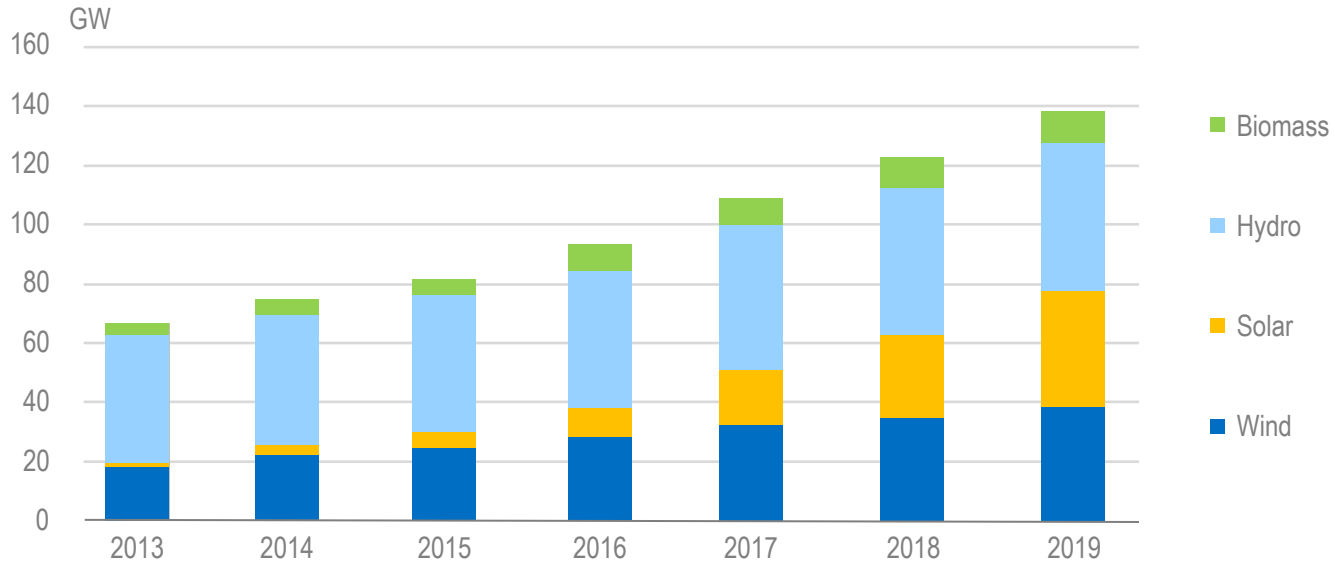


*2019 estimates.

Almost 750 million people gained access to electricity in India since 2000, while vigorous programmes have helped replace biomass use in cooking. India can offer good experience to Africa and the world.

India has seen rapid growth in renewables

India's renewable power generation capacity, 2013-19



Solar PV and onshore wind have seen strong growth, overtaking for the first time investment in thermal power generation in 2018. To reach 175 GW by 2022 and 450 GW, system integration becomes a priority.

Energy efficiency improves, but needs to accelerate

- **Strong programmes based on the National Energy Efficiency Mission**

- Green public procurement of LEDs (UJALA)
- Industry scheme Perform, Achieve and Trade (PAT)
- Cooling Action Plan

- **Recent energy efficiency programmes introduced since 2000 have allowed India to:**

- Cut expected energy demand by 15%
- Reduce oil imports by 8% and gas imports by 12%
- Lower CO₂ emissions by 300 MT (or 14% of current emissions)
- Reduce local pollution (SO₂ and NO_x) by more than 15%

With ambitious energy efficiency policies, up to 2040 India can avoid:

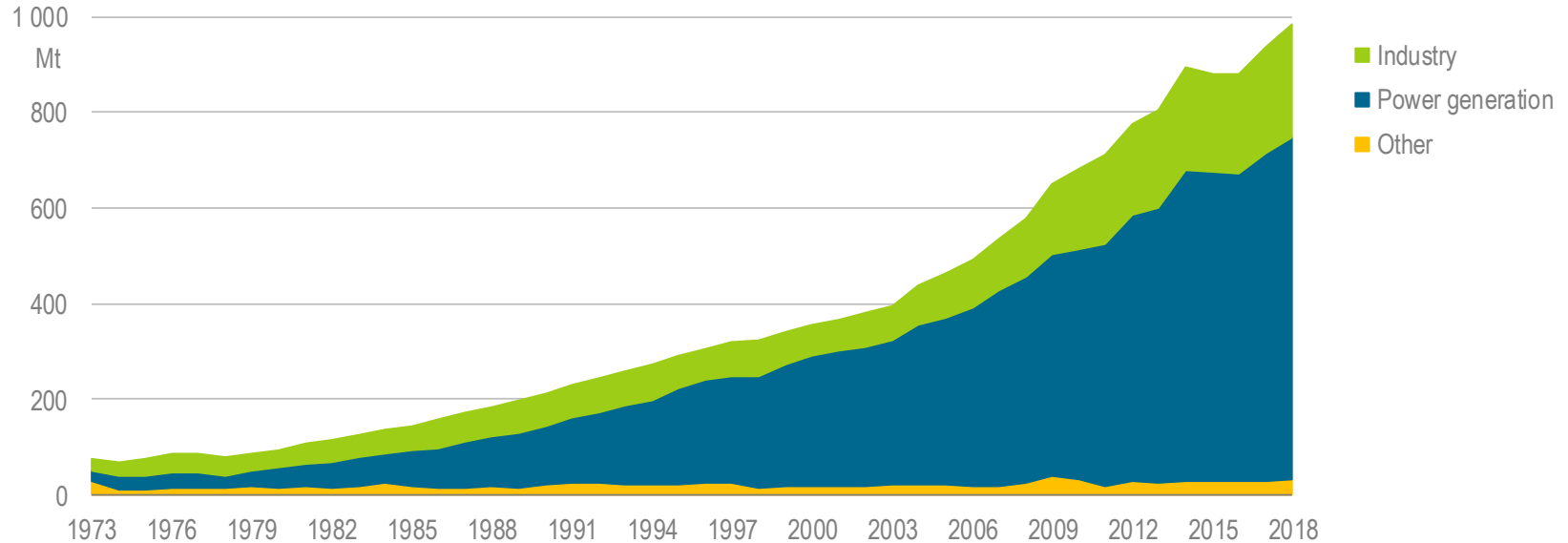
- USD 200 billion per year of energy imports and building 300 GW of new power generation

Energy security and diversification emerges key priorities

- **Oil**
 - Growing net importer of crude oil (Middle East) and net exporter of products
 - Upstream reforms introduced by HELP offer new opportunities for investment
 - India's oil stocks are a good start and emergency capability needs to follow oil demand growth
- **Natural gas**
 - Rising gas use in cities and transport underpin role of natural gas
 - Market pricing is critical for the creation of a gas trading hub
 - Need for enhanced gas infrastructure, including grids and storage
- **Electricity**
 - Milestone reforms: commercial coal mining and flexible coal use (SHAKTI)
 - Investment in a flexible, financially sound and clean energy system needs to continue
 - Moving from scarcity to quality of supply and reliability (24/7)

Coal sector reforms need to continue

Coal consumption by sector, 1973-2018



Coal remains the backbone of the energy system, accounting for two thirds in electricity generation and a quarter in industry. The efficiency and environmental performance of the coal sector remain critical.

IEA key recommendations for India's energy sector

- **Continue to promote energy investments:**
 - Move towards market pricing for all energy commodities
 - Stable regulatory rules for all players in the market
- **Prioritise actions to foster energy security:**
 - Work with the States on the integration of variable renewables and boost flexibility
 - Reinforce oil emergency response, benefitting from international best practice
 - Create a natural gas market with robust gas infrastructure
- **Create a cross-government framework for energy policy**
- **Continue to work with the IEA and expand international energy collaboration** to benefit from international best practice and highlight India's energy successes



iea.org/reports/india-2020