

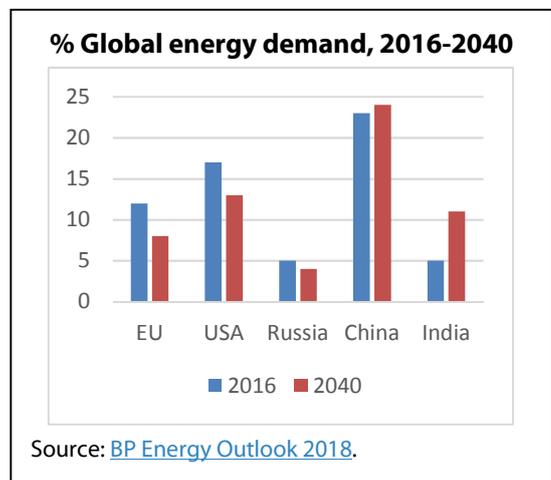
India: Energy issues

India's energy consumption is set to grow faster than that of any other major economy, and the country is to overtake China as the largest-growing market for energy by the end of the 2020s. In spite of its large population, its share of global energy consumption, currently at 5 %, should grow moderately to reach 11 % in 2040. India's government plans to bring electricity to every household by the end of 2018. India's energy mix, mostly based on fossil fuels, is to evolve very slowly in the future, but renewables – especially solar power – will gain relevance.

India's growing energy needs

India is projected to have the [world's largest population](#) by 2024. Its economy is already the fastest-growing in the world: its GDP grew to [7.7 %](#) in the first quarter of 2018, more than that of any other large economy. According to the World Bank, India is set to revert to its trend [growth rate of 7.5 %](#) in the coming years. The [BP Energy Outlook](#) for 2018 forecasts that the country's energy consumption will grow by 4.2% yearly, faster than that of any other major economy in the world. Furthermore, India will overtake China as the largest-growing market for energy by the end of the 2020s. Together with China, it accounts for [half of the growth in global energy demand](#).

While India's production has increased, it remains dependent on imports. Its economy is service-based, and despite the 2014 '[Make in India](#)' initiative, launched to turn the country into a global manufacturing hub, manufacturing contributes only [17 % to national GDP](#) (29 % in China). Therefore, in spite of expectations that India will account for [17 %](#) of global population in 2040, its [share of global energy consumption](#) is set to grow at a moderate pace: from 5 % today, to 11 % in 2040.



A developing country

In 2014, India alone had the [world's largest deficit of access to electricity](#), accounting for a third of the global deficit (270 million people). In 2015, Prime Minister Narendra Modi promised to fill this gap. In April 2018, he [announced](#) that [all villages had been electrified](#). In September 2017, the [Saubhagya](#) scheme was launched with the intention to provide all 180 million rural Indian households with electricity by the end of 2018. Around 91 % of them had electricity in September 2018, according to a [real-time progress](#) tracker.

Still, [780 million people](#), especially in the countryside, rely on biomass (wood, coal or animal dung) for cooking, which threatens their health, because of its [noxious fumes](#). In March 2016, the government adopted the [Pradhan Mantri Ujjwala Yojana \(PMUY\)](#) scheme to provide cooking-gas (LPG) connections free of cost to women members of poor households ('clean cooking').

Challenges

According to the [World Bank](#), due to its population increase, India needs to create 8 million new jobs every year to keep the employment rates constant. The consequential economic growth is likely to bring a rise in the country's energy needs, but it needs to fix its [endemic electricity shortages](#), which hamper business and reduce chances of attracting foreign direct investment. However, thanks to its reforms, the country has made a giant step forward in the World Bank's [Doing Business ranking](#): from 130th in 2017 to 100th in 2018 (out of 190 countries). [Prone to natural disasters](#), India is also determined to deliver on its commitments under the Paris Climate Agreement 'irrespective of what happens in the rest of the world' (in arguing in favour of leaving the accord, US President Donald Trump had mentioned [India's authorisation](#) to double its coal production by 2020 as an example of the unfair treatment his country was receiving).

Striking a balance between fighting pollution and decarbonising the economy, while at the same time upholding economic growth, is a hard task. For instance, in December 2017 India's Supreme Court lifted the ban on the heavy industries around Delhi using the highly polluting petroleum coke and fuel oil, which had been imposed to tackle the high smog levels. According to the [BP Energy Outlook](#), India's energy mix is to evolve very slowly: fossil fuels will still meet 82 % of demand in 2040, compared with 93 % in 2016.

While oil prices have been low in recent fiscal years, their rise between 2017 and 2018 is likely to affect the fiscal and current account deficits, as well as inflation, [hampering](#) Delhi's ambition for even faster [growth](#).

A significant part of the country's thermal power plants face [failure to repay their loans](#), thereby putting a share of India's total power-generation capacity at risk. Public-sector banks have demanded a [special status for power-sector projects](#) and a two-year timeframe to revive [stressed assets invested in such projects](#).

Plans and proposals

In 2015, India announced its plans to increase its electricity-generation capacity from renewables from 57 to 175 gigawatts by 2022, with 100 gigawatts to come from solar. A symbol of India's bid for solar power is its 2GW (AC) [solar park](#) – the world's largest – which is located in the southern state of Karnataka and was inaugurated in March 2018. Moreover, India plans to establish a [gas-trading hub](#) by October 2018. This move would increase domestic natural-gas consumption, establish a market-based price for it, and put an end to price caps and subsidies. However, it has been argued that the country [lacks the necessary infrastructure](#) to accomplish this project and that its [timeframe is unrealistic](#).

In addition, the government is promoting a merger between its main state oil companies in order to create a big integrated public-sector 'oil major', whose market capitalisation would be around US\$100 billion. The merger would face [challenges](#) in terms of execution; yet, according to Fitch Ratings, it would reduce inefficiencies across the sector, while creating an entity that would be better placed to compete globally for resources and would be less vulnerable to fluctuations in oil prices. Finally, in August 2018 [NITI Aayog](#) (the National Institution for Transforming India, the central government's premier policy think-tank) proposed to make it mandatory for passenger vehicles to run on [petrol blended with 15 % methanol](#). The plan envisages an annual reduction of US\$100 billion in crude imports by 2030 if the country moves to 15 % blended fuel for transport and cooking. At present, vehicles use up to 10 % ethanol-blended fuel. Replacing 20 % of crude consumption by methanol would bring down pollution in the country by more than 40 %.

International cooperation

The State Bank of India (SBI) and the World Bank have signed two agreements – the first for US\$625 million in [2016](#), and the second for US\$357 million in [2017](#) – to develop [grid-connected solar-rooftop](#) projects.

In April 2018, India and Saudi Arabia (Delhi's top oil supplier together with Iraq) signed a memorandum of understanding to build a US\$44 billion [refinery with petrochemical facilities](#) in India's Maharashtra state. Saudi Aramco would supply 50 % of the oil for what will be one of the world's biggest projects of its kind.

In March 2018, Prime Minister Narendra Modi (together with French President Emmanuel Macron) co-chaired the founding conference of the [International Solar Alliance](#) (ISA), launched during the 2015 United Nations Climate Change Conference in Paris. This is a coalition of solar resource-rich countries lying fully or partially between the Tropic of Cancer and the Tropic of Capricorn, to specifically address energy needs by harnessing solar energy. The ISA Framework Agreement imposes neither targets nor legal obligations on its member-countries. Some 65 countries have signed it, including France, the Netherlands and the UK. The ISA secretariat will be based in Gurugram, in India's northern state of Haryana.

At their October 2017 summit, the EU and India endorsed their [joint statement](#) on clean energy and climate change, reinforcing their [partnership](#) to implement the Paris Agreement. The partnership brings together, in a joined-up approach, the EU and its Member States, European and Indian institutions, businesses and civil society. The EU finances [joint projects](#): [FOWIND](#) (facilitating off-shore wind development in India), [SCOPE BIG](#) (a scalable [CSP](#)-optimised power plant, engineered with biomass-integrated gasification), [CECI](#) (clean-energy cooperation with India), [CDSC](#) (clean development and sustainable cities, to integrate low-carbon strategies into urban development), and [Technical Cooperation for Clean Energy in India](#). In March 2017, the European Investment Bank (EIB) provided a [€200 million](#) loan to the SBI to develop large-scale solar projects. An India-EU Clean Energy & Climate [Conclave](#) took place in September 2017 in Delhi (where EU Ambassador Kozłowski gave a [speech](#)).

