

# India

## G20 coal subsidies



### State-owned companies carry out **most coal mining and power production** in India

#### Coal and India's economy

**US\$6,817**



GDP per capita, PPP  
(2016–2017 average)

**110,218**



2016 imports  
(kilotonne oil equivalent)

**464**



2016 exports  
(kilotonne oil equivalent)

**75%**



Share in power mix  
(by generation)

#### Key findings

- Government actors dominate India's coal and coal-fired power sectors. On average, ₹795 billion (US\$11.4 billion) in public finance and ₹444 billion (US\$6.4 billion) in state-owned enterprise (SOE) investment is provided for coal per year (2016–2017 average), mostly for power.
- The official data suggest that fiscal support was ₹6,046 million (US\$88 million) per year (2016–2017 average). But independent analysis suggests ₹160 billion (US\$2.3 billion) of support per year during the same period, excluding coal-derived electricity consumption subsidies.
- Coal contributes significantly to central and state government revenues.
- India's coal-fired power sector is in crisis, with 21% of installed capacity 'stressed' and at risk of bankruptcy. Coal is increasingly uncompetitive, but the government's focus is on relieving stressed assets rather than addressing the long-term risks to the power sector.

#### Prominence of fossil fuels and subsidy phase-out commitments

- In 2016, fossil fuels accounted for 81% of India's electricity by generation (IEA, 2019).
- Though India has reduced support for liquid transport fuels, support continues for liquefied petroleum gas (LPG), kerosene and coal, as well as electricity (largely coal-generated).
- Renewables support has increased almost sixfold since 2014 (Soman et al., 2018), with increasing deployment and declining costs (CEA, 2016, 2019; Spencer et al., 2018).
- As a member of the G20, India has committed to phase out inefficient fossil fuel subsidies over the medium term, as agreed in 2009 (G20, 2009). As a signatory of the Convention on Biological Diversity (Aichi Target 3) it has also committed to phasing out environmentally harmful subsidies, including those to fossil fuels, by 2020 (UN, 1992).

## Government support to coal and coal-fired power production

- SOE Coal India Limited accounted for over 80% of coal production in 2018 (PIB, 2018). Coal-fired power capacity is 61% publicly owned (CEA, 2019). Around 80% of public finance and SOE investments go towards power generation.
- Data from the Organisation for Economic Co-operation and Development (OECD) shows that fiscal support for coal and coal-powered electricity is largely via tax exemptions for transportation infrastructure and conservation and safety in coal mines, and budgetary transfers for exploration, mining, and research and development.
- Additional support measures exist, averaging ₹160 billion (US\$2.3 billion) over 2016–2017, mainly preferential taxation for coal consumption (Soman et al., 2018). Other support policies include: income tax exemption for power generation; government guarantees and low interest rates on loans; and non-transparent preferential coal pricing (Garg et al., 2017). Despite some policy changes, the total value of coal subsidies remains broadly unchanged (Soman et al., 2018).

## Government support to coal and coal-fired power consumption

- India's main energy subsidy is electricity under-pricing for residential and agricultural consumers, worth ₹749 billion (US\$11 billion) in 2017 (ibid.).
- The draft National Energy Plan includes proposals for a 'Direct Benefits Transfer' system for affordability, though details remain unclear (NITI Aayog, 2017).

## Government support to the transition away from coal and coal-fired power

- 2018 was critical for India's coal-fired power sector, with 21% of capacity identified as 'stressed' and at risk of bankruptcy (Worrall et al., 2019). The government intervened by providing short-term power purchase agreements and related coal supply linkages (Dutta, 2019), despite risks of a wider systemic problem, where coal will become increasingly uncompetitive with renewables (Spencer et al., 2018).
- India introduced a 'carbon tax' in its 2010 Intended Nationally Determined Contribution (Government of India, 2015) and new local air pollution requirements. The tax is now approximately ₹400 (US\$5.7) per tonne, bringing in ₹285 billion (US\$4.1 billion) in revenue in FY 2016/17 (Shakti Foundation and Ernst & Young, 2018). Air pollution legislation was delayed due to inability to meet the standards (Soman et al., 2018).
- A small amount of fiscal support, ₹213 million (US\$3 million), was identified for retiring miners.

### India's government support to coal and coal-fired power production and consumption

₹ millions, 2016–2017 annual average

Instrument	Coal production <sup>i</sup>	Coal-fired power	Coal consumption <sup>ii</sup>	Transition support <sup>iii</sup>
<b>Fiscal support</b> (budgetary transfers and tax exemptions)	5,833	none identified	none identified	213
<b>Public finance</b>	2,700	792,697	none identified	none identified
Domestic	2,700	738,450	–	–
International	–	54,247	–	–
<b>State-owned enterprise investment</b>	77,420	366,800	none identified	none identified

Note: for more detail and sources see the India data sheet available at [odi.org/g20-coal-subsidies/india](http://odi.org/g20-coal-subsidies/india).

<sup>i</sup> This category includes support for coal exploration, mining, processing and transportation.

<sup>ii</sup> This category includes support for consumption of coal-fired power, and of coal other than for its use for coal-fired power generation (or for co-generation of power and heat).

<sup>iii</sup> This category includes support for closing down mining sites, and for workers and communities in their transition away from coal and coal-fired power.

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## References

- CEA – Central Electricity Authority (2016) ‘All India installed capacity (in MW) of power stations (as on 31-03-16)’. New Delhi: Central Electricity Authority ([www.cea.nic.in/reports/monthly/installedcapacity/2016/installed\\_capacity-03.pdf](http://www.cea.nic.in/reports/monthly/installedcapacity/2016/installed_capacity-03.pdf))
- CEA (2019) ‘All India installed capacity (in MW) of power stations (as on 28-02-19)’. CEA, 28 February ([www.cea.nic.in/reports/monthly/installedcapacity/2019/installed\\_capacity-02.pdf](http://www.cea.nic.in/reports/monthly/installedcapacity/2019/installed_capacity-02.pdf))
- Dutta, S. (2019) ‘Govt clears lifeline for stressed power plants, Rs 31.5k crore for new projects’. The Times of India, 7 March ([timesofindia.indiatimes.com/business/india-business/govt-clears-lifeline-for-stressed-power-plants-rs-31-5k-crore-for-new-projects/articleshow/68309409.cms](http://timesofindia.indiatimes.com/business/india-business/govt-clears-lifeline-for-stressed-power-plants-rs-31-5k-crore-for-new-projects/articleshow/68309409.cms))
- IEA – International Energy Agency (2019) ‘Statistics: electricity generation by fuel’ (electronic dataset, International Energy Agency) ([www.iea.org/statistics/](http://www.iea.org/statistics/))
- G20 (2009) G20 Leaders’ Statement: The Pittsburgh Summit. Pittsburgh PA: G20 ([www.g20.utoronto.ca/2009/2009communique0925.html](http://www.g20.utoronto.ca/2009/2009communique0925.html))
- Garg, V., Gerasimchuk, I., Bandyopadhyay, K., Beaton, C., Chugh, G., Gupta ... and Patel, S. (2017) *India’s energy transition: mapping subsidies to fossil fuels and clean energy in India*. Winnipeg MB: International Institute for Sustainable Development ([www.iisd.org/sites/default/files/publications/india-energy-transition.pdf](http://www.iisd.org/sites/default/files/publications/india-energy-transition.pdf))
- Government of India (2015) *India’s intended nationally determined contribution: working towards climate justice*. New Delhi: Government of India ([nmhs.org.in/pdf/INDIA%20INDC%20TO%20UNFCCC.pdf](http://nmhs.org.in/pdf/INDIA%20INDC%20TO%20UNFCCC.pdf))
- NITI Aayog, Government of India (2017) *Draft national energy policy*. New Delhi: NITI Aayog, Government of India ([niti.gov.in/writereaddata/files/new\\_initiatives/NEP-ID\\_27.06.2017.pdf](http://niti.gov.in/writereaddata/files/new_initiatives/NEP-ID_27.06.2017.pdf))
- PIB – Press Information Bureau, Government of India (2018) ‘Production of coal by CIL’. News release, 31 December ([pib.nic.in/newsite/PrintRelease.aspx?relid=186951](http://pib.nic.in/newsite/PrintRelease.aspx?relid=186951))
- Shakti Foundation and Ernst & Young (2018) *Discussion paper on carbon tax structure in India*. New Delhi and Kolkata: Shakti Foundation and Ernst & Young ([shaktifoundation.in/wp-content/uploads/2018/07/Discussion-Paper-on-Carbon-Tax-Structure-for-India-Full-Report.pdf](http://shaktifoundation.in/wp-content/uploads/2018/07/Discussion-Paper-on-Carbon-Tax-Structure-for-India-Full-Report.pdf))
- Soman, A., Gerasimchuk, I., Beaton, C., Kaur, H., Garg, V. and Ganesan, K. (2018) *India’s energy transition: subsidies for fossil fuels and renewable energy, 2018 update*. Winnipeg MB: International Institute for Sustainable Development ([www.iisd.org/sites/default/files/publications/india-energy-transition-2018update.pdf](http://www.iisd.org/sites/default/files/publications/india-energy-transition-2018update.pdf))
- Soman, A., McCulloch, N., Kaur, H. and Beaton C. (2019) ‘India’s energy transition: the impact of the goods and services tax on solar photovoltaic and coal power costs’. IISD Issue Brief. Winnipeg MB: International Institute for Sustainable Development ([www.iisd.org/sites/default/files/publications/indias-energy-transition-goods-services-tax-coal-solar.pdf](http://www.iisd.org/sites/default/files/publications/indias-energy-transition-goods-services-tax-coal-solar.pdf))
- Spencer, T., Pachouri, R., Renjith, G. and Vohra, S. (2018) ‘Coal transition in India’. TERI Discussion Paper. New Delhi: The Energy and Resources Institute ([www.teriin.org/sites/default/files/2018-12/Coal-Transition-in-India.pdf](http://www.teriin.org/sites/default/files/2018-12/Coal-Transition-in-India.pdf))

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UN – United Nations (1992) Convention on Biological Diversity. 1760 UNTS 20619, entered into force 29 December 1993 ([www.cbd.int/convention/text/default.shtml](http://www.cbd.int/convention/text/default.shtml))

Worrall, L., Roberts, L., Viswanathan, B. and Beaton, C. (2019) *India's energy transition: stranded coal power assets, workers and energy subsidies*. IISD Issue Brief. Winnipeg MB: International Institute for Sustainable Development ([www.iisd.org/sites/default/files/publications/india-energy-transition-stranded-coal-power-assets\\_0.pdf](http://www.iisd.org/sites/default/files/publications/india-energy-transition-stranded-coal-power-assets_0.pdf))

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**This country study is one in an 18-part series.** The country findings are collated in the summary report, which you can find at [odi.org/g20-coal-subsidies](http://odi.org/g20-coal-subsidies) along with full references, acknowledgements and further information about methodology and data sources.

Unreferenced information in this summary is from the analysis conducted for this report, available in the India data sheet at [odi.org/g20-coal-subsidies/india](http://odi.org/g20-coal-subsidies/india).

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