

Mapping India's Energy Subsidies 2020:

Fossil fuels, renewables,
and electric vehicles

EXECUTIVE SUMMARY

INDIA'S ENERGY TRANSITION



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Executive Summary

Subsidies matter because they are used by governments around the world to influence energy producers and consumers. This report examines how the Government of India (GoI) has used subsidies to support different types of energy, updating two previous reviews of India's energy subsidies. We seek to answer: How have India's energy subsidy policies changed? What have been the most significant developments in India's dynamic energy policy environment? And is public support aligned with India's desired energy future?

Our data cover all subsidies from production to consumption for coal, oil and gas, electricity transmission and distribution, renewable energy and electric vehicles. Nuclear and hydropower are not included due to a lack of adequate data availability. The underlying data are [available online](#) and have been made easier to explore with an accompanying [data portal](#).

Five ways India's energy subsidies have changed since our last review

1

Oil and gas subsidies up by over 65%.

This rise—from INR 40,762 crore (USD 6.1 billion) in financial year (FY) 2017 to INR 67,679 crore (USD 10.07 billion) in FY 2019— is largely driven by



higher oil prices and growing use of subsidized liquefied petroleum gas (LPG).

2

Renewable energy (RE) subsidies down by 35%, but likely to rise again.

RE subsidies fell from a high of INR 15,313 crore (USD 2.3 billion) to only INR 9,930 (USD 1.5 billion) in FY 2019. This reflects falling RE costs but also a slowdown driven by policy decisions such as the solar safeguard duty and price caps in auctions. Several new, large policies have been confirmed since FY 2019, so subsidies are expected to rise again in FY 2020.



3

Consumption subsidies rising. Success in expanding energy access has also increased the cost of consumption subsidies. State-level under-priced electricity is the most costly individual subsidy policy in India,



estimated at INR 63,778 crore (USD 9.5 billion). Evidence suggests it is not well-targeted.

4

Coal subsidies remain largely unchanged, and the net costs of coal are much larger than the revenues.

We estimate total revenues from coal taxes and charges and total costs from coal-related subsidies, air pollution and greenhouse gas (GHG) emissions. Even with conservative assumptions, the outcome is a large net cost from coal. Coal subsidies are estimated at INR 15,456 (USD 2.3 billion) in FY 2019 and may increase significantly from FY 2020, given non-compliance with deadlines to install air pollution control technology.



5

Support for electric vehicles (EVs) has skyrocketed. EV subsidies have grown over 11 times since FY 2017.

This reflects the fact that India has only very recently stepped up its support levels for EV. Growth is expected to continue.





What Does This Mean for India's Efforts to Shift Public Funds to Clean Energy?

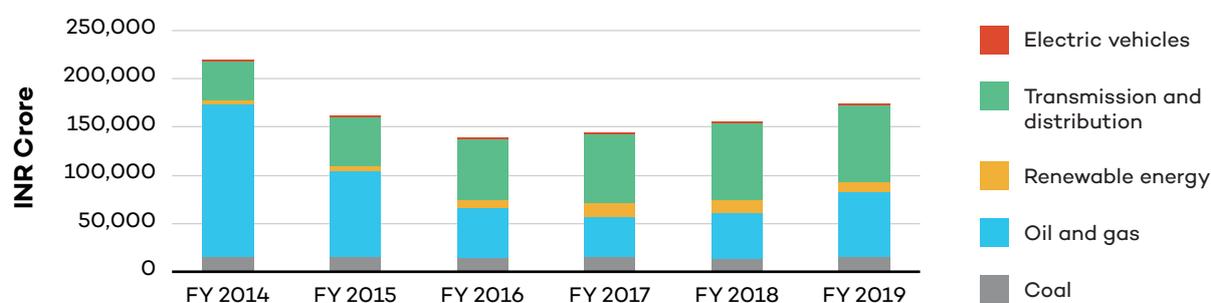
Recent increases in fossil fuel subsidies and decreases in renewable energy subsidies have not yet altered larger trends—since FY 2014, India has shifted significant public resources toward a clean energy transition. In FY 2014, the first year from which we track data, fossil fuel subsidies have fallen by more than half, largely driven by falling world oil prices and policy reforms to diesel and kerosene pricing, while subsidies for RE and EVs have increased over three and a half times, largely due to policy efforts to meet capacity targets. EV subsidies, in particular, have increased over 440 times from a very low baseline in FY 2014.

More remains to be done: subsidies for fossil fuels are still over seven times larger than subsidies for alternative energy. In FY 2019, subsidies for oil, gas and coal amounted to INR 83,134 crore (USD 12.4 billion), compared to INR 11,604 crore (USD 1.7 billion) for renewables and electric mobility.

How Might Energy Subsidies Change in Response to the COVID-19 Crisis?

India should prioritize health and economic recovery as it navigates the COVID-19 crisis—but clean energy transition can and should be reflected in coping strategies and support measures. At the time of writing, it is hard to predict the full impacts of COVID-19, but it seems likely they will be significant and prolonged. There are three key implications for public resources and energy transition in India. (1) The crash in world oil prices can free up revenue to help tackle the crisis by temporarily eliminating petroleum product subsidies and enabling higher tax rates. India has already shown leadership by significantly increasing gasoline and diesel taxes. (2) At the same time, there will be increasing demand to support energy producers, as profits fall, demand falters and perceptions of risk rise. If India considers economic stimulus, it should carefully assess how different interventions for producers will undermine or support clean energy transition. (3) There will be increasing demand for social protection and effective and efficient public services. Investments in these areas can create new options to target energy access subsidies, allowing benefits to be clustered on those most in need.

Figure ES1. Total quantified energy subsidies, FY 2014–FY 2019 (INR crore)



Source: Authors' calculations. Note that a significant number of subsidy policies have been identified but cannot be quantified due to a lack of transparently available data: six for coal, 15 for oil and gas, four for renewables, one for electricity transmission and distribution, and two for EVs in FY 2019. See the full report and [accompanying spreadsheets](#) for more details.

Recommendations

- 1 Increase the shift of public resources to clean energy.** India's progress since FY 2014 shows commitment to energy transition, driven at least in part by specific actions to reform perverse subsidies and back clean energy. But action is still insufficient to address the scale of sustainability challenges. It is recommended that the GoI further swap public resources from fossil fuels to clean energy.
- 2 Resist demands for new oil and gas subsidies.** Volatile world oil prices create demand for price interventions—such as a tax reduction for motor fuels in FY 2018 and FY 2019—and various support measures are being considered for natural gas. If any economic stimulus is introduced, there will be further demands to help producers. It is strongly recommended to avoid such subsidies: volatility makes them a fiscal liability; they are hard to remove once introduced; and they cause fossil energy lock-in. Investments in targeted social protection and public services can better help consumers cope with shocks.


- 3 Adapt RE subsidies for emerging technologies and grid balancing.** Clean electricity is essential: other sectors, such as transport and cooking, will rely on electrification to deliver clean energy. The price competitiveness of on-grid solar and wind power has brought into question the need for continued RE subsidies. But new cost barriers can quickly alter competitiveness, and emerging technologies still need assistance. To achieve 450 GW by 2030, the GoI must develop quality interstate grid transmission and storage—little support was identified in these areas. It is recommended to adjust RE subsidies carefully and use subsidies with other policy tools to promote emerging technologies and grid balancing.


- 4 Target consumption subsidies for energy access: LPG and electricity.** Access policies have grown increasingly costly. The Ministry of Petroleum and Natural Gas and the Ministry of Power should work with social protection agencies to design and test mechanisms to target assistance without harming energy access, such as an “Ujjwala 2.0” or a Direct Benefits Transfer for Power.


- 5 Address the full costs of coal.** Taxes and charges do not come close to covering the net cost of coal to India. A plan is needed to address coal pricing in a socially responsible way, including diversifying coal revenues and protecting consumers and workers. The coal cess should be maintained and the National Clean Energy and Environment Fund, or some equivalent, should be revived and improved.


- 6 Closely monitor and adapt EV subsidies.** Policies should be monitored to ensure effective, efficient and equitable support, including for two-wheelers, public transport, waste treatment and battery recycling. Support may still not be sufficient to reach 2030 targets.


- 7 Develop formal reporting structures on subsidies.** Subsidy reporting can be conducted in line with formal guidelines for Sustainable Development Goal 12(c)1 and India's G20 peer review of fossil fuel subsidies. With fuller data, ministries should monitor, evaluate and adapt their most significant subsidies to better meet policy objectives.