

# POWER FOR ALL FACT SHEET

## Energy paradigm shifting in India with fossil fuel subsidy reforms



# 79%

O&G SUBSIDY REDUCTION FROM 2014-17

# 6x

RENEWABLE ENERGY SUBSIDIES FROM 2014-17

# \$7.9 BN

COAL, OIL & GAS SUBSIDY IN 2017

# \$27.6 MN

DRE SUBSIDY IN 2017

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A new report from International Institute for Sustainable Development (IISD) and the Council on Energy, Environment and Water (CEEW) on electricity sector subsidies in India finds major disparities in subsidy distribution.<sup>1</sup> The analysis compares program subsidies from 2014 until today across oil and gas (O&G), coal, electricity transmission and distribution (T&D), and renewable energy. It finds a shift away from fossil energy through fossil fuel subsidy reforms and towards renewables, paving the way for lower emissions, stronger job creation, and potential increases in welfare expenditure. Nonetheless, it finds there is still substantial progress to be made: fossil-fuel subsidies remain more than three times the value of subsidies for clean energy.

### India is shifting government support away from fossil fuels to cleaner energy, with a major drop in O&G subsidies and an increase in support for renewables.

- » Since 2016, 7 new energy subsidies have been introduced and 11 discontinued. Two major energy access schemes on electricity and liquified petroleum gas (LPG) drove the sectoral shift by adopting a household-level subsidy approach that addressed the poor directly. (7)
- » Between 2014-17, subsidies to the O&G sector decreased by 80%; subsidies to T&D almost doubled; subsidies to coal remain steady; and subsidies to renewable energy grew almost 6-fold. (6)
- » However subsidies to oil, gas and coal are still more than triple the value of subsidies to renewable energy and electric vehicles in 2017. (6)
- » Decentralized renewable energy (DRE) solutions make up only 1.2% of renewable energy subsidies and 0.12% of total energy subsidies, amounting to US\$27.6 million in 2017.

### Subsidies for energy access underwent significant development over the past years. Efforts were more focused on grid-extension and LPG access than DRE solutions.

- » Subsidies to reduce consumer prices for connections and consumption make up 72% of all quantified subsidies in 2017. Many of these subsidies, however, were not targeted and disproportionately benefit higher-income consumer segments. Consumption subsidies, for instance, are 18 times higher than the more targeted connection subsidies. (9)
- » Two attempts to provide more targeted energy access subsidy schemes were introduced since 2016. They focused on connecting households to modern energy sources, rather than broad-based subsidies to support consumption costs, which typically end up leaking a large share of benefits to wealthier households who use more energy. The Ujjwala scheme provides LPG connections to women in below poverty line (BPL) households and the Saubhagya scheme, introduced in 2018, provides free electricity connection to BPL households. (10,12)
- » Quality of grid electricity in India is improving. Mean grid electricity supply increased from 12 to 16 hours a day from 2015 to 2018. In the meantime, end-user satisfaction doubled.<sup>2</sup> (CEEW, 2018)
- » Despite significant progress in providing connection subsidies to promote energy access, as of 2018, 29.6 million households (10.6% of the population) in rural India still lack basic electricity access,<sup>3,4</sup> and 20% of rural households still use kerosene as their primary source of lighting. (14)
- » Based on the scale of subsidies in 2017, phasing out coal subsidy can pay for connection of an additional 8.3 million households to PV-based mini-grid electricity based on a benchmark figure in Bihar, and removing all remaining kerosene subsidy can pay for 172 million solar lanterns at a retail price of US\$8.<sup>5,6,7</sup> (13,15)

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### By the Numbers:

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**Large amounts of subsidies to distribution companies (DISCOMs) are indirectly supporting coal because of the current energy mix. Structural issues such as lack of competition and artificially low tariffs still lead to large government losses.**

- » T&D have received US\$12.9 billion of subsidies in 2017, equivalent to 0.5% of India's GDP. This does not include the increasing amount spent on bailing out failing DISCOMs, which amounted to a further US\$11.8 billion in 2017. (6)
- » While these bailouts are technically one-off and intended to address DISCOMs' structural failings, it is extremely unlikely that they will succeed in doing so: DISCOMs have no strong incentive to pursue revenue as artificially cheap tariffs offer substantial political benefits to elected officials. A further round of bailouts is already an item of policy discussion.

**Caught between India's emissions reduction goal and energy demand growth, coal subsidy reforms remains controversial and complex.**

- » The level of coal subsidy remained stable from US\$2.6 billion in 2014 to US\$2.4 billion in 2017. The largest subsidies go to coal power plants to reduce prices for consumers, in the form of tax exemptions, credit support by state-owned banks, lack of penalties for non-compliance of environmental norms, etc. (15,16)
- » O&G may provide a useful precedent for reform. In 2010 (for petroleum) and in 2014 (for LPG), price caps were lifted along with under-recovery subsidies. This has created fiscal space that enables policies like the Ujjwala scheme, providing LPG connection subsidies for low-income consumers, while drastically lowering the O&G subsidy by almost 80% between 2014-17. (6)
- » Introducing competitive and market-determined price structures—combined with targeted programs for the poor—may achieve reductions in total subsidy expenditure while shielding low-income households from any potential economic impacts. (18)
- » Annual subsidies provided for coal alone are enough to fund job training for more than 72 million Indians or increase per capita healthcare spending by 40%.<sup>9</sup>

### Share the Message

- » Fossil fuel subsidy reform is shifting India towards a cleaner and more inclusive energy paradigm - but there is still more to be done.
- » The O&G sector provides an important precedent for subsidy reform - switching from universally low tariffs to enable more targeted and relevant support programs for the poor.
- » Connection subsidies are inherently better targeted than consumption subsidies, as the poorest households typically cannot afford to use modern energy at all. Nonetheless, affordability is an important issue for low-income consumers and efforts are needed to improve the targeting of consumption subsidies.
- » Government support for coal is complex and controversial. Introducing a competitive price structure, combined with targeted programs for the poor, may help achieve subsidy reduction.

### Sources:

1. India's Energy Transition: Subsidies for Fossil Fuels and Renewable Energy 2018 Update, IISD, December 2018 2. Access to Clean Cooking Energy and Electricity -- Survey of States, Council on Energy, Environment and Water, November 2018 3. World Bank data, 2017 4. UNDESA population data, 2017 5. Benchmarking Study of Solar PV Mini-Grids Investment Costs, The World Bank, 2017 6. Building a Market for Off-Grid Solar Lighting, IISD, 2017 7. E. Mills, Job Creation and Energy Savings through a Transition to Modern Off-grid Lighting (2016) 8. Jai, S. UDAY-II will focus on reducing losses, says power minister R K Singh, Business Standards, December 2018. Available at: [https://www.business-standard.com/article/economy-policy/uday-ii-will-focus-on-reducing-losses-says-power-minister-r-k-singh-11812250067\\_1.html](https://www.business-standard.com/article/economy-policy/uday-ii-will-focus-on-reducing-losses-says-power-minister-r-k-singh-11812250067_1.html) 9. India's Energy Transition: Mapping subsidies to fossil fuels and clean energy in India, IISD, November 2017