

India's just energy transition is more than a coal story

Just Energy Transition Partnership (JET-P) is emerging as the key mechanism for multilateral financing by developed countries to support an energy transition in developing countries. This has taken on particular significance following the insertion of the phrase 'phase-down' of coal in the Glasgow Pact. After South Africa, Indonesia, and Vietnam, India is considered the next candidate for a JET-Partnership. India's G-20 presidency could potentially be an opportune moment to forge a deal. However, India must develop a coherent domestic just energy transition (JET) strategy in order to negotiate a financing deal that addresses its unique set of socio-economic challenges. So, what would a JET strategy for India look like? What can India offer and seek from a multilateral JET-Partnership?

Issues that concern transitions

Energy transitions could give rise to intra-generational, intergenerational, and spatial equity concerns. Transitions affect near-term fossil-dependent jobs, disrupt forms of future energy access, shrink State's capacity to spend on welfare programmes, and thus exacerbate existing economic inequities between coal and other regions.

Existing JET-P deals, pay limited attention to intra-generational inequity, such as job losses resulting from a coal phase-down. However, among the three JET-P deals signed so far, only South Africa's deal mentions a 'just' component – funding reskilling and alternative employment opportunities in the coal mining regions – to be financed as part of the initial \$8.5 billion mobilisation. The other two JET-Ps (Indonesia and Vietnam) are focused on mitigation finance for sector-specific transitions.

Initial JET-P negotiations for India last year have reportedly remained stalled over whether and how India should consider coal 'phase-down' and how to operationalise India's just transition. The emphasis by developed countries' on coal phase-down, without adequate attention to country context, disregards the crucial difference in energy transition between industrialised and emerging economies. Energy transition in the industrialised world involves a natural tapering of energy consumption alongside fuel switching to clean energy sources; India's transition requires significant simultaneous growth in energy demand. The Central Electricity Authority projects a near doubling of electricity demand by 2030. A country that is likely to multiply its energy demand requires adequate supply from a

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diverse mix of sources. India cannot afford to put its development on hold while decarbonising.

The path to a clean energy quest

India has signalled a commitment to clean energy with ambitious targets like 500GW of non-fossil, including 450 GW renewable energy (RE) capacity addition and 43% RE purchase obligation by 2030. These targets are supported through complementary policy and legislative mandates (Energy Conservation (Amendment) Act), missions (National Green Hydrogen Mission), fiscal incentives (production-linked incentives) and market mechanisms (upcoming national carbon market). These interventions show India's serious efforts at energy transition, but additional supplementary measures are needed for a coherent JET strategy.

Here are three sets of actions that could further expedite India's energy transition while also addressing domestic developmental priorities, and justice and equity concerns.

First, acceleration in RE deployment rates to match the pace of demand growth is critical to India's JET. While RE deployment has outpaced coal in recent years, in 2021-22, coal power served one-third of the new demand. Meeting India's 2030 target requires accelerating non-fossil capacity addition from 16 GW a year in 2022 to 75 GW a year by 2030, a 22% year-on-year growth. Despite sustained efforts India missed its 2022 target for 175 GW RE capacity. The gap is largely in decentralised deployment, which is more promising for acceleration.

We suggest two complementary paths to accelerate RE deployment that can have significant developmental co-benefits. A low-hanging option is shifting energy demand patterns in ways that enable faster RE capacity addition: solarisation of agricultural electricity demand; electrification of diesel-powered Micro, Small and Medium Enterprises (MSMEs); and decentralised RE for residential cooking and heating. Stimulation of energy demand through rural productivity enhancement will further aid RE acceleration as well as help to address the rural-urban economic divide, create rural jobs, and thereby address inter-generational and spatial inequities.

Second, domestic manufacturing of clean energy components is critical to sustain a JET, build energy self-sufficiency, and tap the green jobs promise of 21st century energy. While India has recognised the importance of domestic manufacturing, the challenge is in achieving cost competitiveness – Indian components are 20%

costlier than Chinese components. Giving preference to domestic components without addressing cost competitiveness may slow down the pace of deployment. The way around this is to negotiate access to markets outside India as part of a JET-Partnership, to reduce the cost gap through economies of scale.

On coal use

Third, there is a case for re-aligning the current use of coal resources to enhance efficiencies until the period of phase-down. One option is to optimise use of coal-fired power plants closer to where coal is mined rather than based on energy demand in States. This would enable coal to be used more efficiently because transportation of coal is more energy-intensive than transmission of electrons, and also lead to fewer emissions. It would also lead to cheaper power, as transportation accounts for one-third of the cost of coal for power plants; the resultant savings could also help finance much needed emission control retrofits. Finally, and not least, it would indirectly reduce emissions due to more efficient use of coal.

Moreover, by using coal more efficiently, this policy shift opens the door to India considering a future cap on coal-powered generation capacity. Current generation capacity plus plants in the pipeline are adequate to meet India's projected requirement in 2030. Low capacity utilisation factor (58% in 2022) further allows the possibility of greater use of existing plants to match future demand. By leading to cheaper and more efficient power, the coal re-alignment proposed here helps address energy security concerns, making it possible to even consider a future coal-based power capacity cap.

These measures will not only address equity concerns across various dimensions but also create new job opportunities, achieve emissions reduction and prepare the country for deeper decarbonisation through a future coal phase-down. However, as has been stressed by many, the investment requirements for this transition are beyond the means of domestic mobilisation for developing countries. Any future JET-P deal must consider this broader framework for financing and supporting an energy transition. With India holding the G-20 presidency, it has an opportunity at hand to negotiate a deal for itself while also shaping international cooperation on just energy transitions.

The views expressed are personal

India's G-20 presidency is an opportunity for New Delhi to negotiate a deal for itself while also shaping international cooperation on just energy transitions