

Renewables could power 25% of Indian Railways by 2025 - CEEW study

New Delhi (5 April 2017) – Indian Railways could draw up to 25% of its electric power needs from renewables and achieve the target of 5 GW of solar by 2025, according to a study released by the Council on Energy, Environment and Water (CEEW) today. Indian Railways would need an investment of USD 3.6 billion to meet the 5 GW target. Shri Suresh Prabhu, Union Minister for Railways, and Shri Piyush Goyal, Minister of State (IC) for Power, Coal, New and Renewable Energy and Mines, released the CEEW study and delivered keynote addresses.

The CEEW study ‘Decarbonising the Indian Railways: Scaling Ambitions, Understanding Ground Realities’, funded by UNDP, identifies key policy and regulatory challenges that developers face while supporting the Railways’ renewable energy push. A potential 5 GW target, provides a unique opportunity for solar developers, with an estimated 1.1 GW coming from rooftop and 3.9 GW from utility scale projects. The Indian Railways is a guaranteed consumer and has a growing electricity demand, which should mitigate any perceived counter-party risks for project developers or investors.

Speaking on this occasion, Union Minister for Railways Suresh P Prabhu said, “We want Indian Railways to become a green engine of growth. Decarbonisation is extremely important for Railways. We have set up a target of electrifying the entire network of Indian Railways in next 10 years with at least 90% of track electrification in next 5 years. We have a plan to include renewables in a big way in Railways’ energy mix and make it the cleanest mode of transport. We are looking to add 1000 MW of solar and 200 MW of wind energy out of which 36 MW already having been commissioned. Waste-to-energy, energy efficiency, energy audits and restoration of water bodies are areas in which we are looking to improve our resource efficiency.”

Commenting on the CEEW study, Minister of State (IC) for Power, Coal, New and Renewable Energy, and Mines Piyush Goyal said, “Here we have an example of leadership where we have gone from populism to efficiency, and from promise to implementation. Railways have come out with a commendable plan called Mission 41K where they are looking at a saving of INR 41,000 crore through the electrification of railway lines. The decision to domestically source equipment is another positive move from Railways and will largely benefit the domestic industry. I would also like to thank Railways for extending its supporting in restarting Ratnagiri plant by agreeing to purchase 500MW of generating capacity. Energy efficiency has been one of the important programmes of the Government and I am glad that Indian Railways have joined the energy efficiency programme and have tied up with EESL to have 100% LED lights. Today we are supplying power at reduced rate of 60%-70% than what it was 3 years back even at peak demand.”

Dr Arunabha Ghosh, CEO, CEEW, said, “Indian Railways’ ambitious renewable energy push will not only lower energy bills for the Railways but will also advance India’s climate goals and serve as a role model for low-carbon public transportation across the world. The Railway Board needs to pursue stronger collaboration with state governments and electricity regulators to establish a robust ecosystem for ensuring developer and investor confidence in its renewable projects. An R&D fund, in

partnership with MNRE and Ministry of Science and Technology, could be set up to promote innovation on energy efficiency and integration of renewables in the Railways.”

Based on railway operations and land availability, twelve states have been identified across India, wherein rooftop and utility scale projects could be taken up to meet the 5 GW target for solar. The objective of the state solar policy analysis was to find convergence between developer expectations and state policies, so as to facilitate an enabling and effective ecosystem for integration of renewables across the railways. The study ranks these twelve states in terms of the ease of doing business for developers, and finds that Madhya Pradesh ranks the highest for utility-scale projects, while Karnataka ranks highest in the case of rooftop projects.

Going forward, two key issues for the Railways include standardisation of PPAs and setting regulatory guidelines in collaboration with central and state electricity regulators and resolving the issue of clearances around the benefits of open access provisions accruing to the Railways.

The Indian Railways announced its 1 GW solar target in 2015 and had achieved about 37 MW of wind and 16 MW of solar across railway operations until March 2017. The Railways has also tendered close to 255 MW of rooftop solar projects, of which 80 MW had already been awarded. In addition, the Railways are in the process of tendering about 250 MW of land-based solar projects, of which 50 MW have been awarded.

The study *‘Decarbonising the Indian Railways: Scaling Ambitions, Understanding Ground Realities’* can be accessed [here](#).

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About CEEW

The Council on Energy, Environment and Water (CEEW) is one of Asia’s leading not-for-profit policy research institutions. The Council uses data, integrated analysis, and strategic outreach to explain – and change – the use, reuse, and misuse of resources. It prides itself on the independence of its high-quality research, develops partnerships with public and private institutions, and engages with wider public. In 2021, CEEW once again featured extensively across ten categories in the 2020 Global Go To Think Tank Index Report. The Council has also been consistently ranked among the world’s top climate change think tanks. Follow us on Twitter [@CEEWIndia](#) for the latest updates.