

Clean Energy Transition

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Context- Karnataka and Gujarat have emerged as India's frontrunners in the transition to clean electricity, according to a report from the Institute for Energy Economics and Financial Analysis (IEEFA) and Ember.

Key Highlights

- While the IEEFA looks at issues related to energy markets, trends, and policies, Ember is a non-profit climate and energy think tank.

Methodology of Evaluation:

- The "Indian States' Energy Transition" report developed a scoring system for 16 states, which account for 90% of India's electricity production. Their performance is evaluated based on four broad criteria:
 - Policy and political commitments Assessment
 - Decarbonization
 - Performance of the Power System
 - Readiness of the Power Ecosystem

Assessment

- Out of the 16 states analyzed, Karnataka is the only one that scored well on all four aspects of the clean electricity transition.
 - Additionally, the state met 100% of its goal of installing smart meters and exceeded its target of segregating feeders by 16%.

- In terms of decarbonizing its electricity sector, Gujarat was a little behind Karnataka.
- States like West Bengal, Bihar, and Uttar Pradesh are far behind in the field, but Haryana and Punjab have demonstrated promising preparations and implementations for the electricity transition.
 - West Bengal received a low score across all of the parameters, and between March 2018 and March 2022, its outstanding payments to generators increased by 500 percent.
- Power system readiness needs to be improved in Rajasthan and Tamil Nadu.

Suggestions

- It is suggested that states take a multi-dimensional approach to the clean electricity transition, including efforts on the demand side, in addition to increasing the capacity and storage of renewable energy.
- Innovative bilateral financial market mechanisms like contracts for difference (CfD) and virtual power purchase agreements (VPPAs) have a lot of potential to open up the market and give buyers and regulators the assurance they need to deal with intermittent renewable energy generation.
- It demanded an increase in data availability and transparency so that it could effectively monitor progress and make any necessary adjustments.

What is India's goal for clean energy?

- India has pledged to reduce the emissions intensity of its GDP by 45 percent by 2030 and generate approximately half of its electricity from non-fossil fuel sources as part of its international obligations.
- States must modify their electricity delivery infrastructure to efficiently accommodate inputs from multiple power sources, including solar, wind, and hydropower, as well as existing fossil fuel sources, in order to achieve this.
- The revised Nationally Determined Contribution (NDC) targets that India has adopted have placed the nation in a position to successfully transition its electricity sector.