

Debate Over ISTS Connectivity - Balancing Grid Efficiency and Renewable Energy Growth

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ISTS Connectivity Latest News

- India's renewable energy sector (private developers, Renewable Energy Implementing Agencies (REIAs), industry bodies) has raised strong objections to a proposed regulatory framework by the Central Electricity Regulatory Commission (CERC).
- The proposed framework could lead to the forfeiture of **Inter-State Transmission System (ISTS)** connectivity if developers fail to execute long-term Power Purchase Agreements (PPAs) within a stipulated time.
- The issue is significant in the context of India's ambitious target of **500 GW** of non-fossil fuel capacity by **2030** and ongoing challenges of grid congestion, transmission bottlenecks, and delays in project execution.

Background

- **Existing framework:**

- Under General Network Access (**GNA**) regulations, renewable projects can secure connectivity through Letters of Award (LoAs), signed PPAs, partial land acquisition, bank guarantees in lieu of land documents.
- This **flexibility** aimed to facilitate early-stage project development.
- **How the current model works:**
 - REIAs like SECI, NTPC, NHPC, and SJVN act as intermediary procurers – buy power from developers via PPAs, sell to discoms through Power Sale Agreements (PSAs).
 - Typically, PPAs are signed only after PSAs, making early PPA linkage difficult.
- **CERC's proposal:**
 - **PPA-linked connectivity:** Grant future transmission connectivity only against signed PPAs, not LoAs.
 - **Auction-based allocation:** Introduce auctions for allocating connectivity, along with firm commissioning timelines.
- **Rationale behind these proposals:**
 - Address underutilisation of transmission infrastructure.
 - Nearly 31.8 GW of renewable capacity already has connectivity but lacks PPAs.
 - Around 42 GW of RE capacity remains without PPAs, making PPA delays a systemic bottleneck (ICRA).

Key Concerns Raised by the Renewable Energy Sector

- **Penalising developers for factors beyond control:**
 - Industry associations argue that PPA delays are largely due to **procedural inefficiencies** and slow tariff approvals by state-owned DISCOMs, not developer inaction.
 - Penalising developers undermines the principle of regulatory certainty.
- **Impact on India's clean energy targets:**
 - The proposed measures could **slow capacity addition**, threatening the 2030 non-fossil energy target.
 - Despite rapid renewable growth, transmission infrastructure (495,000 circuit-km grid) has struggled to keep pace.
- **Risk of higher tariffs and market concentration:**
 - The National Solar Energy Federation of India (NSEFI) opposed auctioning grid connectivity at a premium, warning it would –
 - Increase renewable energy tariffs.
 - Favour large, cash-rich players, marginalising smaller developers.
 - Grid connectivity, they argued, should not become a tradable asset.

Sector-Specific Issues

- **Solar energy sector:** Emphasised that delays stem from state-level regulatory and approval **bottlenecks**. Warned against market distortion through premium-based auctions.
- **Wind energy sector:**
 - Wind associations termed proposed timelines **unrealistic**, citing long manufacturing cycles, import dependence for turbines and key components.

- Opposed the 18-month project completion deadline, seeking a 24–30 month timeframe.

SECI's (Solar Energy Corporation of India) Position

- Warned that auctioning connectivity would push up future tariffs.
- Recommended reallocation based on **project readiness**, such as land acquisition, financial closure, and equipment procurement.
- This approach prioritises execution capability over bidding power.

Challenges and Way Ahead

- **Transmission bottlenecks and idle capacity:** Accelerated transmission infrastructure development – Proactive expansion of ISTS to match renewable ambitions.
- **Delayed PPAs:** Due to DISCOM inefficiencies. Reform DISCOM processes – Time-bound tariff approvals and PPA execution, strengthening financial health of DISCOMs.
- **Mismatch between generation growth and grid expansion:** Flexible, technology-specific timelines – Differentiated norms for solar, wind, and hybrid projects.
- **Risk of policy uncertainty and investor confidence erosion:** Integrated policy coordination – Closer coordination between CERC, Ministry of Power, and MNRE, align transmission planning with renewable capacity addition.
- **Potential monopolisation of grid access:** Non-market-based allocation of connectivity – Prioritise project readiness and execution milestones, avoid auctioning connectivity as a revenue-maximising tool.

Conclusion

- The controversy over ISTS connectivity rules highlights the broader tension between grid efficiency and renewable energy expansion.
- While addressing idle transmission capacity is necessary, punitive measures risk undermining **investor confidence** and slowing India's clean energy transition.
- A coordinated, flexible, and **developer-sensitive** regulatory approach, focused on structural reforms rather than penalties, is essential to achieve India's renewable energy and climate commitments.

Source: IE

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