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27 May 2026

The Secretary
Central Electricity Regulatory Commission
6th, 7th & 8th Floors, Tower B
World Trade Centre
Nauroji Nagar
New Delhi – 110029

Sir,

Subject: Submission of Comments and Suggestions on the Staff Paper on Capacity Market for Electricity in India

This is in reference to the Staff Paper issued by the Central Electricity Regulatory Commission (CERC) on the Capacity Markets for Electricity in India vide Notification No. RA-14027(12)/1/2026-CERC dated 29.04.2026. At the outset, we appreciate the initiative undertaken by the Commission towards exploring market-based mechanisms for ensuring long-term resource adequacy, grid reliability, and efficient capacity planning in the evolving power sector landscape.

In this regard, please find enclosed our comments and suggestions on the aforesaid Staff Paper for kind consideration of the Commission. We would respectfully submit that any framework relating to capacity markets should be implemented only on a prospective basis and should be applicable solely to future capacity contracting arrangements. Existing long-term power procurement arrangements and legacy contracts, which were entered into under the prevailing regulatory and commercial framework, may not be subjected to retrospective alterations or additional obligations arising out of the proposed market mechanism.

Further, considering the significant commercial, operational, and regulatory implications associated with the introduction of a capacity market framework, it is essential that detailed regulations, implementation procedures, market design

principles, settlement mechanisms, roles and responsibilities of stakeholders, and associated operational protocols be developed and issued separately by the Commission.

In this regard, we request that the Commission undertake due regulatory processes, including issuance of draft regulations/procedures and extensive stakeholder consultations, prior to finalization and implementation of the proposed framework. Such a consultative and transparent approach would facilitate better stakeholder participation, regulatory certainty, and smoother implementation of the proposed mechanism. We once again thank the Commission for providing the opportunity to submit our views and request that the enclosed comments and suggestions may kindly be taken on record and considered appropriately.

Yours faithfully,

Head – Regulatory

Encl:

CESC Comments on the CERC Staff Paper on Capacity Market for Electricity in India

Context

At the outset, the initiative undertaken by the Hon'ble Commission to initiate discussions on the establishment of a Capacity Market for addressing resource sufficiency during peak demand periods is appreciated. The increasing penetration of renewable energy, rising peak demand variability, growing balancing requirements, and the need to maintain adequate reserve margins make it necessary to strengthen India's resource adequacy framework. The Draft Staff Paper appropriately highlights emerging structural challenges in the electricity sector, particularly the gap between installed capacity and dispatchable availability during peak demand conditions.

However, while the objective of strengthening resource adequacy is well-founded, the proposed framework for a centralized Capacity Market appears institutionally premature in the context of India's present legal, financial, and market structure. Capacity markets in mature jurisdictions evolved gradually alongside deep wholesale markets, financially robust utilities, sophisticated balancing mechanisms, and clear regulatory frameworks. India presently lacks several of these foundational conditions.

The Indian power sector continues to operate predominantly through long-term PPAs under Sections 62 and 63 of the Electricity Act, 2003, with only around 15% of electricity consumption transacted through short-term markets and exchanges. In such a structure, introducing a centralized market-clearing capacity mechanism without corresponding legal and institutional reforms risks creating overlapping payment obligations, contractual uncertainty, distorted investment signals, and prolonged regulatory disputes.

Conflict with Existing Tariff Framework under Sections 62 and 63

A key concern arises from the coexistence of the proposed Capacity Market with the existing tariff framework under Sections 62 and 63 of the Electricity Act.

Generating stations operating under Section 62 already recover fixed costs through regulated capacity charges determined by Appropriate Commissions under established tariff principles. Similarly, Section 63 projects operate under competitively bid PPAs where both capacity and energy charges are contractually discovered and adopted by regulators.

The proposed framework effectively introduces a second mechanism for capacity remuneration through market-clearing prices. This creates conceptual and legal overlap between regulated tariff recovery and market-based rediscovery of capacity value. Existing PPAs and approved tariff structures were designed on the basis of defined contractual and regulatory assumptions. Imposing an additional/alternative auction-based capacity obligation over these arrangements may materially alter the commercial basis of investments and procurement decisions.

Given the sector's history of extensive litigation relating to tariff interpretation, contractual sanctity, and change-in-law claims, introduction of a capacity payment framework is likely to trigger regulatory and legal disputes unless explicitly supported through amendments to the Electricity Act.

Jurisdictional and Federal Structure Concerns

The proposed framework also does not adequately account for India's federal electricity structure. A significant portion of generation capacity remains intra-state in character and falls under the jurisdiction of SERCs and state procurement frameworks.

A centralized Capacity Market can function effectively only with broad and uniform participation. However, in the absence of statutory provisions mandating participation by intra-state entities, states may resist centralized

procurement obligations, particularly where such mechanisms are perceived to affect state autonomy or existing resource planning structures.

This concern is especially relevant for surplus power states that currently derive commercial benefits through bilateral sales and merchant transactions. Without clearly defined coordination mechanisms among CERC, SERCs, NLDC, RLDCs, SLDCs, and state utilities, implementation may lead to fragmented participation and overlapping regulatory jurisdiction.

Financial Fragility of DISCOMs and Counterparty Risks

The viability of any Capacity Market depends fundamentally on financially credible buyers and robust payment security mechanisms — an area where the Indian power sector continues to face structural weaknesses.

As of March 2026, aggregate DISCOM borrowings reportedly stood at more than ₹7 lakh crores, while overdue payments to generators remained around ₹17000 crore. Several utilities continue to face persistent ACS-ARR gaps, delayed subsidy reimbursements, and weak cash flows despite successive reform measures.

In such an environment, generators and lenders are likely to factor significant payment risk premiums into capacity bids, thereby increasing procurement costs for consumers. Unlike markets such as PJM or the UK, where capacity mechanisms evolved alongside financially solvent utilities and strong settlement discipline, Indian DISCOMs continue to exhibit structural financial fragility. Without robust payment security mechanisms, the proposed framework may weaken investor confidence rather than strengthen long-term investment signals.

Stranded Cost Risks and Legacy Thermal Assets

The proposed framework also raises concerns regarding stranded cost exposure for existing thermal assets and legacy utility portfolios.

Competitive capacity auctions are likely to favour newer and lower-cost technologies such as hydro, storage, and flexible resources. Older thermal stations with higher fixed costs may therefore fail to clear future auctions, while utilities may continue to remain burdened with unrecovered fixed liabilities under existing arrangements.

The Staff Paper does not presently provide a clear framework for treatment of stranded costs, transition support, or recovery of legacy asset liabilities. This creates uncertainty for utilities, lenders, and investors, particularly where investments were undertaken under regulated procurement frameworks.

Impact on Long-Term Contracting and Dispatch Autonomy

The proposed framework also raises concerns regarding dilution of DISCOM scheduling autonomy.

At present, DISCOMs retain operational control over scheduling decisions for contracted capacity. Under the proposed design, DISCOMs may continue bearing fixed payment liabilities under PPAs while losing effective operational control over dispatch optimization. This separation of financial obligation from operational control creates commercial asymmetry for procurers.

Further, weakening the role of long-term contracting may adversely affect future investment confidence, as financing for generation projects in India continues to rely substantially on long-term PPAs and predictable dispatch arrangements.

Prematurity Relative to Market Development

International experience demonstrates that capacity markets evolved only after substantial maturation of wholesale electricity and balancing markets. India's electricity market, however, continues to remain

predominantly bilateral and contract-driven, with limited market depth and evolving ancillary service frameworks.

Simultaneously introducing market coupling, balancing reforms, and centralized capacity procurement may create excessive institutional complexity at a stage where foundational market infrastructure itself remains under development. The proposed framework therefore risks creating administratively driven market outcomes without sufficient market depth for efficient price discovery.

Payment Security and Consumer Tariff Constraints

A significant concern relates to the absence of a robust payment security architecture in a sector where retail tariffs remain heavily regulated and politically sensitive.

Unlike mature international markets, Indian DISCOMs do not operate in an environment where increased procurement costs can be seamlessly passed through to consumers through automatic tariff adjustment mechanisms. Tariff revisions are often delayed, and subsidy reimbursements remain uncertain.

Consequently, any increase in capacity market clearing prices during periods of supply tightness may create a structural mismatch between market-based procurement obligations and regulated retail revenue realization. In the absence of strong payment security arrangements, escrow structures, or settlement guarantees, capacity bids are likely to incorporate significant counterparty risk premiums, ultimately increasing consumer costs.

Operational and Institutional Readiness Concerns

Capacity markets require sophisticated forecasting capability, portfolio optimization, settlement systems, and advanced market participation mechanisms. However, many Indian DISCOMs continue to operate within legacy institutional structures characterized by fragmented operational systems, limited analytical capability, and significant dependence on state-level administrative direction.

Many utilities are still grappling with foundational structural issues such as AT&C loss reduction, subsidy recovery, smart metering rollout, and implementation of resource adequacy frameworks. Introducing a sophisticated Capacity Market structure at this stage may therefore impose disproportionate operational burdens and create execution inefficiencies and regulatory disputes.

Demand Forecasting and Resource Adequacy Limitations

Capacity markets critically depend on accurate multi-year demand forecasting and credible resource Capacity markets critically depend upon accurate multi-year demand forecasting and credible resource adequacy assessments. However, forecasting capabilities across DISCOMs continue to remain uneven and inconsistent.

Historically, several utilities have under-procured long-term power and relied heavily upon short-term market purchases during peak demand periods. India's resource adequacy framework itself remains under development. While the Central Electricity Authority (CEA) has initiated important work in this area, including development of modelling tools such as STELLAR, these frameworks have not yet matured through sustained operational validation across states and utilities.

Introducing binding capacity procurement obligations prior to strengthening forecasting methodologies may lead either to systematic over-procurement — resulting in avoidable consumer burden — or under-procurement, leading to reliability risks and emergency procurement dependence.

Renewable Integration and Capacity Accreditation

The Draft Staff Paper appropriately recognizes the importance of technology neutrality. However, renewable energy integration presents unique challenges in the context of Capacity Markets. Intermittent renewable resources cannot presently be treated as equivalent to firm dispatchable capacity without scientifically validated capacity accreditation methodologies.

India's framework for determining capacity credits for solar, wind, storage, and hybrid resources continues to evolve. Premature inclusion of intermittent resources within centralized capacity obligations without mature accreditation mechanisms risks overstating available firm capacity and weakening reliability outcomes. This issue assumes increasing significance in view of India's ambitious renewable energy targets and rapidly evolving generation mix.

Need for Legislative and Regulatory Preparedness

The proposed framework effectively introduces a third tariff paradigm beyond the existing structures recognized under Sections 62 and 63 of the Electricity Act. Such a transition cannot be sustainably implemented solely through subordinate regulations.

A robust legal foundation would require:

- Explicit statutory recognition of market-based capacity procurement;
- Clearly defined resource adequacy obligations;
- Harmonized Centre-State coordination mechanisms;
- Defined treatment of legacy PPAs and regulated assets; and
- Transparent cost allocation principles.

Without such enabling reforms, the framework is likely to face prolonged legal and implementation challenges.

Conclusion

The Draft Staff Paper correctly recognizes the growing importance of resource adequacy, reserve sufficiency, and investment signalling in an increasingly renewable-intensive power system. However, the proposed Capacity Market framework appears significantly ahead of the present institutional, legal, financial, and operational readiness of the Indian electricity sector.

A premature transition toward centralized market-clearing capacity mechanisms may create additional layers of complexity, financial exposure, and regulatory disputes without necessarily strengthening reliability outcomes.

A more prudent approach would involve phased strengthening of resource adequacy planning, forecasting capability, ancillary services, payment security frameworks, and wholesale market development before introducing binding capacity market obligations.

Any eventual transition should be supported by explicit statutory backing, robust payment security mechanisms, clearly defined grandfathering provisions, and transparent transition arrangements for existing assets and contractual structures.