CERC Draft Proposes Market Coupling to Reform India’s Electricity Trading System

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The Central Electricity Regulatory Commission (CERC) has released a draft framework proposing market coupling in India’s electricity market. The reform aims to introduce a single, uniform price discovery mechanism across all power exchanges by designating Grid India as the Market Coupling Operator (MCO). This move seeks to improve efficiency, transparency, and optimal utilization of transmission infrastructure in India’s growing short-term power market.

Detailed Analysis: ?

What is Market Coupling?

Market coupling is a mechanism where buy and sell bids from all power exchanges are pooled together and cleared through a common algorithm, leading to a uniform market clearing price (MCP).

Current System:

Each power exchange (e.g., IEX) determines prices independently

Leads to price differences and fragmented liquidity

After Reform:

Single price across exchanges

Better matching of demand and supply

Efficient electricity allocation

Key Features of CERC Draft (2026)

Grid Controller of India Ltd (Grid India) to act as Market Coupling Operator (MCO)

Introduction of Power Market Coupling Procedure (PMCP)

Uniform bid format and centralized price discovery

Applies to:

Day-Ahead Market (DAM)

Real-Time Market (RTM)

Other segments (phased manner)

Major Change:

Price discovery will shift from power exchanges ? central operator (Grid India)

Growth of Electricity Market in India

Short-term electricity transactions increased from:

65.9 BU (2009–10) ? 238.35 BU (2024–25)

Share of short-term market in total generation:

9.6% ? 13.03%

CAGR of short-term market: ~8.9%

Indicates rising importance of competitive electricity trading

Significance of Market Coupling

Economic Benefits:

Uniform pricing ? price efficiency

Better use of transmission ? reduced congestion

Increased market transparency and competition

System-Level Benefits:

Integration of renewable energy sources

Supports national grid optimization

Enhances energy security

Regulatory Impact:

Reduces dominance of individual power exchanges

Promotes a neutral and centralized market structure

Concerns and Challenges

Potential impact on existing exchanges like IEX

Implementation complexity (technology + coordination)

Need for robust data sharing and cybersecurity systems

Risk of over-centralisation

Additional Key Facts:

Electricity Market in India

Governed by Central Electricity Regulatory Commission (CERC)

Legal basis: Electricity Act, 2003

Power traded via:

Bilateral contracts (long-term)

Power exchanges (short-term)

CERC:

Established: 1998

Chairperson: JishnBarua IAS

Function:

Tariff regulation

Promote competition

Ensure transparency

Grid India

Role: National grid operator

Founded: March 2009

Headquarters: New Delhi, India

Chairman and Managing Director (CMD): Mr.Samir Chand Saxena

Responsible for:

Grid stability

Real-time power system operations

Proposed role: Market Coupling Operator (MCO)

Key Market Segments

Day-Ahead Market (DAM): Electricity traded one day in advance

Real-Time Market (RTM): Electricity traded close to delivery time