MCX
METAL & ENERGY
Trade with Trust



ELECTRICITY
PERFORMANCE REVIEW
2025-2026

Public

FOREWORD TO THE ELECTRICITY PERFORMANCE REVIEW

The Electricity Futures Performance Report (PR) is prepared pursuant to the SEBI circular SEBI/HO/CDMRD/DNPMP/CIR/P/2020/21 dated February 04, 2020, directing all Recognised Stock Exchanges offering Commodity Derivatives Segment to create a 'Performance Review of the Commodity Derivatives Contracts'. The PR, based on SEBI directive, must be uploaded on the Exchange website by June 30, 2026, after consultation with the respective Product Advisory Committee (PAC).

MCX launched India's first Electricity Futures Contract on July 10, 2025, following SEBI approval. This launch marked a significant milestone in India's energy derivatives landscape, providing power generators, distribution companies (Discoms), large industrial consumers, with a transparent and reliable hedging mechanism. The Energy – Product Management Team (PMT) at the Exchange has created this inaugural PR for Electricity Futures in consultation with the PAC.

The Electricity Futures Performance Report highlights important aspects of the performance of the MCX Electricity Futures Contract. Information on Volume, Turnover, Open Interest, price correlations with the underlying spot market and hedging efficiency are provided to help market participants develop an empirical understanding of the contract's performance.

Acknowledgement

We have been ably guided by the MCX Electricity PAC members in shaping the content of this inaugural report and we are extremely thankful to them. We hope to keep improving the report going forward.

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ELECTRICITY- PERFORMANCE REVIEW

Parameters for Performance Review of Commodity

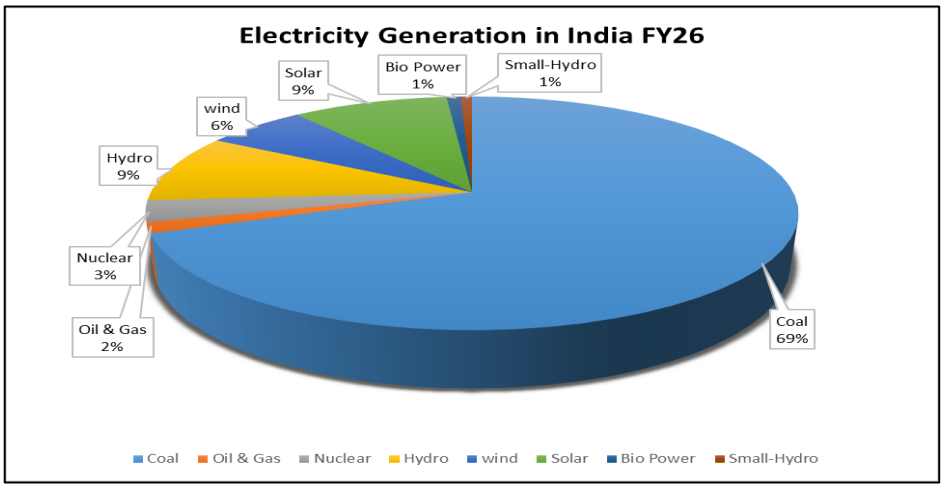
1. BACKGROUND

a. Brief about Commodity such as Sample Picture, Lifecycle, and Various Categories, Grade of commodity found in India.

Electricity is a unique secondary energy carrier produced from primary sources such as coal, natural gas, nuclear fuel, hydropower, solar radiation, and wind. Unlike most commodities, electricity cannot be stored economically at scale and must be consumed the instant it is generated, making real-time balancing of supply and demand critical. It is transmitted through interconnected power grids and distributed to residential, commercial, and industrial consumers. Its characteristics are generally classified according to voltage levels, frequency stability, generation source, and delivery schedules. Being a critical input for economic activity, electricity plays a vital role in India's growth and energy security. The importance of this commodity has led to the development of financial trading instruments such as electricity futures, enabling generators, distribution companies, industrial consumers, traders, and investors to manage price risks effectively.

India is the third-largest producer and consumer of electricity in the world, with a total installed generation capacity of approximately 5,23,959 MW as of FY26. The country generated approximately 1,840 million Mwh of electricity in FY26, driven by thermal, hydro, nuclear, solar, and wind sources.

Categories of Electricity Sources in India



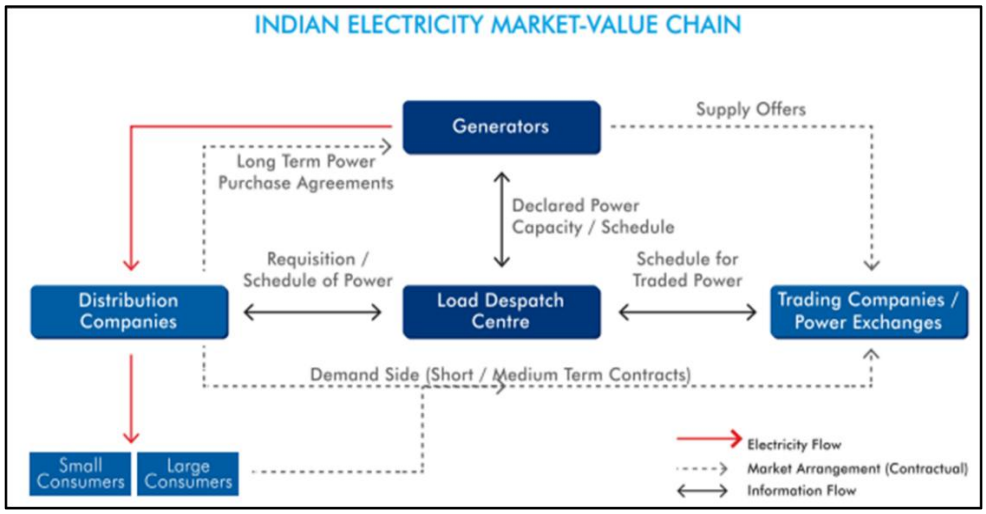
Source: Central Electricity Authority (CEA) / Ministry of Power

Electricity Physical Market

The electricity value chain comprises three broad segments: Generation (power plants thermal, hydro, nuclear, and renewables), Transmission (high-voltage interstate and intrastate grid), and Distribution (supply to end consumers via Discoms). The short-term market through spot exchanges facilitates price discovery and risk transfer

between generators, aggregators, traders, Discoms, and large industrial consumers.

Value chain of electricity is given in the figure below:



b. Commodity fundamentals and Balance Sheet as the per following Format (To be prepared based on publicly available information on best effort basis

Table 3. Indian Scenario (Million Mwh)		
Balance sheet	**FY25**	**FY26**
Generation	1,824	1,840
Import	5	8
Source: CEA		

C. Major Changes in the Polices Governing Trade in the Spot Markets of the Commodity

During FY 2025-26, the Indian electricity market continued to evolve through policy and regulatory initiatives aimed at enhancing market efficiency, increasing renewable energy integration, and expanding market-based procurement mechanisms.

- National Electricity Plan (NEP): The National Electricity Plan continued to guide India's transition towards a power system with a higher share of renewable energy, energy storage, and transmission infrastructure. The increasing penetration of variable renewable energy sources has strengthened the importance of efficient price discovery and market-based risk management mechanisms.

- Renewable Purchase Obligation (RPO) Framework: The progressive RPO trajectory for obligated entities continued to drive renewable energy procurement across the power sector. The growing share of renewable generation has increased reliance on market-based balancing and procurement through power exchanges, thereby enhancing the significance of exchange-discovered electricity prices.

- Green Energy Open Access Reforms: Continued implementation of the Green Energy Open Access Rules facilitated greater participation by commercial and industrial consumers in market-based power procurement. The reforms expanded access to exchange-traded electricity markets and supported the development of a more competitive and liquid power market.

- Cross-Border Electricity Trade: Ongoing efforts to facilitate cross-border electricity trade with neighbouring countries, including Bhutan, Nepal, and Bangladesh, strengthened regional power market integration and diversified electricity sourcing opportunities, thereby contributing to greater market depth and efficiency.

d. Geopolitical issues in the commodity and its impact on Indian scenario.

During FY26, geopolitical developments, particularly tensions in West Asia and disruptions to critical maritime trade routes, contributed to uncertainty in global energy markets. As India relies on imports of crude oil, LNG, and certain energy-related inputs, these developments increased fuel procurement risks, transportation costs, and supply-chain uncertainties.

Tightness in LNG supply and rising gas prices have impacted the thermal coal market, reinforcing coal's role as the fuel for India's power system. Disruptions linked to conflicts in the Middle East sharply curtailed LNG availability, forcing the country to rely more heavily on coal-based generation to meet electricity needs. The government order redirecting natural gas and regasified LNG to priority sectors, with curtailments primarily affecting petrochemical and power sector consumers.

The resulting volatility in energy input costs influenced power generation economics and electricity procurement costs, particularly during periods of elevated demand. Given the growing role of exchange-based price discovery, such uncertainties contribute to fluctuations in Day-Ahead Market (DAM) prices, underscoring the importance of electricity futures as a tool for managing price risk.

2. TRADING RELATED PARAMETERS

a. Monthly and Annual Traded Volume (Quantity in Appropriate Units)

Table 9. Monthly and Annual Traded Volume during FY26 (Million Mwh)	
Month	**Electricity Futures**
Apr-25	-
May-25	-
Jun-25	-
Jul-25	0.70
Aug-25	0.93
Sep-25	3.20
Oct-25	1.54
Nov-25	1.05
Dec-25	1.00
Jan-26	0.82
Feb-26	1.42
Mar-26	1.54
Total FY 26	**12.21**

Note: MCX Electricity futures was launched on 10th July 2025.

b. Annual Traded Volume as a Proportion of Total Deliverable Supply (Quantity in Appropriate Units)

Table 10. Annual Traded Volume as a Proportion of Total Deliverable Supply in FY26 (Mn. mwh)		
Electricity Volume	**Electricity Production + Imports in India**	**Ratio (in %)**
12.21	1,840	0.7%

Source: CEA

c. Annual Traded Volume as a Proportion of Total Annual Production (Quantity in Appropriate Units)

Table 11. Annual Traded Volume as a Proportion of Total Annual Production in FY25 (Mn. Mwh)		
Electricity Volume	**Electricity Production in India**	**Ratio (in %)**
12.21	1,848	0.7%

Source: CEA

d. Average Annual Open Interest as a Proportion of Total Production

Table 12. Average Annual Open Interest as a Proportion of Total Production in FY26 (Mn. Mwh)		
MCX Electricity Average Open Interest	Total Electricity Production in India	Ratio (in %)
0.05	1,840	0.003%

Source: CEA

e. Average Annual Open Interest as Proportion of Total Deliverable Supply

Table 13. Average Annual Open Interest as Proportion of Total Deliverable Supply in FY26 (Mn. Mwh)		
MCX Electricity Average Open Interest	Total Electricity Production + Imports in India	Ratio (in %)
0.05	1,848	0.003%

Source: CEA

f. Monthly and Annual Value of Trades (in Rs. Crores)

Table 14. Monthly and Annual value of trade in FY26 (in Rs. Crores)	
Month	Total Turnover
Apr-25	-
May-25	-
Jun-25	-
Jul-25	312
Aug-25	399
Sep-25	1,212
Oct-25	479
Nov-25	333
Dec-25	395
Jan-26	340
Feb-26	509
Mar-26	696
Total FY 26	4,677

g. Monthly and Annual Quantity of Delivery (in Appropriate Units)

- Not applicable as MCX Electricity Futures contracts are cash settled contracts.

h. Monthly and Annual Value of Delivery (in Rs crores)

- Not applicable as MCX Electricity futures contract are cash settled contracts.

i. Monthly and Annual Average Open Interest (OI) (In appropriate units)

Table 15. Monthly and Annual Average Open Interest during FY26 (Mn. Mwh)	
Month	**Average Open Interest**
Apr-25	-
May-25	-
Jun-25	-
Jul-25	0.04
Aug-25	0.04
Sep-25	0.07
Oct-25	0.08
Nov-25	0.05
Dec-25	0.04
Jan-26	0.04
Feb-26	0.06
Mar-26	0.05
Average FY26	**0.05**

j. Annual Average Volume to Open Interest Ratio:

Table no:16 Annual Average Volume to Open Interest Ratio in FY26 (Mn. Mwh)		
MCX Electricity Average Volume	**MCX Electricity Average Open Interest**	**Ratio (in %)**
0.07	0.05	135

k. Total Number of Unique Members and Clients Who Have Traded During the Financial Year

FY26	Unique Members Traded	Unique Clients Traded
Electricity	232	9,221

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l. Ratio of Open Interest by FPOs/farmers/Hedge/VCP Positions to Total Open Interest (Annual Average as well as Maximum Daily Value)

Instrument	Average of Open Interest	Average of VCPs/ Hedgers	Average of VCPs/ Hedgers	Max of VCPs/ Hedgers	Max of VCPs/ Hedgers	Average of Long %	Average of Short %
Futures	52,620	64,542	4,896	18,65,226	1,38,336	1.33	0.11

Note: All Units are in Mwh
Details are provided based on daily disclosure on the Exchange website for the period April 2025 to March 2026 in line with SEBI circular no SEBI/HO/CDMRD/DNPMP/CIR/P/2019/08 Dated January 04, 2019, based on the data provided by the members from time to time pertaining to VCPs/ Hedgers.

m. Number of Unique FPOs / Farmers and VCPs/Hedgers Who Traded in the Financial Year

Number of value chain participants traded in Electricity during FY26: 54

n. Algorithmic Trading as Percentage of Total Trading

- Electricity: 39.84%

o. Delivery Defaults

- Not Applicable

3. PRICE MOVEMENTS

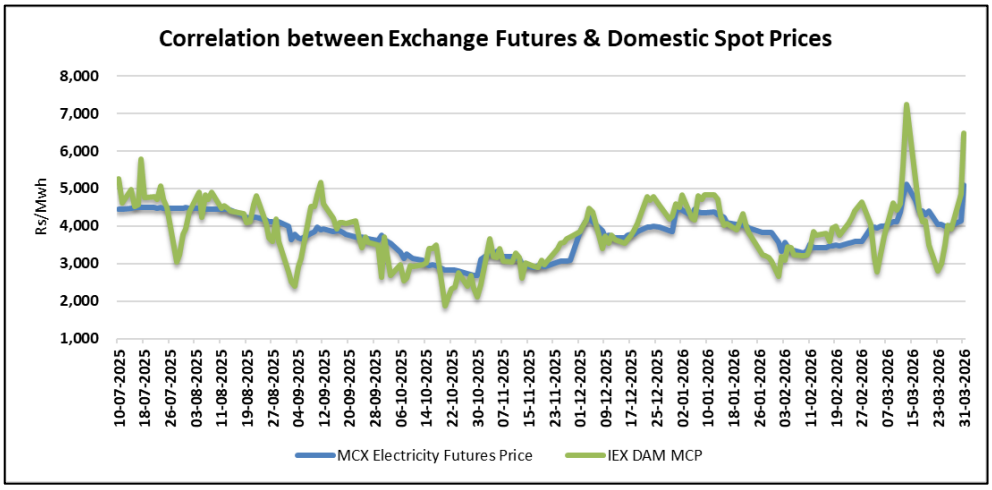
a. Comparison, Correlation and Ratio of Standard Deviation of Exchange Futures Price vis-à-vis International Futures Price (wherever relevant comparable are available).

Not Applicable

b. Comparison, Correlation and Ratio of Standard Deviation of Exchange Futures Price vis-à-vis International Spot Price (wherever relevant comparable are available) and Domestic Spot Price (exchange polled price).

Not Applicable

c. Correlation between Exchange Futures & Domestic Spot Prices Along with Ratio of Standard Deviation.



Correlation between exchange Futures & domestic Spot Prices for FY26 was 0.80.
Ratio of standard deviation= 0.29.

d. Correlation between International Futures & International Spot Prices along with Ratio of Standard Deviation (wherever relevant comparable are available).

Not Applicable

e. Comparison of Exchange Polled Price and Mandi Price (in case of Agricultural Commodities) / other Relevant Price (in case Non-Agricultural Commodities) at Basis Centre.

Not Applicable

f. Maximum & Minimum Value of Daily Futures Price Volatility and Spot Price Volatility along with Disclosure of Methodology Adopted for Computing Volatility.

Commodity	Spot		Futures	
	Min of Daily Volatility %	Max of Daily Volatility %	Min of Daily Volatility %	Max of Daily Volatility %
Electricity	0.28%	7.91%	0.78%	8.55%

Method of Computation of volatility: Exponentially Weighted Moving Average (EWMA)

g. Number of Times the Futures Contract was in Backwardation/Contango by more than 4% for the near month contract in the period under review.

- Number of Times the Futures Contract was in Backwardation by more than 4% for the near month contract: 10
- Number of Times the Futures Contract was in Contango by more than 4% for the near month contract: 112

4. OTHER PARAMETERS

a. Qualitative and Quantitative Measure for Hedge Effectiveness Ratio and Basis Risk (Volatility of Basis) Along with Disclosure of Methodology Adopted for Such Calculations.

Hedging Efficiency: Hedging Efficiency measures the degree to which the simultaneous gains or losses in the physical market are equalized by the respective losses or gains in the futures market – thereby ensuring effective 'lock in'.

Basis risk, the risk associated with an unexpected widening or narrowing of the basis between the time a hedge position is established and the time that it is settled. Basis continuously keeps changing due to the changing price of the underlying asset as well as futures prices. This change in basis lead to basis risk when the futures contract price doesn't not move in line with that of the underlying spot price. In other words, basis risk is the risk that the cash futures spread widens or narrows between.

Hedge Efficiency for FY26	
Commodity	**Hedge Efficiency**
Electricity	80.65%

Note:
Hedging efficiency has been estimated as the value of Coefficient of Determination (R^2) obtained from regressing changes in Due Date Rates of the monthly contracts on changes in monthly average of MCX Futures Prices during the period.

Basis Risk for FY26			
Commodity	**Unit of Basis**	**Avg Return of Basis**	**Basis Risk**
Electricity	Rs/Mwh	-15.04	39.30

Note:
Basis Risk is computed as the Standard Deviation of normal returns in Basis, which is excess of Spot over Futures price. In case Basis is zero for any day, next day's basis return has been ignored for computing the Standard Deviation.

b. Details about Major Physical Markets of the Commodity vis-à-vis Market Reach in Terms of Availability of Delivery Centers (information to be provided state-wise and UT-wise).

- Not applicable.

c. Details About Major Physical Markets of the Commodity and Average Open Interest for Each Month Generated from those Regions.

- Not applicable.

d. Details, such as Number and Target Audience, of Stakeholders 'Awareness Programs Carried Out by the Exchange.

The Exchange has undertaken extensive market development initiatives to enhance awareness, improve market understanding, and facilitate adoption of electricity Futures across the power sector ecosystem.

- Over 350 awareness seminars and webinars conducted for VCPs and financial market participants across the country.

e. Steps Taken / to be Undertaken to Improve Hedging Effectiveness of the Contracts as well as to improve the Performance of Illiquid Contracts.

The following steps have been or are being undertaken by MCX to improve hedging effectiveness and participation in Electricity Futures:

- Engagement with value chain participants to create awareness about contract specifications and hedging using MCX Electricity Futures.
- Engagement with State Commissions and Discoms: Workshops and advocacy for regulatory enablement for state distribution companies to commence hedging.
- Event with associations to create awareness on MCX Electricity Futures and partnering for national levels power conferences and events.

5. ANY OTHER INFORMATION TO BE DISCLOSED AS DEEMED IMPORTANT BY THE EXCHANGE OR AS SUGGESTED BY THE PAC.

None

ABBREVIATIONS

Abbreviation	Full Form
BU / BUs	Billion Units (1 BU = 1,000 MWh = 1 GWh)
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
DAM	Day Ahead Market
DISCOM	Distribution Company
EWMA	Exponentially Weighted Moving Average
GW	Gigawatt
GWh	Gigawatt-hour
IEX	Indian Energy Exchange
MCX	Multi Commodity Exchange of India Limited
MCP	Market Clearing Price
MU	Million Units (1 MU = 1,000 kWh = 1 MWh)
MW	Megawatt
MWh	Megawatt-hour
NLDC	National Load Dispatch Centre
PAC	Product Advisory Committee
PMT	Product Management Team
PR	Performance Report
RPO	Renewable Purchase Obligation
SEBI	Securities and Exchange Board of India
VaR	Value at Risk
VCP	Value Chain Participant

DISCLAIMER

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