



Edition- MMXXV-II | June 2024

TATA POWER TRADING COMPANY LIMITED



POWER MEETS INTELLIGENCE

FOREWORD BY OUR CEO



Dear Patrons,

It is with great pleasure that I welcome you to another edition of our periodical, Energy Services Insights. As we navigate through a rapidly transforming power market scenario which is witnessing an unprecedented evolution, it must be noted that this transition towards renewable energy sources is not merely a trend, but a necessity driven by the urgent need to address climate change and ensure sustainable growth. At Tata Power Trading Company Limited, we are at the forefront of this transition, embracing innovation and sustainability as the cornerstones of our strategy.

In recent years, the integration of renewable energy into the grid has accelerated, presenting both opportunities and challenges. The diversification of energy sources, from solar/wind/hydro to other alternate RE sources, requires a robust and flexible trading mechanism. Beyond mere power trading, our focus is on delivering comprehensive energy solutions that enhance efficiency, reduce costs, and support sustainable practices. From energy management and consulting to innovative demand response programs, we are dedicated to empowering our customers with the tools and knowledge to optimize their energy use.

As we move forward, collaboration and partnerships remain critical. The energy landscape is a complex ecosystem where utilities, regulators, technology providers, and consumers must work in unison. We are proud to collaborate with various stakeholders to create a more sustainable and resilient energy future.

Thank you for your continued trust and partnership.

Happy Reading!

Tarun KatiyarChief Executive Officer



ENERGY NEWS





Green Deals

Total Energies has signed a deal with **Air Products and Chemicals** for delivery of green hydrogen.

This is a follow up action by Total Energies post their call for tenders to supply 5,00,000 tonnes of green hydrogen to their refineries. The deal involves supplying 70,000 tonnes of green hydrogen each year from the year 2030 and also marks the first step by Total Energies towards decarbonization of their refineries.

Total Energies is a France based oil and gas major, present in more than 120 countries and deals in oils biofuels, natural gas, renewables and electricity. Its portfolio includes six refineries in Belgium, Germany, the Netherlands and France and two biorefineries in France, all of which are currently using grey hydrogen. The company aims to reducing their net GHG emission from oil and gas business to 40% by 2030 as compared to 2015 levels.

Air Products and Chemicals is a US based company whose business includes essential industrial gases and related equipment and applications expertise to refining, metal, manufacturing, food and electronics industries.

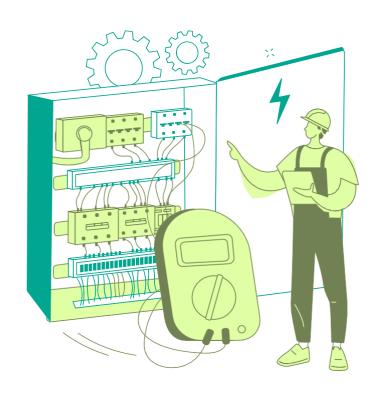
In an interesting arrangement, Total Energies has also become the supplier of renewable energy to Air Products hydrogen manufacturing plant. As a part of PPA, Total Energies is set to supply 150 MW solar power to Air Products from a plant based in Texas, USA.

More than the quantum and amount of the deal, the momentum that green hydrogen is gaining is what pulls the attention the most. This is an example of global awareness and efforts towards a green economy where a US company provides green hydrogen to a French company for its Northern Europe operations and the French company facilitates the green power supply from a US based plant.



ENERGY NEWS





India's firm footing on CBAM

India has raised its concern to the World Trade Organization (WTO) regarding the implementation of Carbon Border Adjustment Mechanism (CBAM).

Implementation of CBAM involves emission reduction efforts by manufacturing units that are exporting their product to the EU. Whether in the form of efficiency improvement or carbon certificates, this initiative will need investment and in developing countries the local government might want to give subsidies to such factories. To counter this, EU proposes to link the trade policy and the industrial policy which would supposedly allow them to scrutinize the policies made by the countries.

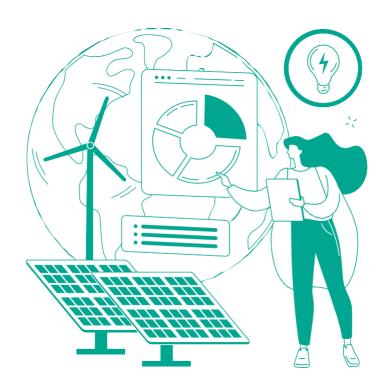
In the 13th Ministerial Conference (MC13) of the WTO in early 2024, India expressed its concern to such linkage of the trade and industrial policy. Industrial policy being the concurrent subject in India, the policies are being framed by both the Center and the State. In case the State forms a policy to promote industries in its state, this should not come under the scrutiny of the EU. Most of the time these are small and medium scale industries which might even not export to the EU.

This proposal by EU is seen as step to onshore the industrial activities and to reduce their dependency on the Rest of the World.









Steel-Scope

12% - is the percentage contribution of India's steel sector to India's total emission reduction

25% - is the percentage by which the India's steel sector emissions (per ton of crude steel) are higher than the global average

Evidently, these are the concerning numbers when it comes to achieving the India NDCs of emission reduction. However bigger concern is that the steel sector is the export-oriented sector with CBAM being applicable in the near future.

With this point of view, the Ministry of Steel in India has pushed the steel manufacturers of India to go green. The two major ways suggested to go green is to adopt carbon capture methodologies in the processes and to replace the use of coal in the furnaces with green hydrogen. The push comes majorly for all the steel exporters in India.

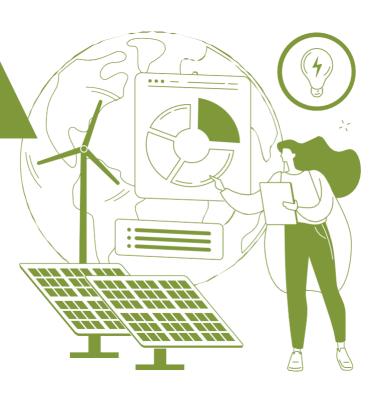
CBAM is in its reporting period at present i.e. from 2023 to 2025 and the tax is planned to be imposed from 2026 onwards. The sectors that come into the ambit of CBAM in the first phase are steel, aluminum, hydrogen, cement, electricity and fertilizer.

For the interest of the readers, Tata Steel implemented the first carbon capture plant in India to capture CO2 from the blast furnace gas at Jamshedpur in September 2021. This plant is capable to capture 5 tonnes per day of carbon.



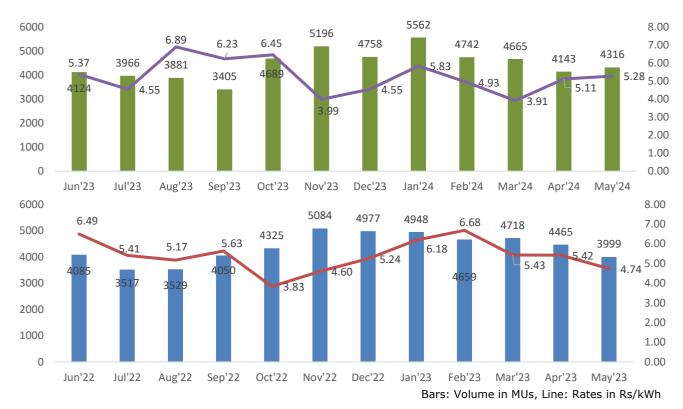


MARKET WATCH



Day Ahead Market

An analysis of the day ahead market on a 12-month rolling basis presented in the below charts gives a glimpse of the market behavior in the past 2 years. A consistent rise in the volume as compared to the same month previous year. Surprising exceptions are the summer months of March and April in 2024 when the volumes were lower than that in the previous year. Other than the months of August, September and October, the prices have kept low this year than the past year, when compared on rolling basis.







MARKET WATCH



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Green Day Ahead Market

The volumes in the green day ahead market have just picked up in the recent months of March, April and May in 2024. Except these, the volumes in GDAM have shown striking low trade as compared to their counterparts in the previous years.

Following the trend of day ahead market, the prices have generally kept low this year as compared to the past year; except the months of August, September and October.





Bars: Volume in MUS, Line: Rates in Rs/unit





Active Tenders -	- Conventional
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Name of the Utility	Tender Submission Date	Reverse Auction Date	Requirement (MW)
UPCL	18-June-2024 (14:00 Hrs.)	Shall be intimated through E-mail after conducting of technical Evaluation of tender	Jul'24 to March'24: Up to 2 00 MW(RTC) Minimum Requirement: 20 MW

Recent tenders concluded – Conventional					
Name of Utility	Requirements	Delivery Point	Tariff at Delivery Point (₹/kWh)		
BSES Rajdhani Power Limited (BRPL)	Period: 16th Apr'24 to 30th Sep'24 Duration: RTC Quantum: Up to 500 MW	NR Periphery	July'24 - 6.01 to 8.00 Aug'24 - 6.07 to 6.25 Sep'24 - 6.47		
Haryana Power Purchase Centre (HPPC)	Period: 1st June'24 to 30th Sep'24 Duration: RTC Quantum: 1000 MW	Haryana State Periphery	July'24 - 6.29 to 6.89 Aug'24 - 6.50 to 7.00 Sep'24- 6.45 to 6.90		
West Bengal State Electricity Distribution Company Limited (WBSEDCL)	Period: 1st July'24 to 30th Sep'24 Duration: RTC Quantum: 1500 MW	WB State Periphery	July'24 - 6.41 Aug'24 - 6.65 Sep'24 - 6.69		



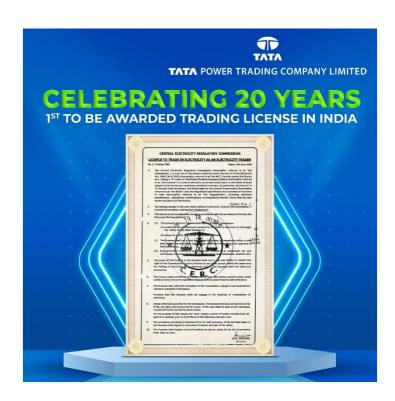
Recent tenders concluded – Conventional				
Name of Utility	Requirements	Delivery Point	Tariff at Delivery Point (₹/kWh)	
Bihar State Power (Holding) Company Limited	Period: 20th May'24 to 30th Sep'24 Duration: RTC Quantum: Up to 700 MW	ER Periphery	July'24 - 7.25 Aug'24 - 6.45 Sep'24 - 6.44	
UP Power Corporation Limited (UPPCL)	Period: 1st Apr'24 to 30th Sep'24 Duration: Evening Peak Quantum: Up to 1200 MW	UP State Periphery	July'24 - 9.83 Aug'24- 9.85 Sep'24 - 9.87	

Recent tenders concluded - Green

Name of Utility	Requirements	Delivery Point	Tariff at Delivery Point(₹/kWh)
NPCL (RE Tender)	Period: 1st June'24 to 31st Mar'25 Duration: 06:00 -18:00 Quantum: Up to 50 MW	CTU Periphery of seller	July'24 to Sep'24 - 4.05 Oct'24 to Mar'25 - 4.00



COMPANY HIGHLIGHTS



It has been an exciting new quarter for TPTCL, with completion of 20 years since grant of Trading License by CERC. We also have the privilege of being the recipient of the first-ever Trading License issued by CERC.

We have charted a long journey since then, and TPTCL has cumulatively traded 188+ Billion kWh since its inception, till date. Firming up our renewable journey, TPTCL now has a 400+ MW Green capacity. And the journey continues.

We hope to continue to serve our customers with customized, innovative and differentiated offerings, with full-stack solutions across the energy value chain.



REGULATORY UPDATES



Directions for Gas-Based Generating Stations (GBSs) under Section 11 of the Electricity Act.

As per the latest directive from the Ministry of Power, dated April 12, 2024, GBSs must be notified fourteen days in advance to arrange natural gas for operating Gas-Based Generating Stations due to increasing demand. These stations are required to ensure the dispatch of 50% of their RTC capacity on Day-1.

Furthermore, GBSs with Power Purchase Agreements (PPAs) with distribution licensees must prioritize offering their power to them. If power remains unscheduled under any PPA, it should then be offered to other PPA holders. Any surplus power can be sold in the Indian Energy Exchange (IEX).

GBSs with existing PPAs should offer their capacities based on their energy charge rates, while those without PPAs must offer their power at the benchmark Energy Charge Rate (ECR) determined by the appropriate commission. This benchmark rate will be reviewed every 15 days.

Power offered in the power exchange should not exceed 120% of the ECR, and any fixed charges recovered above the ECR will be used to cover the fixed costs of the Generating Station. The Ministry of Power has provided a list of 26 stations, including Central Sector, State Sector, IPP, and Merchant Gas-Based Stations, subject to these regulations.





Regulatory overview: Tamil Nadu

Eligibility Criterion for Open Access

Contract Demand of 1 MW and Above (100 kW & above for Intra state transaction)

Connection 11 kV and Above

ABT Meters with 0.2S class CT, 0.2 class PT to record the drawl energy in15 mins time-block at sub-station / consumer end.

No Pending arbitration / No outstanding dues with DISCOMs/Transmission Licensee

Charges Applicable

State transmission	Rs. 223.57
charge	/MWh
Scheduling Charge	Rs. 172/day
System Operating Charge	Rs. 3.13/MW/hr Subject to a ceiling of Rs.750/-/ Day
Wheeling charge	1.00/kWh

Steps for Open Access transaction:

- Signing of Power Purchase Agreement
- Installation of ABT meters (as per regulation)
- Approval from EDC (Electricity Distribution Circle)
- Registration on NOAR portal
- Approval from SLDC and SLRDC
- Start of Power flow transaction

Cross Subsidy Surcharge	Rs/kWh
HT IA: HT-Industry	1.86
HT IIA: Govt. educational Instt	2.02
HT IIB: Pvt Educational Instt	2.27
HT III - HT commercial	2.41

Renewable Energy Policy:

For Intrastate 3rd party transactions:

- **Waiver:** Wheeling charges 50% for Solar and wind, Cross subsidy 60% for solar, 70% for wind
- **Banking:** Monthly banking in slot wise.

	Industrial		Commercial	
Breakeven rates (Rs/unit)	11 KV: 3.91 22 KV: 3.92 33 KV : 3.99	110 KV: 4.93 230 KV: 5.07	11 KV: 5.34 22 KV: 5.38	33 KV : 5.45 110 KV: 6.44

Losses (%)	VOLTAGE LEVEL				
	11KV	22KV	33KV	110KV	230KV
Transmission Losses	2.34	2.34	2.34	2.34	0.77
Distribution Losses	1.95	1.9	0.72	0	0
Total State Losses	4.29	4.24	3.06	2.34	0.77



LET'S SUSTAIN!

What is CBAM

The Carbon Border Adjustment Mechanism is essentially a tariff on carbon-intensive goods imported from countries with lax environmental regulations. By imposing a carbon price on these imports, CBAM seeks to prevent carbon leakage—a scenario where companies relocate production to countries with less stringent climate policies to avoid higher costs at home. This mechanism ensures that imported goods bear the same carbon costs as products manufactured domestically under stricter environmental regulations, thereby promoting fair competition and encouraging global carbon reduction.

The legislative process for CBAM lasted from 2020 to 2022. CBAM is in its adoption and pilot phase which will last till 2025. During this period, the entities exporting to the EU are expected to monitor and report their emissions. The CBAM will be implemented in full by 01-Jan-2026 where the exporters to EU will have to either limit their emissions or purchase the carbon certificates equivalent to the emissions. The price of the carbon certificates is expected to be reflective of EU Emission Trading Scheme (ETS) pricing.

The sectors covered under CBAM are major carbon emitters like from Cement, Iron and Steel, Aluminium, Fertilizers, Hydrogen and Electricity.

Currently, there are practical difficulties in the implementation of CBAM considering the technical complexity that is involved in the monitoring and reporting of the emissions. However these are expected to be resolved in due course of time. The major issue that the CBAM is expected to face is to ensure that the economies of the developing countries are not adversely hit. Keeping alive the trade and export relations among EU and non-EU countries should be the spirit of the game!!





Contact Us at: 0120-6102000

www.tatapowertrading.com

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