

Frequently Asked Questions - Physical Market

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What is Power Exchange India Limited (PXIL)?

Power Exchange India Limited (PXIL) is India's first institutionally promoted Power Exchange that provides innovative and credible solutions to transform the Indian Power Markets. PXIL provides a platform on which buyers and sellers of electricity come together to trade electricity.

Why do we need a Power Exchange?

Indian Power Sector required an independent market place operating at a national level enabling the buyers and sellers to trade anonymously yet providing a transparent level playing field to the participants allowing the electricity market to be driven by the demand and supply, truly reflecting the power price. In long run the Power Exchange would provide the price signals for the whole electricity market operating in India.

Who are the promoters of PXIL?

PXIL has been jointly promoted by the National Stock Exchange of India Limited (NSE) and the National Commodity and Derivative Exchange (NCDEX). The other equity partners are

- **Central Govt. Entity** - Power Finance Corporation
- **State Govt. Entities** - Gujarat Urja Vikas Nigam Limited (GUVNL), Madhya Pradesh Power Management Company Limited (MPPMCL), West Bengal State Electricity Distribution Company Limited (WBSEDCL)
- **Private Sector Entities** - JSW Energy Limited, Tata Power Trading Company Limited, GMR Energy Limited

What is Power Trading?

Power trading is activity of buying and selling of power. At Power Exchanges, which are approved by Central Electricity Regulatory Commission (CERC), standardized Products are offered to buy and sell power.

Who regulates Power Trading?

The Exchange based power trading is being regulated by the Hon'ble Central Electricity Regulatory Commission (CERC).

What are the benefits of trading power through PXIL?

Power trading helps in matching of buyers and sellers according to various criteria like price, quantum, region etc. The price discovered on exchanges is fair and transparent. It means that the participant is ensured that he has got the best deal based on his preferences and constraints.

- Non-partisan & transparent system to participate in electricity trading
- 100% secure and risk free process
- **For Buyers:** Ability to manage portfolio with reduced costs.
- **For Sellers:** Ability to secure best price available in the market
- rationally distributes transmission losses among the participants
- wide variety of contracts available on exchange to manage load on contingent, day ahead and term ahead basis
- improves the market environment & provides electricity price signals to the market

How does Power Exchange help? What is the role of Power Exchange?

Being a demutualised, nationwide, electronic Exchange it offers an instrument to hedge price risk more efficiently at a reasonably priced cost.

The benefits of trading in a Power Exchange being:

Utilities: Utilities can adjust their portfolio as a function of demand or generation profile and rebalance their portfolio in DAM and Intraday markets. Utilities can also participate in the Weekly market of the Exchanges

and meet their demand on a weekly basis.

IPPs & CPPs: DAM is the only national Power Market where demand and supply are aggregated on a national basis. It means that Price discovered on the Exchange is a national Price and the quantum is cleared on national basis rather than locally. It helps the IPPs and CPPs in getting a competitive price for the quantum sold and also diminishes their capacity from being idle.

OA Consumers: Open Access consumers can derive the benefit of buying electricity from a national level market through Power Exchanges which will help them in reducing their cost of buying of electricity in comparison to the tariffs levied by the respective utilities of their state.

Who is an Open Access Customer?

Any consumer, trader, distribution licensee or a generating company of load 1 MW above and who has been granted open access under the Open Access Regulations by the concerned state is an Open Access customer.

What are the Pre Requisites for trading at PXIL?

- Membership at PXIL
- Grid connectivity
- SLDC concurrence required for application to nodal RLDC
- Two Settlement Accounts for Settlement of trade
- Installation of Availability Based Tariff (ABT) Meter

Who can become a member of PXIL?

Any Legal Entity that fulfils the criteria mentioned above in question no 8 are eligible to be a member on PXIL. For example Generators, Distribution Utilities, Independent Power Producers (IPPs), Captive Power Producers (CPPs), Merchant Power Plants (MPPs), traders and others.

My facility is grid connected and already there is a meter installed. Why the need to change it?

The Meter that is present at your premises may be a Time of Day (TOD) Meter, which only records consumption at hourly intervals. The Special Energy Meter (ABT Meter) is programmed to record injection/drawl of energy, demand, voltage and average frequency at 15 mins interval which is one time block as per the Indian Electricity Grid Code.

What are the Membership categories and the associated fee?

For detailed information on Membership categories and the fee structure kindly visit PXIL webpage

<http://www.powerexindia.com/PXIL/insidepage.aspx?id=135>

I don't want to become a Member of Power Exchange. Can I still trade?

Yes, Even if you are not a member of PXIL, you can trade through a member, i.e. by becoming a client of a member. Members, however, can trade and clear directly on their own behalf as well as on behalf of their client's.

I am a Member/client of PXIL, but how do i really get connected with PXIL for trading power?

PXIL has created a Front End Application / interface with all required tools embedded so that anyone can connect to the PXIL trading platform & put the bids conveniently. The same will be installed by IT Team of PXIL.

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How to get the PXIL application/software installed in the PC/desktop/laptop at my premises?

Installation of PXIL applications in PC/desktop/laptop is very simple. PXIL IT team would provide 2 executable files of PXIL application. Member has to just run those executable file by double clicking on them.

To whom Member has to contact for software or application related issue(s)?

Member will have to contact the helpdesk team and from there the call will be transferred to the concern IT Engineer. To contact helpdesk Team you can dial on the following Landline number **+91 22 26530537/38** or email at itsupport@pxil.co.in

How transparent is the entire trading process?

Market transparency is ensured by computerised trading system and immediate dissemination of all relevant information related to any trades.

What are the products offered by PXIL?

PXIL currently offers contracts in the following categories

Physical Category

- Day Ahead Spot Contract (DAS)
- Day Ahead Contingency Contract (DAC)
- Week Ahead Contract
- Intra Day Contract
- Any Day Contract

Renewable Energy Category

- Renewable Energy Certificates (REC)

For detailed product information please refer PXIL website at <http://www.powerexindia.com/pxil/>

How will the power trading happen at PXIL?

Trading at PXIL is done electronically wherein the buyer or seller uses electronic interface to connect with PXIL and put bids for buying or selling power.

What is the process of power trading at PXIL?

Following steps are followed at the exchange to ensure smooth trading experience for the buyer or seller

Margining:

For Day Ahead Market (DAM) i.e., DAS or DAC, Buyer has to deposit margin equal to the total bid he/she intends to put in the DAM and there is no margin requirement for a seller in DAM

For Weekly trades, the Exchange collect margins on a rolling basis. The buyer has to deposit an initial margin and keep it rolling on a day to day basis and seller has to deposit a margin of 10 paise per unit as bid security.

Bidding: A registered buyer/seller has to enter their Order into the electronic platform provided by the Exchange. There are various kinds of Orders available to the buyer/seller whom they can choose according to their needs and preferences.

Price discovery: Exchange discovers Price through its Matching Engine based on the various bids put by different buyers and sellers. The Matching Engine and Matching Methodology used by the Exchange differ from Product to Product. The Matching Methodologies of all Products is validated and approved by CERC, so that the Price discovery happens in a fair, transparent

and efficient manner.

Scheduling: Based on the Prices discovered for various time slots or various Products, Exchange provides schedules that provides client-wise and time slot-wise information related Price, Quantity and Region.

Settlement: After the scheduling is over, the Exchange initiates the settlement process wherein the pay-in collected from various buyers need to be transferred to the sellers. Also, any residual Margins left are transferred back to the buyers whose bids were not successful.

Delivery: Seller starts injecting power into the required node of the grid on the basis of cleared quantum and symmetrically the buyer's starts drawing power from the connected node.

What are the types of Order Entry and types of Order Buyer/Seller can entered?

Order Entry will be used by the trader and advisory members to place order on behalf of clients mapped to the trader. Order Entry will restrict the placement of buy / sell orders on the basis of configurations set by user. Order entry will display all the order placed in the session anonymously, although same can be controlled by exchange user.

There are two types of order Buyer and seller can enter, they are **Normal Orders and Block Bid orders.**

Normal orders: The Members would be able to put multiple price-quantity orders for each Contract (i.e. each timeslot).

Block Orders: Block Order will specify one price and one quantity for a combination of continuous time slots i.e. same quantity, at one particular price for multiple time slots, as may be notified by the exchange from time to time. A Block order would consist of orders for eight contiguous time slots (i.e. 8 time slots of 15 minutes each) and in further multiples of 4 time slots, or as notified by Exchange from time to time.

What is the minimum power unit that one can trade?

Contract Size : Minimum 0.01 MWh*

Minimum volume step : 0.01 MWh

Minimum price step : Rs 1 per MWh

***Gujarat OA consumers 1 MWh**

What are trading hours at PXIL?

The trading hours for various product categories at PXIL are enlisted below

S No.	Product Type	Session	Day	Start Time	End Time
1	DAS	N/A	Every calendar day	10:00	12:00
2	DAC	N/A	Every calendar day	15:30	16:30
3	Week Ahead	N/A	Monday, Wednesday and Thursday	10:00	16:00
4	Any Day	N/A	Every calendar day	10:00	16:00
5	Intra day	1	Every calendar day	10:00	11:00
6	Intra day	2	Every calendar day	11:01	12:01
7	Intra day	3	Every calendar day	13:00	14:00
8	Intra day	4	Every calendar day	15:00	16:00

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S No.	Product Type	Session	Day	Start Time	End Time
9	Intra day	5	Every calendar day	16:30	17:30
10	Intra day	6	Every calendar day	18:00	19:00
11	REC	N/A	Last Wednesday of every month	13:00	15:00

When is the delivery done?

Delivery of power depends upon the Product for which a participant has entered into a trade. In case of DAS, Trading is done on T minus 1 day and delivery starts from 00:00 hrs. of the D-day.

When is the trade finalized?

The trade obligation of Market participant for DAS is finalised by 15:00 hrs. of the trading day.

Where is the Delivery Point?

The Delivery is done on the Periphery of Regional Transmission System in which the grid-connected entity is located.

How is the Price determined?

A Uniform Price is determined through the matching of Aggregate Demand and Aggregate Supply for each time block of 15 min.

What are the transaction charges levied by PXIL?

Currently PXIL charges 2 paise/kWh each from buyer and seller which has been in effect since October 21, 2011.

What is the procedure for obtaining the concurrence from SLDC? How can one get the State Clearance in connection with Open Access License?

State Utilities and intra-State Entities intending to participate need to obtain "Concurrence" or "No Objection" or "Prior Standing Clearance", from the respective State Load Dispatch Centres (SLDCs) in accordance with Regulation 8 of CERC (Open access in inter-State transmission) Regulations 2008.

What are the operating charges in Day Ahead Spot market at SLDC and NLDC Level?

- SLDC Operating charges @ Rs.2000/- per day per Client.
- NLDC Operating charges @ Rs.5000/- per day per Entity involved. All Buyers within a State shall be clubbed together into one group and all Sellers within a State shall be clubbed together into another group by the Power Exchange(s). NLDC shall count each Buyer group and each Seller group for each of the Power Exchange(s) as separate Entities for Scheduling and levy of Operating Charges.

NLDC Operating Charge per client:

$$\frac{(\text{No of Regional Entity Buy} + \text{No of Regional Entity Sell}) \times 5000.00}{\text{Number of Successful Clients}}$$

What are the operating charges in bilateral products (Intra Day, DAC, Week Ahead and Any Day) at SLDC and RLDC Level?

- SLDC Operating charges @ Rs.2000/- per day per Client.
- RLDC Operating charges @ Rs.5000/- per day per RLDC involved.

What are the Application fees involved in trading process?

- A Non-refundable fee* is payable to NLDC along with each DAS application, which is socialized by the power exchange between no. of successful clients.
- A Non-refundable fee** is payable along with each bilateral application, which is collected from the buyer by the power exchange and paid to the Nodal RLDC.

* Currently Rs. 5000/-

** Currently Rs. 5000/-

What are Transmission Charges involved in the trading process?

- Point of Connection charges (PoC charges) for injection/drawl determined as per CERC Regulations
- State transmission charges determined by respective SERCs in case the Buyer/Seller is connected to the Intra-State grid

How are the transmission losses calculated?

The losses are mainly at State and regional level transmission. Inter-State transmission losses would be applied separately on Buyers as well as Sellers. Further, to compensate for the losses in the inter-State transmission system, the Sellers shall have to inject extra power in addition to the contracted power and in the same way the buyers shall draw less power than contracted power.

The inter-State transmission loss would be as specified in the Order on PoC loss and charge to be issued by CERC. The intra-State transmission loss for Buyers/Sellers connected to the State grid would be as per the Orders issued by respective SERCs.

What is the procedure of Scheduling in Collective Transaction (DAS)?

The individual transactions for State Utilities/intra-State Entities shall be scheduled by the respective SLDCs. Power Exchange(s) shall send the detailed breakup of each point of injection and each point of drawl within the State to respective SLDCs by 18:00 Hrs. after receipt of acceptance from NLDC. The details for Scheduling Request for Collective Transaction shall be submitted by Power Exchange (s) to the respective SLDCs as per Format-PX-IV: "Scheduling Request for Collective Transaction to SLDC". Power Exchange(s) shall ensure necessary co-ordination with SLDCs for scheduling of the transactions.

How are the exchange based bilateral transactions scheduled?

The exchange based bilateral transactions can be scheduled on Advance Reservation basis or First cum First Served basis as per the Open Access regulations.

The current products offered by exchange do not qualify for Advanced Reservation as the exchanges are not allowed to offer delivery contracts promising delivery beyond 11 day period and hence the exchange based bilateral transactions are scheduled on First Come First Serve Basis.

What is the procedure for scheduling of bilateral transaction on "FIRST-COME-FIRST-SERVED" basis?

Application received under the following categories shall be treated as "First-Come-First-Served" application:-

- Application received under "First Come First Served" category for Short-Term Open Access shall be considered only when transactions are commencing and terminating in the same calendar month.
- Application for scheduling a Bilateral Transaction which is commencing in the same month, in which Application is made,

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provided that such Application is received at least four (4) days in advance from the date of commencement of the Bilateral Transaction. All such Application shall be processed and decided within three days of their receipt.

- c) Application received during the last ten (10) days of the first month, for scheduling of transactions in the second month. However, Applications received up to five (5) days prior to the end of the month shall be processed only after completing the process for Advance Scheduling of Bilateral Transactions for the second month.

All Applications received by the Nodal RLDC in a day up to 17:30 hrs shall be considered together for processing and shall have same priority. Applications received by the nodal RLDC after 17:30 hrs of a day shall be treated as having been received on next day.

Pro-rata scheduling acceptance shall be given in case scheduling requests of the Applicants is for more than the margins available.

What is the procedure for scheduling of DAY-AHEAD bilateral transaction?

Applications received within three days prior to the date of scheduling and up to 15:00 Hrs. of the day immediately preceding the day of scheduling shall be treated as having been received together for processing and shall have same priority.

Applications for Day Ahead transactions shall be processed only after processing of the Collective Transactions of the Power Exchange.

Pro-rata scheduling acceptance shall be given in case scheduling requests of the Applicants is for more than the margins available.

What is the procedure for scheduling of bilateral transactions in a CONTINGENCY?

In the event of a contingency, the buyer or in its behalf, a trader may locate, and the power exchange may offer its platform to locate, a source of power to meet short-term contingency requirement and make an Application to the Nodal RLDC.

Nodal RLDC shall accept such Application only after 1500 hrs of the day immediately preceding the day of scheduling.

Nodal RLDC shall take steps to incorporate such Bilateral Transactions in Day Ahead schedules/same -Day schedules, as the case may be. In case of Same Day, the transaction shall be scheduled from the 6th time block, counting the block in which acceptance is accorded as the first time block.

Applications received by 1800 Hrs under the contingency category for scheduling of bilateral transactions on the next day shall be taken up together for processing. Applications received after 1800 Hrs under the contingency category for scheduling of bilateral transactions on the next day and those applications received on the same day shall be processed on a first come first serve basis.

Pro-rata scheduling acceptance shall be given in case scheduling requests of the Applicants is for more than the margins available.

Formats for short-term open access –bilateral transaction.

FORMAT-I: “APPLICATION FOR SCHEDULING”

FORMAT-II: “CONCURRENCE FROM SLDC”

FORMAT-III: “AFFIDAVIT – regarding Deemed Concurrence from SLDC”

FORMAT-III: “REQUEST /CONCURRENCE FROM RLDC”

FORMAT-IV: “CONGESTION INFORMATION–ADVANCE SCHEDULING”

FORMAT-V: “REQUEST FOR REVISION OF SCHEDULE- DUE TO CONGESTION”

FORMAT-VI: “ACCEPTANCE FOR SCHEDULING”

FORMAT-VII: “DETAILS OF PAYMENT”

FORMAT-VIII: “REGISTRATION FORM”

Formats are available at this link. <http://www.wrlcdc.com/STOAformats.aspx>

How the counter party risk in bilateral products is managed at PXIL?

In case of trade default, the Exchange shall levy penal charges on the defaulting member who has violated the contract. Please Ref Circular No: PXIL/Operations/2012-2013/0098 Subject: Introduction of Penalty (Charges) Structure on default of Weekly Contracts.

How can I start Power trading at the earliest without becoming a member?

- Become Client
 - Sign the Client Registration Form available with Broker Member
 - Get Registration Identification Code after payment of requisite fee, etc.
- Standing Clearance from State SLDC – Eligibility
 - ABT Meters
 - Sufficient transmission capacity
- Start Buying from PXIL or Sell surpluses to PXIL

For further info on Products & Services, kindly contact [Market Operations](#) at

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