

Ref: PXIL/S&R/04112024/1

Date: 4th November 2024

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

Sub: Public notice issued by CERC in the matter of 'Directions by the Commission to the Power Exchanges registered under the Central Electricity Regulatory Commission (Power Market) Regulations, 2021- Draft order in the Suo-Motu Petition No. 8/SM/2024 thereof – submission of observations

Ref: Public Notice No. L-1/257/2020/CERC dated 4th October 2024

Dear Sir,

The Electricity Act 2003 mandates the Commission to develop a framework that provides for competitive markets in electricity. Power exchanges provide a fair and transparent platform for transacting in electricity, the platform operated by Power exchanges has enhanced competition, enabled quick dissemination of discovered prices to foster more innovations and investments in Power sector.

It is humbly submitted that the intent for issuing the Order in Suo-Motu Petition No. 8/SM/2024 date 04.10.2024 is to provide an opportunity to review the operational structure of different bilateral Contracts operating under provisions of Regulation 5(2) and Regulations 5(3) of Central Electricity Regulatory Commission (Power Market) Regulations, 2021 ('PMR 2021'). This would be beneficial for the entire market as it benefits all the stakeholders, including market participants, and at the same time develops the right competitive framework for unhindered growth of the power market itself.

We take this opportunity to welcome this review exercise that will promote market based transactions in non-discriminatory manner.

We request Hon'ble Commission to kindly take our suggestions on record and grant us an opportunity to present them to the Commission and its Staff.

Thanking You,

Yours faithfully, For Power Exchange India Limited

ANIL VITTHAL KALE Authorised Signatory Enclosed



- a. Annexure-1: PXIL Circular No. PXIL/Operations/2022-2023/399 dated 15.04.2023
- b. Annexure-2: Market participant wise volume transacted in High Price Intraday Contract in FY 2023-24 and FY 2024-25 (till 20.10.2024)



<u>CERC vide Public notice no L-1/257/2020/CERC dated 04.10.2024has issued Order in</u> <u>Suo-Motu Petition no 8/SM/2024 providing 'Directions by the Commission to Power</u> <u>Exchanges registered under CERC (Power Market) Regulations, 2021'</u>

Power Exchanges are market infrastructure institutions that have been established to offer contracts in power trading that ensures social welfare maximisation in the market. Under the provision of CERC (Power Market) Regulations, 2021 ('PMR 2021'), different Contracts are offered by Power exchanges, the transaction in these Contracts are scheduled as Collective or Bilateral transaction. From 2008 onwards, Power exchange has evolved as a market-based institution providing price-discovery and price-risk management to the generators, distribution licensees, traders, commercial and industrial consumers and other stakeholders e.g. Ministry of Power/State Government, Regulators, investors and lending institutions.

Power Exchange India Limited ('PXIL') submits that the Order in Suo-Motu Petition no 8/SM/2024 dated 04.10.2024 ('Suo-Motu Order' / 'Order') proposes to amend operational framework of different bilateral Contracts, especially the pricing methodology, applicable in Contingency and Term Ahead segment.

Following are the observations of PXIL on the Order:

1. Observations w.r.t Para 15 & 16 of the Order

- **1.1.** PXIL is of considered opinion that comparision between DAC executed at three power exchanges platform and DAM prices of dominant power exchange cannot be a basis to conclude the sanctity of price discovery mechanism in DAC. It is submitted that each buy / sale DAC transaction that materialises on power exchanges for a block of few hours is based on bids that are never placed as solitary block wise (i.e. on 15 minutes basis) and such buyers / sellers participate in DAC based on different criteria. Moreover, bids in DAC are placed after closure of DAM to help entity to meet shortfall which could not have been done in DAM due to sudden tripping or forecasting error. It is therefore evident that DAC trade happens under different market dynamics. Therefore, it will be unfair to presume that DAC trade would happen at a price comparable to DAM of dominant power exchange.
- **1.2.** A Discom while placing a buy bid on power exchanges is equally concerned about price and volume being cleared. On the other hand, a generator / seller would no doubt be interested for a higher price, at the same time would like to despatch higher quantum of power during off-peak hours primarily to ensure optimal loading of its generating units.



Therefore, to strike a balance, Discom / buyer as a bargain at times is compelled to purchase some off-peak hour power which it can afford.

It is humbly submitted that based on detailed analysis of transactions concluded by buyers and sellers in **Conventional DAC** at its 'PRATYAY' platform and transactions concluded by market participants in DAM at dominant power exchange, following conclusions may be arrived at which are as under:

- a. During the period November 2023 to September 2024, majority of participants concluded transaction in Conventional DAC during morning and/or evening peak
- b. The weighted average price of transactions in conventional DAC was generally lower than the price of DAM at dominant power exchange for same time block of evening peak and/or morning peak. Since PXIL had very low liquidity in DAM, the time block wise price discovered in dominant power exchange was referred for comparision.

Month wise daily comparision of price in DAM at dominant power exchange vis-à-vis weighted average price in DAC at PXIL is plotted for kind reference.

1.3. <u>Month wise transaction trend (Conventional DAC vs DAM)</u>

It is submitted that at Para 15 and 16 of referred Order, a comparision of transactions concluded by market participants in DAM and DAC is made, and for the period October 2023 to June 2024, it is concluded that the price in DAC remained consistently higher than DAM which prompted the draft Order to recommend change in price discovery mechanism of DAC.

The referred Order has presented a snapshot of DAC transactions executed during 26-month period starting from April 2022 to June 2024. The table below provides summary of financial impact incurred by Discom while transacting in Conventional DAC at PXIL vis-à-vis purchasing the same quantity in DAM from dominant power exchange.

Period	PXIL Volume (MU)	Weighted average price of conventional DAC at PXIL (Rs./kWh)	Average price in DAM at dominant power exchange (Rs. / kWh)	Difference (IEX DAM – PXIL DAC)
2022 (April-2022 to December-2022)	4,077	7.24	7.15	-0.09
2023 (January-2023 to December-2023)	5,236	7.27	7.14	-0.13
2024 (January-2024 to June-2024)	1,908	7.96	7.20	-0.76



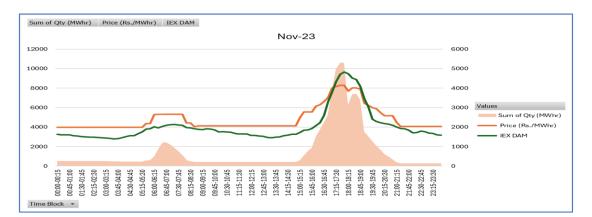
Period	PXIL Volume (MU)	Weighted average price of conventional DAC at PXIL (Rs./kWh)	Average price in DAM at dominant power exchange (Rs. / kWh)	Difference (IEX DAM – PXIL DAC)	
2022-2024 (April-2022 to June-2024)	11,221	7.37	7.15	-0.22	

(Note: the DAC price of PXIL and DAM price of IEX are for the same time block when transactions have concluded at PXIL)

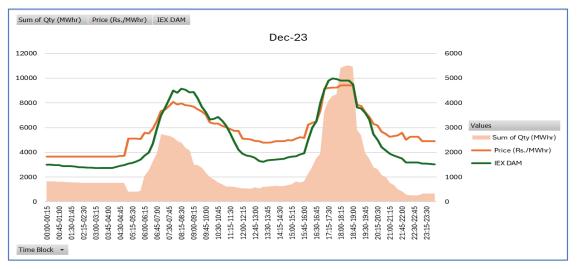
The summary findings show that, Discoms have incurred a slightly higher rate of 22 paise/kWh. However, as major volume has been transacted mostly during the morning and evening peak periods this slightly higher rate may be attributable to Discom's necessity to secure a higher quantum during peak hours (i.e. during shortage conditions). This is expected because DAC provides Discoms an oppurtunity to meet energy requirements close to real time which is affected at an incremental price of only about 3% higher than DAM price of dominant power exchange.

- 1.4. From chart 2 of referred Order it is presumed that referred DAC price includes High-Price DAC ('HPDAC') transactions which constitute about 15% of the DAC quantum during high demand season and hence would be incorrect to be compared with DAM Price. We have excluded High-Price DAC transactions to compute weighted average DAC price to compare the comparable.
- **1.5.** We have plotted transactional volume vis-à-vis weighted average price for DAC of PXIL and DAM of dominant power exchange between November-2023 to September-2024 wherein it may be observed that the weighted average price of DAC during evening peak continued to remain lower compared to DAM price of dominant power exchange. It may be noted that contingency Contracts were designed to enable buyers and seller to transact on day ahead and/or near to real time for meeting shortfall during evening peaks.



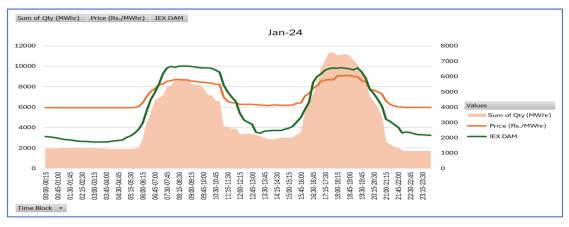




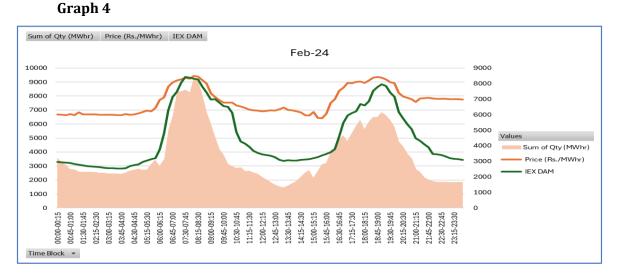


It is observed majority of transactions in DAC have materialised in evening and morning peak and the price in DAC during evening peak hours is lesser than price in DAM similar to previous month



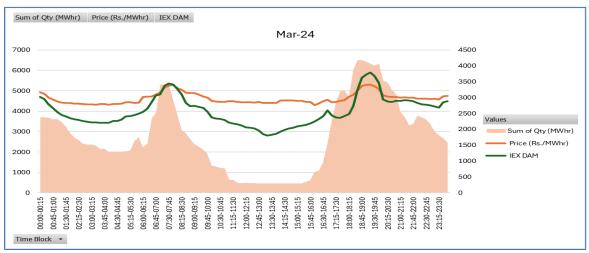






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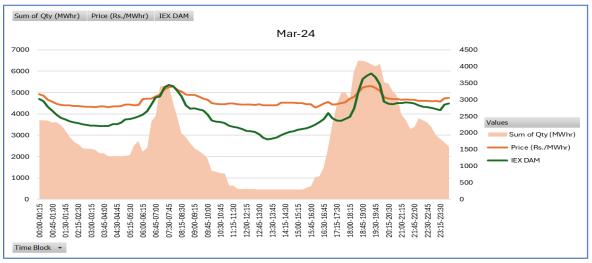




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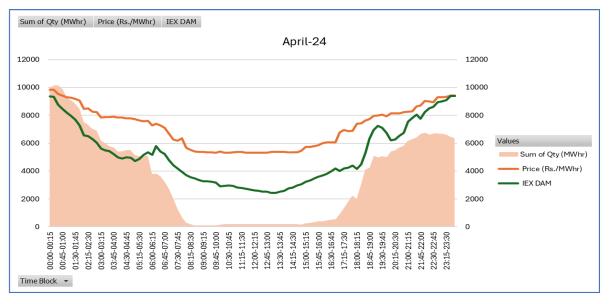


Graph 6



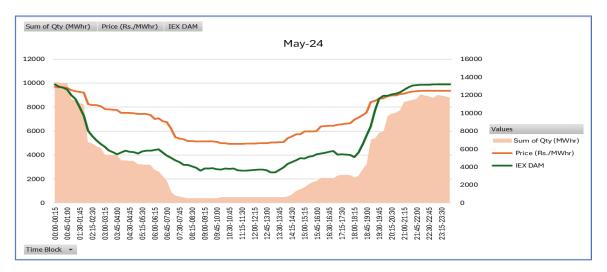
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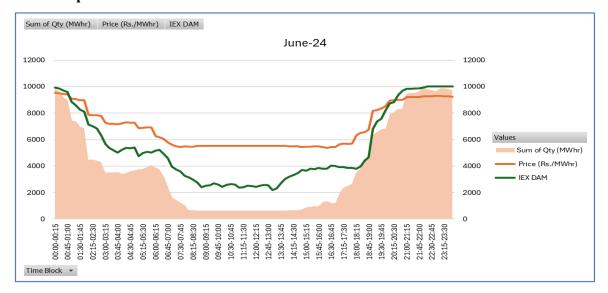
Graph 7



It is observed majority of transactions in DAC have materialised in evening and morning peak and the price in DAC during evening peak hours is lesser than price in DAM similar to previous month



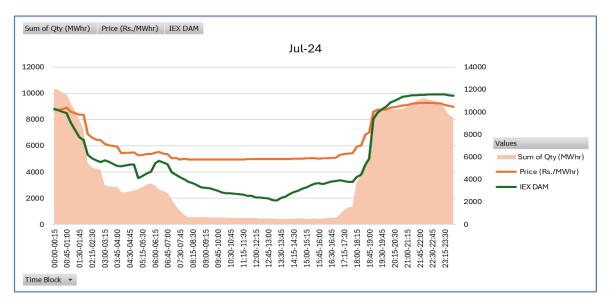




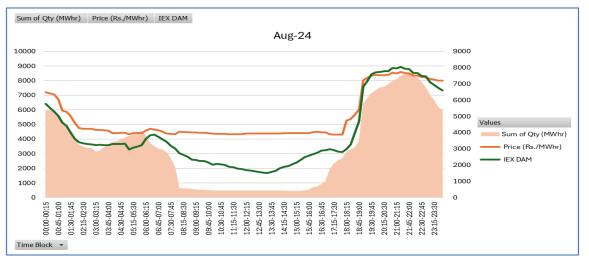
Graph 9

It is observed majority of transactions in DAC have materialised in evening and morning peak and the price in DAC during evening peak hours is lesser than price in DAM similar to previous month



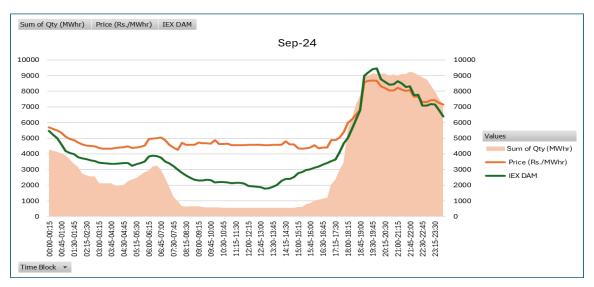






It is observed majority of transactions in DAC have materialised in evening and morning peak and the price in DAC during evening peak hours is lesser than price in DAM similar to previous month

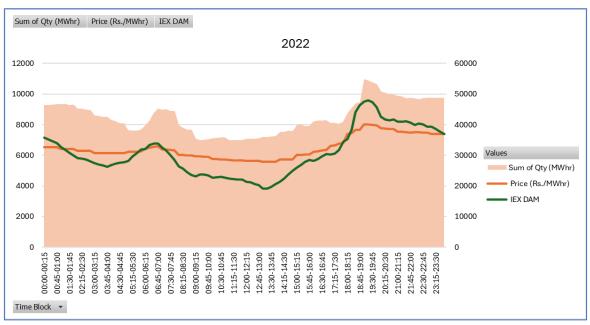




1.6. Similar result of lower Conventional DAC price against higher average DAM price during evening peak hours can be seen in the yearly periods 2022 and 2023

i. It is further submitted that for longer horizon of a year, the time block wise weighted average price in DAC is lesser than price in DAM of dominant power exchange.

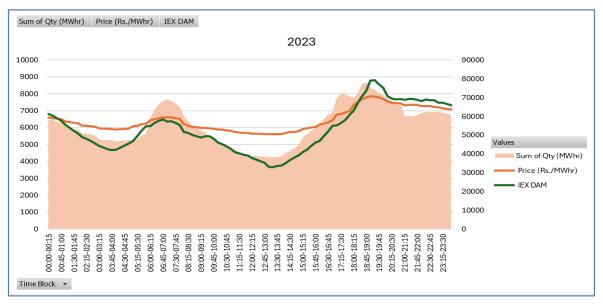




In 2022, the weighted average price in DAC during peak hours is lesser than price of DAM







In 2023, the weighted average price in DAC during peak hours is lesser than price of DAM

1.7. It may be concluded that :

- In above analysis, the volume transacted in conventional DAC has been considered as majority of volume is transacted in conventional segments vis-à-vis green and high-price segments.
- At Para 15 and 16 of Order, the details of DAC price computation is not provided, in our opinion the price is average of transaction in all Contracts including High-Price segment that was introduced vide Order in Petition no 170/MP/2023 dated 21.09.2023

2. Savings in power purchase made by Discoms during Peak Hours (18:00-24:00)

2.1. During the period 01.04.2022 to 30.09.2024 nearly 4,271 MUs of volume was transacted at PXIL, based on difference in weighted average price of Conventional DAC and price of DAM in dominant power exchange, a difference of 0.35 paise per unit results in power purchase cost reduction by Rs. 151 Crore

Peak slot (18:00 to 24:00)	Weighted average price in DAC at PXIL (Rs/kWh)	DAM Price in dominant power exchange (Rs/kWh)	Savings to Discoms
Price (Rs. / kWh)	8.58	8.93	-0.35
DAC volume at PXIL (MUs)	4,271		
Resultant cost (Rs. Crore)	3,664	3,815 (on purchase of	151
		similar volume)	(during evening



Peak slot (18:00 to 24:00)	Weighted average price in DAC at PXIL (Rs/kWh)	DAM Price in dominant power exchange (Rs/kWh)	Savings to Discoms
			peak hours)

 Further, during the period 01.04.2022 to 30.09.2024, when DAC price were lesser than DAM price, Discoms would have incurred reduced power purchase cost for their purchase made in DAC when compared to DAM during evening peak hours
 During the period May-2022 to September 2024, in most of the months the weighted average price of DAC at PXIL is lesser than price of DAM at dominant power exchange during evening peak hours

Month	Volume transacted at PXIL (MU)	PXIL DAC weighted average price (Rs/kWh)	DAM price in dominant power exchange (Rs/kWh)	Price difference (Rs/kWh)	Net Savings to Discoms (in Rs Crore)
May-22	104	7.44	8.54	-1.1	-11
Jun-22	228	8.59	10	-1.41	-32
Jul-22	176	8.61	9.8	-1.19	-21
Aug-22	131	7.61	8.889	-1.28	-17
Sep-22	130	8.71	9.95	-1.24	-16
Oct-22	72	6.13	6.74	-0.61	-4
Nov-22	47	5.88	6.42	-0.53	-3
Dec-22	50	6.78	6.97	-0.2	-1
Jan-23	105	8.53	8.91	-0.39	-4
Mar-23	108	6.48	7.17	-0.69	-7
Apr-23	136	7.59	8.34	-0.74	-10
May-23	122	6.69	8.16	-1.47	-18
Jun-23	213	7.95	9.08	-1.13	-24
Jul-23	159	7.52	8.5	-0.97	-16
Aug-23	227	8.74	9.48	-0.74	-17
Sep-23	173	8.23	9.09	-0.86	-15
Jun-24	192	9.07	9.14	-0.08	-1.5
Jul-24	229	9.18	9.31	-0.13	-3.1
Sep-24	203	8.6	8.69	-0.09	-1.9

It is therefore evident that DAC provides suitable option for Discoms to purchase power at competitive rates in order to meet shortfall during evening peak hours.

It is therefore concluded that:



- a. Weighted average price in DAC continued to be less than price in DAM of dominant power exchange for most sessions, when transaction in DAC occur during morning peak and/or evening peak
- b. DAC is last available Contract to meet contingent requirement on day-ahead basis and hence though DAC price is likely to be higher when compared to DAM, in reality it is observed that DAC price is lower than DAM during peak hours
- c. It would therefore be prudent for Discoms to take advantage of DAC Contract meeting shortfall during evening peak.
- d. DAC provides another oppurtunity to meet their power requirements before the RTM where availability of power for purchase/sale is not known for buyer/seller to schedule a transaction.

DAC was designed to provide an oppurtunity for Discom to take care of load forecasting error or outages at Generators end after conclusion of DAM

e. The entire equity and commodity exchanges operate on Continuous matching hence Continuous matching as applicable for DAC and other Contingency Contract i.e. Intra Day Contract should continue

<u>It is therefore, reiterated that Para 17 of Order which raises concern about high price</u> <u>in DAC segment is far from reality. It is therefore, humbly requested that there may</u> <u>not be any change in price discovery mechanism in DAC.</u>

3. Approved price discovery mechanism in different Contracts

The Contract wise price discovery mechanism applicable for different Contracts for transacting in Conventional, High Price, Wind, Solar, Hydro and other types of renewable energy and in REC and ESCert are:

Sr. No.	Name of the Contract	Type of Clearing	Price Discovery Methodology	Regulatory provision / CERC Order	
	Day Ahead Market		Double Sided Closed		
1	(G-DAM, Conventional and HP-DAM)	Collective	Bid with Uniform	Regulation 5(1) of PMR 2021	
2	Real Time Market		Price		
3	Day Ahead Contingency	Bilateral	Continuous Trade session	Regulation 5(2) of PMR 2021	
4	Intra-day	Bilateral	Continuous Trade Session	Order in Petition no 215/2010 dated 12.07.2011	
5	Daily, Weekly and Monthly Contracts	Bilateral	Double Sided Open Bid with Uniform	Order in Petition no 229/MP/2021	



Sr. No.	Name of the Contract	Type of Clearing	Price Discovery Methodology	Regulatory provision / CERC Order
			Price	dated 07.06.2022
6	Any Day Single Sided	Bilateral	Reverse Auction	
7	RECs	Callesting	Double Sided Closed	Order in Petition no 215/2010 dated 17.09.2010
8	ESCerts	Collective	Bid with Uniform Price	Energy Savings Certificates Regulations 2016
			'Pay-as-bid' and 'Uniform Price'	
9	TRAS (Day Ahead and Real Time)	Bilateral	[sharing of bids by power exchanges and matching by NLDC]	Ancillary Services Regulations 2022

PXIL submits its suggestions and observations to directives issued by Hon'ble Commission at Para 24 and 25 of referred Order.

Specific Comments and /or Suggestions

1) Para 24(a):

Para 24 In view of the above, the Commission proposes to give the following directions: (a) All Power Exchanges shall allow only the established pre-specified slots on the exchange platform for TAM contracts (including HP-TAM). These pre-specified slots shall include Base/RTC, Peak, Off-Peak (other than peak), and Night, wherein the peak period would be as defined by the NLDC. In the case of G-TAM, Power Exchanges shall have the liberty to prespecify slots based on the generation profile of different technologies, as provided by the sellers. Exchanges should submit the pre-specified contracts for approval of the commission.

PXIL suggestion

PXIL submits that Hon'ble Commission vide Order in Petition No 229/MP/2021 dated 07.06.2022 approved introduction of Daily, Weekly, Monthly and Any Day Single Sided Contracts in Term Ahead segment under provisions of PMR 2021.

PXIL submits observations in two parts, e.g. (a) Daily, Weekly and Monthly Contracts and (b) Any Day Single Sided Contract.



a. Daily, Weekly and Monthly Contracts

At Para 51 of Order in Petition no 229/MP/2021 dated 07.06.2022, the Hon'ble Commission granted approval to introduce Daily, Weekly and Monthly Contracts with direction to notify well in advance different time blocks available for transaction for benefit of market participants.

It is submitted that post introduction of TAM Contracts, market participants have requested PXIL to develop and introduce in 'PRATYAY' platform variety of slots to meet their power trading requirements. Later, PXIL issued Circulars from time to time informing buyers / sellers regarding development and introduction of different time slots to enable buyers / sellers to meet specific needs of power trading.

The list of time-slots available in 'PRATYAY' platform were informed to market participants vide Circular No. PXIL/Operations/2022-2023/399 dated 15.04.2023:

Trading slot	Applicable Hours
Round the Clock	00:00 to 24:00 Hours
Morning Peak	06:00 to 10:00 Hours
Evening Peak	18:00 to 22:00 Hours
Day off Peak	10:00 to 18:00 Hours
Night off Peak	00:00 to 06:00 Hours and 22:00 to 24:00 Hours
Hourly Slots	Slots for any Hour (s) between 00:00 to 24:00 Hours
15 minutes or	15 minutes or multiples or any combination thereof
multiples thereof	Based on request received from market participants prior to start
	of Auction session on daily basis
The Trading Slots woul	d be prescribed by Exchange from time to time

<u>Table -1: Time slots developed and introduced in 'PRATYAY' platform for transacting</u> <u>in Daily, Weekly and Monthly Contracts</u>

The referred Circular 399 dated 15.04.2023 is enclosed as Annexure-1.

The Hon'ble Commission is requested to approve the above time slots in Daily, Weekly and Monthly Contracts to enable market participants to transact in Conventional, High-Price, Wind, Solar, Hydro and other types of renewable energy based on their requirement.

b. Any Day Single Sided Contract



PXIL submits that Para 42 of Order in Petition No 229/MP/2021 dated 07.06.2022 directs to introduce Any Day Single Sided Contract with Reverse Auction mechanism and buyer initiates the Reverse auction by informing its requirement in term of quantum in MW and duration of supply.

"Para 42

We have taken note of the Petitioner's submission on the mechanism of reverse auction as provided in the IA No 25/2022 dated 08.04.2022. After examining, we notice that the Petitioner has not provided mechanism of reverse auction, particularly for the Anyday Single Sided Contract. Therefore, we decide the same. For Reverse Auction, the buyer shall specify its requirement in terms of quantum in MW and duration. The sellers shall bid their offers specifying quantum in MW and Price in Rs/MWh against the requirement of buyer during the auction window. Then, the bidding shall take place in two stages i.e. Initial Price Offering (IPO) and Reverse Auction"

Further, at Para 51, the Order dated 07.06.2022 directs that the buyer has to provide range of days , i.e. 'start date' and 'end date', alongwith 'time blocks' for which it intends to purchase power under this Contract.

"Para 51

A table summarising the timelines including commencement and duration of bidding and delivery duration for approved contract is provided as under:

Name of the Contract	Commencement of Bidding	Last day of Bidding	Bidding Time	Delivery duration	Remarks
Daily Contract	On Daily Basis	Two days before delivery day	00:00 – 24:00 hours	T+2 to T+90 Days	For pre- specified time
Weekly Contract	Monday of the week prior to delivery	Friday of the one week prior to delivery	12:00 – 17:00 hours	TW+1 to TW+12 weeks	blocks notified to the market
Monthly Contract	First Day of the zero month	For the first month (M1) contract – ten days prior to close of zero month (M0); For the second month (M2) contract – five days prior to close of zero month (M0); For the third month (M3)	12:00 – 17:00 hours	TM+1 to TM+3 Months	participants well in advance through Circulars



Name of the Contract	Commencement of Bidding	Last day of Bidding	Bidding Time	Delivery duration	Remarks
		contract – last day of zero month (M0);			
Any Day Single Sided Contract	On Daily Basis	Two days before delivery day	00:00 - 24:00 hours	T+2 to T+90 Days	For user defined days and time blocks

Accordingly, the 'PRATYAY' platform permits the buyer to create reverse auction notice

- a. By excluding days within the range of days when power supply is not required on account of holidays or weekends, i.e. national holiday, festival, Saturday and/or Sunday, etc., when there is reduced demand from consumers
- b. Provide time-blocks for each delivery day when power supply is required

Conclusion:

PXIL humbly submits that:

- a. Approval be granted to continue to offer time slots in Daily, Weekly and Monthly Contracts as provided at Table-1 above
- b. Approval be granted to facilitate Buyer to prescribe below delivery criteria for each Reverse auction notice in 'PRATYAY' platform:
 - i. Start date of Delivery
 - ii. Last date of Delivery
 - iii. 'Exception day(s)/period' i.e., information on day / day(s) between 'start date' and 'last date' when delivery of power is not required

2) Para 24(b)

Para 24 In view of above, the Commission proposes to give following directions:

(b) All Power Exchanges shall follow the timelines for different stages of ADSS contracts, including the bid receiving window/submission of interest quantity by sellers, IPO auction, Reverse auction, and Bid acceptance window as follows:

Bid Receiving Window	Max. 2 days (48 hours)
IPO Auction	Max. 2 hours (120 mins)
Reverse Auction	Min. 2 hours (120 mins) with an extension up to 24:00 Hrs of
	auction day



Acceptance Window Max. 2 days (48 hours)	
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PXIL suggestion

The provision invites suggestion to standardise the auction milestone from issuance of auction notice to acceptance of auction result by buyer in 'PRATYAY' platform. PXIL submits its observations as under:

a. Bid Receiving Window:

Two (2) days period is short time to invite selling entities to participate in reverse auction notice. Many Discoms have in the past provided atleast a week's window for submission of bids in 'PRATYAY' platform.

Further, since this is buyer's market, curation of a healthy number of eager sellers is task undertaken by PXIL to generate active interest in auction process.

It submitted to increase the duration from 'maximum 2 days (48 hours)' to 'maximum one week'.

b. IPO Auction:

It is humbly submitted 'IPO Auction' stage is not applicable in reverse auction notice issued on 'PRATYAY' platform and all sell bids received during 'Bid Receiving Window' stage proceed to next stage i.e. 'Reverse Auction'.

PXIL suggest 'IPO Auction' stage to be deleted

c. Acceptance Window:

Two (2) days period is short time for buyers to submit their acceptance to auction result. Among buy side participants, Discoms are the largest initiators of reverse auction events, since Discoms are government owned entities, the approval for power purchase follows an hierarchy of decision making that may require more than two (2) days' time to decide the outcome of reverse auction result.

It submitted to increase the duration of 'Acceptance Window' from 'maximum 2 days (48 hours)' to 'maximum five (5) days'.

3) Para 24 (c)

Para 24 In view of above, the Commission proposes to give the following directions: (c) In view of very low liquidity in Intra Day Contracts since its introduction, the availability of the alternative Real-Time Market, and to avoid market fragmentation, it is proposed to



withdraw Intra-Day Contracts in all Power exchanges from a pre-specified date, in terms of Regulation 25(3) of PMR 2021.

PXIL Suggestion:

The provision invites suggestion on withdrawal of 'Intra-Day Contract' due to liquidity constraints.

PXIL submits that Intra-Day Contract were approved for introduction by Hon'ble Commission vide Order in Petition no 166/2008 dated 31.08.2009. The Intra-Day transaction enable buyer/seller to transaction power early as 10 time blocks, i.e. 2 hours 30 minutes, prior to start of delivery for duration up to 24:00 hours. Few advantages the Intra Day market has provided during the evolution process are:

- a. One of the key objectives that Intra Day market has provided is availability of options to balance demand-supply from close to delivery to remaining hours of the day, i.e. from near to real time to 24:00 hours of the day.
- b. All international Power exchanges have continuous intra-day markets to enable buyer and seller in arranging power to manage their imbalances. Such Power exchanges offer wide range of Contracts to their participants in order to facilitate them in managing power requirement efficiently including futures market and balancing market.

c.	A comparative analysis encapsulating Contracts offered by various Power exchanges
	globally is provided:

S No.	Power Exchange	Country	Availability o Price Marl Continuous	ket and
			DAM and/or RTM	Intra Day
1	NordPool Spot	Norway, Sweden, Finland, Denmark	Yes	Yes
2	EPEXSPOT	France, Germany, Austria, Switzerland	Yes	Yes
3	Polish Power Exchange	Poland	Yes	Yes
4	GME	Italy	Yes	Yes
5	PLM	USA	DAM and RTM	
6	IMO / AEMO	Australia	Yes	Mandatory Balancing Market for generators



S No.	o. Power Exchange	Country	Availability of Uniform Price Market and Continuous Market	
			DAM and/or RTM	Intra Day
				>10 MW

- d. It provides welcome relief to Renewable energy plants to schedule renewable generation due its unique nature of 'accuracy in forecasting' and 'infirm nature'. Many RE generators find it convenient to bid based on anticipated profile of generation.
- e. **Market evolution:** It is submitted that across the globe, options are available to participants for efficient management of their respective portfolios through a mix of concurrent as well as sequential Contracts. The principle objective in case of sequential Contracts is to introduce time delay between bids while the assumptions is that there will be additional information available before the later session which will be built by participants into their decisions on whether to participate and in case yes, what should be the bid.

Illustration:

Intra-Day is 'open bidding' that operates with 'Continuous matching mechanism', the result of such matching/clearing is available 10 time-blocks ahead of delivery, in case the bids remain un-matched, the buyer/seller has option to place bid in 'RTM' that operates as 'double sided closed bid'. Thus, sequential operation of 'Intra-Day' followed by 'RTM' facilitates market participants to meet their power trading requirement in optimal manner.

Necessity to retain High-Price Intra Day Contract

Intra Day Contracts operate in two segments e.g. first for transaction in conventional and green energy where price cap of Rs 10/kWh is applicable and in second segment for transaction in High Price power the price cap is Rs. 20/kWh as directed at Para 22 of Order in Petition no 170/MP/2023 dated 21.11.2023. It is submitted that, due to forced outage of generating unit(s) a Discom may face with a sudden requirement of large capacity. This situation is also very much synonymous with industrial units operating on continuous process cycle like steel / aluminium producing plants having critical electricity loads to cater to on RTC basis. With running units of coal and renewable capacities having little spare capacities, this contingency power can be met by gas



stations. As there is no High Price RTM product, the buyer enters purchase bid in HP Intra Day Contract to secure its urgent power requirement. In FY 2023-24 nearly 45.8 MU was transacted at PXIL in FY 2024-25 till 20.10.2024 the transacted volume is 58.66 MU.

Month	Transacted Volume (MU)
October – 2023	45.8
FY 2023-24	45.8
April-2024	12.97
May-2024	11.44
June-2024	5.35
July-2024	15.05
August-2024	6.16
September-2024	0.94
October-2024 (up to 20.10.2024)	6.75
FY 2024-25	58.66

The details of sell and buy side participants and their transacted volume is provided as Annexure-2.

We could not appreciate the reasoning for discontinuing Intra Day Contracts. In the same circumstances few contracts like HP-DAM, G-DAM where liquidity continues to be low, however, there is no proposal to discontinue such Contracts

In addition, it is pertinent to submit that, power exchanges have developed and introduced all the Contracts after obtaining approval from CERC, while introducing any new Contract the power exchange has to incur software and business development expense prior to its introduction, it would therefore be prudent to allow the continuation of such Contracts to facilitate regulatory certainty.

Further, participation in power exchange is voluntary and the participants have the freedom to exercise choice of market segment and Contracts, continuation of Intra Day Contract is necessity for overall development of the market, thus competition between Intra Day Contract based on 'Continuous matching' and RTM based on 'Uniform price' go hand-in-hand and are not mutually exclusive. It's true that Intra Day is operation on 24X7 basis from April 2015 onwards and RTM was introduced in June 2020, Intra Day is yet to get a respectable share of transaction, however, the price discovery mechanism of



'Continuous matching' provide choice to market participants to meet power requirement up to 24:00 Hours, else fall back option in 'Uniform form price' based RTM is available.

Availability of different types of options is sign of healthy market and the success or failure of such options shall be left to market participants to decide.

PXIL humbly requests Hon'ble Commission not to discontinue Intra Day Contract introduced by Power exchanges under provision of Regulation 5(2) of PMR 2021.

4) Para 24 (d)

Para 24 In view of above, the Commission proposes to give the following directions:
(d) It is proposed to modify price discovery mechanism in case of Contingency Contracts to Uniform price step Auction from the existing Continuous matching. The Commission proposes to issue amendment(s) in PMR 2021 to this effect

PXIL Suggestion:

PXIL humbly informs that observations made in Para 24 (c) for continuation of 'Continuous mechanism' in Intraday, are relavant to continue Day Ahead Contingency Contract under 'Continuous matching' as provided in Regulation 5(2) of PMR 2021.

Further, it is submitted that in case price discovery is revised from existing Continuous matching to Uniform price step auction, the following difficulties may emerge:

- a. For the same time block the participants need to continuously remain active in the market and may have to place bids several times during the day (D-1) till gate closure as they may clear full volume in the first attempt of bid submission
- b. Multiple application to RLDC/SLDC for scheduling of power, resulting in high landed cost of power (due to payment of application fee, scheduling fee and operating charges)
- c. Several bidding attempts for delivery during the same time blocks may be vulnerable to price manipulations by the participants as the uncleared volume in the first attempt will give a clear indication of their volume and price preference
- d. Power exchange will have to revamp their software system resulting in increased running cost and delay in rollout of revised Contract

It is submitted that buyer/seller may intend to average their traded price by placing their bids for all available hours of delivery, in case bids do not match they have the flexibility to meet their power requirement the next day in 'Intra Day' and/or 'RTM'.



It is humbly submitted that all Contracts are approved by Hon'ble Commission after due stakeholder consultations and detailed analysis, any change in Contract creates regulatory uncertainty and restricts future investments by power exchanges in developing and introducing innovative Contracts.

It is submitted that Hon'ble Commission has not provided any rationale behind revision of price discovery mechanism in case of contingency contract from 'Continuous matching' to 'Uniform price step auction'.

PXIL is of considered view that such modification would result in lowering the liquidity of the market as continuous transaction tends to improve liquidity and transparency, thereby it has propensity to attract more liquidity.

It is also submitted that liquidity tends to be higher in continuous transactions as observed in stock exchange and commodity exchanges that operate on continuous mechanism and underlying strength of high liquidity in such transactions is continuous auction.

PXIL humbly requests Hon'ble Commission to permit continuance of Contingency Contract with existing 'Continuous matching'.

5) Para 24 (e)

Para 24 In view of the above, the Commission proposes to give the following directions:

(e) Till the time the amendments to PMR 2021 come into effect, the Power Exchange shall follow the directions in case of Contingency Contracts as under:

(i) Power exchanges to make changes in the software/market watch so that all the parties are able to see all the buy and sell offers for 10 minutes before the order gets transferred to the order book; after the expiry of this period, best buy and best sell bids get cleared, and (ii) Power exchanges to display information regarding the number and volume of bids received (both buy and sell) on their website, in addition to the data on traded volume.

PXIL Suggestion:

The Direction informs Power Exchanges to make appropriate changes in 'PRATYAY' platform in case of Contingency Contract:



- a. Provision of market watch to enable buyers and sellers to view Orders received in auction session for a period of 10 minutes and prior to start of matching
- b. Display of number and volume of bids both buy and sell along with trade volume information on website of power exchange.

PXIL requests Hon'ble Commission to provide directions on following issues for implementation of above:

- i. Whether the bid entry would be 'closed session'
- ii. 'Start time' and 'End time' of 'bid entry' for buyer and seller in trading session. Post 'end time', power exchange will announce 'gate closure', post gate closure no new participant will be allowed to submit bid
- Whether 'market watch session of 10 minute duration' will commence immediately after
 'gate closure' or there would be lag of few minutes between 'gate closure' and 'start time of market watch'
- iv. Whether aggregate buy and sell quantum at each point are to be displayed or individual buy and sell quantum of each bid are to be displayed
- v. Whether 'market watch' session would be followed by 'closed bid' session where buyer/seller will be able to fine tune their bids.
 Provision to fine tune their bids would enable market participants to make informed decision and increase probability of clearing
- vi. Number of such trading sessions to be conducted with lead time between 'end of first session' and 'start of second session'

Further, based on information on above modification in DAC order processing parameters, PXIL will require atleast three (3) months to develop, test and introduce the DAC.

6) Para 25

The directions in this order {point (a) and (b) of Para 24 above} shall be in furtherance/addition to the directions in Orders dated 7.6.2022 in Petition No 219/MP/2021 (of IEX) and 229/MP/2021 (of PXIL) and Order dated 30.12.2022 in Petition no 206/MP/2022 (of HPX).

PXIL reply:



PXIL shall abide by directions provided by Hon'ble Commission. However, we request Hon'ble Commission to kindly take our suggestions on record and grant us an opportunity to present them to the Commission and its Staff



List of Annexure:

S No	Annexure No	Particulars	Page number
1	Annexure-1	PXIL Circular no : PXIL/Operations/2022-2023/399 dated 15.04.2023	28 to 40
2	Annexure-2	Participant wise volume transacted in High Price Intra Day Contract in FY 2023-24 and FY 2024-25 (till 20.10.2024)	41 to 42



Power Exchange India Limited CIRCULAR

Circular No: PXIL/Operations/2022-2023/399 Date of Issue: 15 April 2023 Subject: Additional Hourly Slots in Daily, Weekly & Month (s) Ahead Contracts Double Sided Open Bidding with UniformPrice Step Auction on 'PRATYAY' platform

Dear Members,

We are pleased to inform Members and Clients regarding the introduction of Additional Hourly Slots in Daily, Weekly & Month (s) Ahead Contracts with Uniform Pricing Mechanism on 'PRATYAY' platform w.e.f. 15 April 2023 in line with the approval granted by Hon'ble Central Electricity Regulatory Commission (CERC) vide Order in Petition no. 229/MP/2021 dated 07.06.2022

With introduction of Additional Hourly Slots in Daily, Weekly & Month (s) Ahead Contracts with Uniform Pricing Mechanism members would be able to trade for each hourly slots of a day with Delivery Starting from T+2 to T+90 Days with 'T' as Trade Date, from Week W-1 to Week-12 with transacting week designated as 'Week-0', from Month M-1 to Month M-3 with transacting month designated as 'Month-0'.

Application for Scheduling

Application for Scheduling shall be submitted to the Nodal RLDC as specified in the Trading and Delivery Calendar and as per the "Procedure for Scheduling of Bilateral transactions" issued by POSOCO. The month in which the application is submitted is considered as the first month.

The application will be made to the appropriate NOAR/ RLDC / SLDC based on consent received from SLDC/Regional Entity. If consents are received by the exchange before the NOAR/ RLDC/SLDC delivery timelines for a particular slot, then the application will be punched on NOAR/ RLDC/SLDC as per the formats generated/Matched bids as those delivery slots will be accepted by RLDC as per their rules and regulations for Bilateral transactions. In case consent from SLDC/Clients is received later an application will be made to the concerned NOAR/ RLDC (S) / SLDC(S) for the permissible delivery time as per the RLDC/SLDC timelines.

For instance, if the RLDC application gate closure time for from delivery hour 16:00 hours is 13:30 hours and the consent is received at 13:35 hours then the application shall be made from delivery hour 16:15 Hr.





Product

The following products shall be available in Daily, Weekly & Month (s) Ahead Contracts with Uniform Pricing Mechanism:

Products	Product Name	Type of Segment
Daily	Daily_U	NON-GREEN
Weekly	Weekly_U	NON-GREEN
Month (s) Ahead	MonthA_U	NON-GREEN

The product information about Daily, Weekly & Month (s) Ahead Contracts with Uniform Pricing Mechanism is as under:

A. Contract Specification:

The detailed contract specifications of various Daily, Weekly & Month (s) Ahead Contracts with Uniform Price Step Auction are given in <u>Annexure-1</u>.

- B. Trading interface and manual for accessing trading: PXIL's Trading Portal, - PRATYAY, can be accessed through URL: trading.pxil.in. The members who are already registered can log in into PRATYAY using the Login credentials issued to them. The manual is given in <u>Annexure-2</u>.
- C. Illustration of Cases in Daily, Weekly & Month (s) Ahead Contracts with Uniform Price StepAuction is given in <u>Annexure-3</u>.
- D. The Matching Rules for conducting Daily, Weekly & Month (s) Ahead Contracts with Uniform Price Step Auction is given in <u>Annexure-4</u>.

For further details or any further assistance feel free to get in touch with Market Operations Department on below mentioned phone or email.

For and on behalf of Power Exchange India Limited

Sd/-

Mukti Prakash Marchino Head – Market Operation, Membership, Clearing and Settlement





ANNEXURE-1

General Contract Specification:

Trading System	PRATYAY
Type of Contract	Firm Delivery Contract
Trading Methodology and Price discovery	Double Sided Open Bidding with Uniform Price Step Auction
Order Type*	Normal Order
	The Exchange reserves the right to introduce new Order type by issuing a Circular from time to time
Minimum Bid Volume*	Buyer: 1 MW or as specified by Exchange
	Seller: 1 MW or as specified by Exchange
Minimum Volume Quotation Step*	1 MW or as specified by Exchange
Minimum Value Quotation step*	Rs. 1 per MWh
Delivery Point	As described in 4.2.5.5.4 of these Business Rules
Transmission charges	The transmission charges to be paid by the buyers and sellers
	for Exchange transactions would be as laid down under the
	Central Electricity Regulatory Commission (Open Access in inter-
	State Transmission) Regulations, 2008, and Central Electricity
	Regulatory Commission (Sharing of Inter-State Transmission
	Charges and Losses) Regulations, 2020, as amended from time
	to time and would be payable to the Exchange as per procedure
	notified in Circular from time to
	time
Transmission Losses	The losses would be handled as per the Central Electricity
	Regulatory Commission (Open Access in inter-State
	Transmission) Regulations, 2008 and Central Electricity
	Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020, as amended from time to time.
Revision of Schedule	No revision of Schedule is allowed. Any revision by System
	Operator on account of reasons other than force majeure or
	constraints in transmission corridor shall be treated as default
	by the Buyer/Selling entity who is responsible for such an
	event





Settlement Price(s)	Traded Price * Quantity scheduled by Load Dispatch Centre at
	delivery point.
	In case of revision in schedule, the final price settlementshall
	be based on revised scheduled quantity.
	The traded price shall be the Uniform prices discovered
	during the auction session
Margin*	a. <u>Pre-bid Margin</u>
	Sellers: Nil
	Buyers: Rs. 40/MWh
	The System at the receipt of the bids will check for Pre- bid
	margin and will not accept Bids if sufficient margin is not
	available. The pre-bid margin will be released when
	Post-trade Margin is applied.
	b. Post- Trade margin
	Seller: 10% of total trade value
	Buyer:
	i. Post trade margin of 15% of total cost of power forthe
	Contract
	ii. Delivery margin at 100% of total cost of power for the
	next 3 calendar days and 5% of cost of power for the
	cost of power for the remaining days
	The applicable margin shall be higher of Post-trade margin or
	Delivery margin.
	The Margin shall be recomputed on Application
	Acceptance or/and Real time curtailment.
	In case of insufficient margin, application for Scheduling shall
	not be forwarded and if forwarded, application for
	cancellation shall be sent to RLDC/ SLDC. Further penalty shall
	be levied as prescribed. Once the Post-trade
	margin is applied, Pre-bid margin would be released.
	<u>c. Charge Margin</u>
	The margin would be applied at the time of application creation
	or as prescribed. Charge margin would be applicable either on
	Buyer or Seller or both. The margin shall be recomputed on
	application acceptance, once the pay-in fortrade is fulfilled
	towards charges, charge margin would be released





	The Exchange reserves the right to revise the Pre-bid margin, Post-trade margin, Delivery margin and Charge margin applicable to Buyer and/or Seller by issuing a Circular from time to time The margins may be in the form of Bonk Guarantee, FD, Cash or Bank limit or any such instrument as may be notified by Exchange from time to time.	
	sufficient margins are n any default in paymen Exchange will be invoke	saction will not be executed in case not maintained by Members. In case of nt, deposits/margins placed with the d to make good the default inpayment. gin collected for otherContracts by the may also
	be impounded.	
Pay-in*	On Application acceptance day	Charges in Pay-in from Buyer
	On Delivery (D) day	Cost of Power pay-in from Buyer
	On first D +1 day	Charges Pay-in from Seller
	All Pay-in will be done to	o the Exchange by 11:00 hours
Pay-out*	On D+1: Cost of power p be done after 11:00 hou	pay-out to the Seller. All pay-outswill irs
Transaction fees*	Transaction fee payable Seller shall be Rs. 20 per	to the Exchange by the Buyer and MWh.

*The Exchange reserves the right to amend these parameters by issuing a Circular from time to time.





1. Trading slots and Auction Trade Session

The Trading slots are those time periods during which the contracted quantity has to be delivered for the entire Contract Period. The Daily, Weekly and Monthly Contracts can be traded over any or all of the Trading slots. The Trading slots and Auction Trade session applicable for each Contract will be notified by Exchange through Trading Calendar.

Slot	Hours	
Round the Clock	00:00 to 24:00 Hours	
Morning Peak	06:00 to 10:00 Hours	
Evening Peak	18:00 to 22:00 Hours	
Day off Peak	10:00 to 18:00 Hours	
Night off Peak	00:00 to 06:00 hours and 22:00 to 24:00 hours	
Round the Clock	00:00 to 24:00 Hours	
Hourly Slots	Slots for any hour (s) between 00:00 to 24:00 Hrs.	
15 minutes or	15 minutes or multiples or any combination thereof	
multiples Thereof	based on request received from market participants prior to start of Auction	
maniples mereor	session on Daily basis	
The Trading Slots would be Prescribed by the Exchange from Time to Time		

Trading Slots

2. Auction Trade Session

The Daily Auction Trade session for the operational day of the Exchange shall be notified from time to time

3. Other terms and conditions of the contract shall be as per Annexure VI – Terms and Conditions for Contracts operating under provisions for Regulation 5(2) and 5(3) of CERC (Power Market) Regulations, 2021

Additional Contract Specifications of PXIL Daily Contracts:

Type of Market	Daily
Delivery Period*	Contracts as placed by the participant for the delivery
	period and time for any number of days from 'T+2' to 'T +
	90' Days
Auction Timings*	12:00 to 17:00 Hours (on Daily basis)
	The Exchange shall notify the start and end time for all auction
	days for submission of Order by issuing Circular from time to
	time. After completion of end time no modification / revision
	to the Orders will be allowed
Duration of Contracts*	As per defined slots Round the Clock, Hourly Slots, Morning,
	Morning Peak, Day, Evening, Night





Additional Contract Specifications of PXIL Weekly Contracts with Uniform Pricing Mechanism:

Type of Market	Weekly
Auction Timings*	12:00 to 17:00 hours on Auction days
Auction Days*	Monday to Friday of the Week
	(The transacting week is designated as 'Week 0')
Order type*	Normal Order
	The Exchange may introduce any other Order type by issuance of Circular from time to time
Duration of Contracts*	Round the Clock, Hourly Slots, Morning, Morning Peak, Day, Evening, Night Asper defined slots from Monday 00:00 Hours
	to Sunday 24:00 Hours of the Week for any number of Weeks from 'Week 1' to 'Week12' on rolling basis

Additional Contract Specifications of PXIL Month (s) Ahead Contracts with Uniform Pricing Mechanism:

Type of Market	Month (s) Ahead Contract
Delivery period	The monthly period shall be from start of next Calendar month (M1) up to end of month (M3)
Auction days*	 Auction Days will be made available to market participants for transacting in Monthly basis as under: a. From First Day of zero Month (M0) b. Auction will be available till (10) days prior to the end of zero Month (M0) For Delivery in near Month (M1) (5) days prior to the end of zero Month (M0) For Delivery in mid-Month (M2) Last day of zero Month (M0) For Delivery in far-Month (M3)
Auction Timings*	12:00 to 17:00 Hours (on Daily Basis)(The Exchange reserves the right to revise the auction time for single or multiple days in one or more days in advance)
Duration of Contracts*	Round the Clock, Hourly Slots, Morning, Morning Peak, Day, Evening, Night as per defined slots





ANNEXURE-2

TRADING INTERFACE AND MANUAL FOR ACCESSING TRADING:

PXIL Trading Portal- PRATYAY can be accessed through URL: trading.pxil.in. The members who are already registered can log in into PRATYAY using the Login credentials issued to them as shown below:



EPXIL

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. A deep understanding of the local markets is matched by PXIL's non-partisan, unbiased and often fearless functioning, at times even in the face of uncomfortable conclusions. Our core values are integrity, excellence, commitment and continued innovation. These are the bedrock on which the edifice of PXIL stands. PXIL's unique combination of local insights and global perspectives helps its stakeholders to make better informed business and investment decisions, improves the efficiency of the power markets, and helps shape policies and projects. PXIL is India's first and only Quality Management System "ISO 9001:2008" certified Power Exchange in the country.

View details »

Vision

To create a significant difference and remain the benchmark of unquestionable integrity and excellence for our stakeholders by continually innovating and offering credible solutions to transform the Indian Power Markets.

Mission

To constantly demonstrate our core values – Integrity, Excellence, Commitment and Continued Innovation – and to remain non-partisan, unbiased and fearless in our functioning, even in the face of uncomfortable conclusions. To nurture our talented workforce and continually strengthen our local insights and global perspectives so as to bring about a paradigm shift in the functioning of our power markets. To aid our stakeholders to make better informed business and investment decisions, improve the efficiency of the power markets, and help shape policies and projects.

4	Username
6	Password
Frade	here to reset password. er App https://memberdr.pxil.in t App https://clientdr.pxil.in

≤ +91 22 4009 6695 ≤ +91 22 4009 6696 ≤ +91 22 4009 6687 Fax +91 22 4009 6683 , +91 22 4009 6690

Email : marketoperation@pxil.co.in

Best Viewed in Internet Explorer 9 and Up, chrome, FF

When Members/Clients Login for the first time in the day, One Time Passcode will be sentto their email ID and mobile number. Members/clients need to enter the received OTP in the textbox and press the Verify OTP button as shown below:

Morning Power Markets Trading Rodefined	OTP Validation	
PXIL Power Exchange India Limited (PXIL) institutionally promoted Power Exchange innovative and credible solutions to trans Power Markets. A deep understanding markets is matched by PXIL's non-partisar	Since, you are logging in first time today from this machine, we have sent a One Time Passcode to your email ID :re******@pxil.co in and mobile number :XXXXX1225. Please enter the OTP below. If you cannot see any such email in your inbox, make sure to check your SPAM folder. On subsequent logins today from the same machine, you will not need to enter this OTP. Enter OTP	
often fearless functioning, at times even uncomfortable conclusions. Our core integrity, excellence, commitment a innovation. These are the bedrock on whit PXIL stands. PXIL's unique combination and global perspectives helps its staketh better informed business and investin improves the efficiency of the power mar shape policies and projects. PXIL is India	O08863 Verify OTP Resend OTP perspectives so as to oring about a paraoigm shift in the	Logn Dick here to reset password. Trader App https://member.pxil.in Dient App https://client.pxil.in
Quality Management System "ISO 9001:2 Power Exchange in the country. View details >	008" certified functioning of our power markets. To aid our stakeholders to make better informed business and investment decisions, improve the efficiency of the power markets, and help shape policies and projects. He Example Fa	elp Line +91 22 4009 6695 +91 22 4009 6696 +91 22 4009 6687 x +91 22 4009 6633 , +91 22 4009 6690
	Best Viewed in Internet Explorer 9 and Up, chrome, FF	an . marketoperation@pvit.co.ill





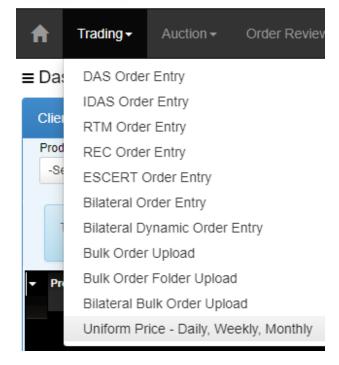
After successful login the members/clients will land up at the Client Wise Order SummaryPage as shown below:

Torming Power Markets	PRATYAY	IM-A	NYDAY-NSL	: 09:40 -	20:00]			-ANYDA bers, Es			0:00] available	[G now for	Membership Balance :0.0 ServerTime	10		() Welcome,
Trading -	Order Review +	FundsOperatio	n - Repor	rts + (Configura	ation -										
Dashboard																
Client Wise Order S	2				19.14											
Product -Select-	17 D. (e Date -Mar-2021		Member -Select			Ŧ	Client -Sel			Ŧ					
Total Orders 4520		^{Open} 1252			Rejecte 1152					Cancel O				Traded 2116		
Product TAC/ C	Client ID DD From	DDTo	Time Slot	Side	Туре	Total Orders	Open Count	Pending Count	Reject Count		Complet Count	Ordered Power	Traded Power	Open Power	Rejected Powe	r
10 👻 Wrap	M Page 1	of 4 🕨 🕅	🗯 Display 1	to 10 of 37	7 items											3

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On this screen the clients/members can select the filters to view the breakup of trades as per product, trade date, Member ID, and Client ID. Also, this screen provides the counts of the bids for the filter criteria provided by member and would show breakup as per the status viz; Open, Rejected, cancelled, traded and the total orders.

For entering the bids in the Pratyay Portal the members/clients can please follow thefollowings steps from the **Trading Menu**:







From the Trading Menu click on the **Uniform Price-Daily, Weekly, Monthly**. Then User will land up in Bid Entry Screen as shown below

		Bid Entry						Market W	atch	
	Daily				Weekly				Monthly	
Delivery Date(s) * 2022-09-25 ate range - select FROM-TO dates ingle date - DOUBLE CLICK a date		Client	• LC10060001	Buy/Sell* Buy	Quar • 10 1 to 99	0	Price (Rs/MWhr)* 1000 00001 to 12000	Slots *		Submit Order
Order ID Sub	Order ID	Delivery Date	TMID	Client ID	Quantity (MW)	Price (Rs./I	MWhr) Buy/Se	ll Slot	Order Date & Time	Margin

The **Market Watch** Screen which can be used by the participants to get various Market information like the Best Buy Price, Best Buy Quantity, Best Sell Price as well as the Best Sell Quantity of the desired Product.

			Bid Entry						Market Watch	
		Daily			w	eekly				Monthly
Download t	• Excel		DeliveryDate		Quantity (MW)	Price (Rs./MWhr)		Buy / Sell	Slot	Fetch / Refresh Bid Timestamp
144819	1650	-	26-Sep-2022 to 30-Sep-2022	-	Quantity (Intri)	20	999	sell	00:00-24:00	23-Sep-2022 14:48:19
143857	1647		26-Sep-2022 to 30-Sep-2022			10	1500	buy	00:00-24:00	23-Sep-2022 14:38:57
103357	1627		25-Sep-2022 to 25-Sep-2022			5	900	sell	00:00-24:00	23-Sep-2022 10:33:57

Once Bids are entered after pressing the Preview button on the above screen and afterwards confirmation of the same, they are displayed on the Summary (Landing) page.

Currently NOC check is disabled for long duration contracts





ANNEXURE-3

Illustrations of Cases

A. Case 1:

Seller A entered a sell order in RTC Slot for 100 MW at Rs. 2450/MWh.

Buyer B has entered buy bid in Morning Peak that is 06:00 to 10:00 Hours to fulfill his requirement of 70MW at Rs. 2450/MWh.

Participants	Time Slot	Quantity (MW)	Price (Rs. /MWh)
Seller A	00:00-24:00 (RTC)	100	2450
Buyer B	06:00-10:00 (Morning Peak)	70	2450

In this case the clearance of 70 MW only for 06:00-10:00 Hrs. that is Morning Peak at the rate of Rs. 2450/MWh as there is no other buyers to match with the seller's availability.

B. Case 2:

Seller A, B, C, D, E & F has entered bids in hourly slots from 00:00-03:00 Hrs. against the buy orders of Morning that is 00:00-06:00 Hrs.

Participants	Time Slot	Quantity (MW)	Price (Rs. /MWh)
Seller A	00:00-01:00 (Hourly Slot)	6	999
Seller B	00:00-01:00 (Hourly Slot)	4	1000
Seller C	01:00-02:00 (Hourly Slot)	5	999
Seller D	01:00-02:00 (Hourly Slot)	4	980
Seller E	02:00-03:00 (Hourly Slot)	4	999
Seller F	02:00-03:00 (Hourly Slot)	4	950
Buyer G	00:00-06:00 (Morning)	10	1000

In this case the clearance will be as follows depending upon the available power in each hour:

Seller	Buyer	Time Slot	Quantity (MW)	Price (Rs. /MWh)
Seller A	Buyer G	00:00-01:00	6	1000
Seller B	Buyer G	00:00-01:00	4	1000
Seller C	Buyer G	01:00-02:00	5	1000
Seller D	Buyer G	01:00-02:00	4	1000
Seller E	Buyer G	02:00-03:00	4	1000
Seller F	Buyer G	02:00-03:00	4	1000





C. Case 3:

Seller A has entered bids in hourly slots from 00:00-06:00 Hrs. 10MW @ Rs. 1000/MWh against the buy orders of Buyer C, D, E that is 00:00-01:00, 01:00-02:00 & 02:00-03:00 Hrs. respectively

Participants	Time Slot	Quantity (MW)	Price (Rs. /MWh)
Seller A	00:00-06:00 (Morning)	10	1000
Buyer C	00:00-01:00 (Hourly Slot)	10	1500
Buyer D	01:00-02:00 (Hourly Slot)	10	2000
Buyer E	02:00-03:00 (Hourly Slot)	5	1400

In this case the clearance will be as follows depending upon the available power in each hour:

Seller	Buyer	Time Slot	Quantity (MW)	Price (Rs. /MWh)
Seller A	Buyer C	00:00-01:00	10	1375
Seller A	Buyer D	01:00-02:00	10	1375
Seller A	Buyer E	02:00-03:00	5	1000





ANNEXURE-4

Matching Rules of Double-Sided Open bidding with Uniform Price Step Auction:

For detailed matching rules of Double-Sided Open bidding with Uniform Price Step Auction, Members may refer Annexure V in updated Business Rule available on PXIL Website.



Annexure-2

Participant wise volume transacted in High Price Intra Day Contract in FY 2023-24 and FY 2024-25 (till 20.10.2024)

Name of Selling entity	Volume transacted (MWh)
Anta GPS	4925.25
Auraiya GPS	7082.75
Dadri GPS	15457.75
NTPC ANTA GPS Spot RF	78.75
NTPC AURAIYA GPS Spot RF	792.5
NTPC DADRI GPS Spot RF	105
NTPC Jhanor Gandhar GPS_COMGAS	1773.5
NTPC JhanorGandhar GPS RLNG	2331.75
NTPC Kawas GPS RLNG	2811.25
NTPC Kawas GPS_COMGAS	1881.25
Ratnagiri Gas and Power Private Limited-LTRLNG	6982.5
Torrent_Power_1147.5_Mw_Sugen_Ccpp_Kamrej	1125
Torrent_Power_Ltd_382.5_MW_Unosugen_Kamrej	450
Total in FY 2023-24	45,797.25
FY 2024-25	
DGEN MEGA POWER PROJECT	2476
Meenakshi Energy Limited	520
NTPC ANTA GPS RLNG	3264.25
NTPC AURAIYA GPS RLNG	2685
NTPC AURAIYA GPS Spot RF	1272.25
NTPC DADRI GPS RLNG	5946.75
NTPC Jhanor Gandhar GPS_COMGAS	628.5
NTPC JhanorGandhar GPS RLNG	3895
NTPC Kawas GPS RLNG	3976.5
NTPC Kawas GPS_COMGAS	1435
Ratnagiri Gas & Power Private Limited	30634.5
Ratnagiri Gas and Power Private Limited-LTRLNG	1900
Torrent_Power_1147.5_Mw_Sugen_Ccpp_Kamrej	25
Total in FY 2024-25 (till 20.10.2024)	58,658.75

Sellers in High-Price Intra Day Contract

Buyers in High-Price Intra Day Contract

Name of Buying entity	Volume transacted (MWh)
Arcelor Mittal Nippon Steel India Limited	206.25
CESC_Limited	1000
Tamil Nadu Generation And Distribution Corporation Ltd West Bengal State Electricity Distribution Company Limited	41191
(WBSEDCL)	3400
Total in FY 2023-24	45,797.25
FY 2024-25	
Adani Electricity_Mumbai_Limited	250
Bihar State Power Holding Company Limited	20415
Tamil Nadu Generation And Distribution Corporation Ltd	24494
TATA Power Delhi Distribution Limited (TPDDL)	550
The Tata Power Company Limited	1377.5
West Bengal State Electricity Distribution Company Limited (WBSEDCL)	11572.25
Total in FY 2024-25 (till 20.10.2024)	58,658.75