Comments and Suggestions on Draft Order on Directions by CERC to Modifying TAM contracts

Prayas (Energy Group) 11th November 2024

We welcome the Commissions directions towards increasing standardization in TAM contracts keeping in mind the need to increase liquidity in the term-ahead contracts, stemming gaming/malpractices by market participants and reducing market fragmentation, price uncertainty, disparity for various participants.

Modifications in TAM contracts should take into account changes in the recent past including investments in transmission networks, implementation of General Network Access (GNA), operation of OTC platforms, green open access implementation etc. These measures should aim to achieve efficient price discovery across wider geographical areas, reduce market fragmentation, enhance liquidity, encourage open access consumer participation, and incentivize DISCOMs to plan short-term purchases beyond the day-ahead timeframe.

In recent years, over 70% of traded volume in power exchanges has been purchased by DISCOMs. As cost-plus entities, these DISCOMs directly pass their power purchase costs to end consumers. Therefore, ensuring transparent and efficient trading in power exchanges is crucial. Contract design should minimise instances where DISCOMs are using exchange platforms to legitimize certain trades for SERC approval.

Therefore, it is crucial that as far as possible all contracts have national closed-door auction with standard slots, delivery periods and durations. This can mitigate this risk significantly and give more confidence to consumers on price discovery and contracting for short-term power procurement.

In this context, it is vital that

- Intra-day contracts are discontinued in the wake of RTM contracts.
- DAC contracts be discontinued over time as much of the trades in this contract is due to its sub-optimal, inefficient matching mechanism and the possibilities of gaming. If DAC contracts are required, they can be national contracts with double sided closed auctions.
- Daily, Weekly and Monthly contracts are standardized national contracts with price discovery via double sided closed auctions across pre-specified blocks. The durations for these contracts should be complementary and not overlapping to aid DISCOMs meet supply through a portfolio of such contracts. The suggestions for these contracts are summarised in Annexure 1.
- All High Price TAM and DAM contracts are discontinued due to low liquidity in these contracts. Instead, the ceiling price for all contracts can be pre-specified to change dynamically across blocks and months. This way, the ceiling in some blocks maybe lower than Rs.10/unit and higher in other blocks but the overall ceiling is still Rs.10/unit.

- ADSS contracts on power exchanges are discontinued as such flexibility reduces trades on daily, weekly and monthly standard contacts and can result in price shopping by sellers. To ensure that DEEP contracts are complementary, the competitive bidding guidelines can be amended such that DEEP contracts are for durations > 3 months but less than 1 year. As liquidity in exchanges increases all short-term trades should be through standard contracts on power exchanges.

Our detailed comments and suggestions in this regard are given below:

1 Day-Ahead Contingency: National contracts, double sided closed auctions

As per CERC MMC and the draft order there are significant trades in the Day Ahead Contingency segment in the recent years. DAC Contracts accounted for 42% of all TAM contracts (i.e contracts other than I-DAM and RTM) and G-DAC accounted for 74% of all G-TAM contracts. Over time, we believe the DAC contracts should be discontinued especially with significant trades in DAM contract. However, in the interim, we **support the Commission's proposal to change the price discovery mechanism from continuous matching**.

However, it is also suggested that DAC's price discovery mechanism should be similar to RTM and I-DAM such that:

- There is collective double-sided closed auction mechanism for price discovery
- The contracts are national rather than regional
- To enable inter-regional transfer of power, market splitting is undertaken.
- Similar to I-DAM, DAC and Green-DAC can also be integrated with single price discovery mechanism.

We believe there is sufficient liquidity within the segment for double sided closed auctions for each block. In fact, the volumes transacted in the DAC in FY24 were higher than the volumes transacted in DAM segment in FY11. In FY24, DAC cleared volumes are also >50% of the volumes cleared in RTM. The share would be higher if G-DAC volumes are also counted.

With the reduction of congestion in the system and improvements in interregional connectivity, market splitting can also be introduced in DAC as is the case in RTM contracts which are closer to delivery. This will ensure the availability of a transparent and efficient price discovery mechanism for those bidders who did not clear in the DAM segment before participation in RTM.

2 Support removal of intra-day with RTM

As per data in monthly MMC reports for FY24, Intra-Day contracts account for 1% of all TAM contracts and the average prices were 28% higher than other TAM contracts in the exchanges. Green Intra-Day contracts account for 0.4% of all G-TAM contracts and prices are 54% higher than all other G-TAM contracts. **With the growth in RTM trades, we support the Commissions proposal to discontinue all intra-day contracts across exchanges**. It is suggested that the pre-specified date for discontinuation is within three months of the order/amendment to PMR, 2021 to provide clarity to all stakeholders.

3 Daily, weekly and monthly TAM: National contracts, pre-defined slots, Delivery Period and contract duration

There are several issues with the existing daily, weekly and monthly contracts, which should be addressed. These are:

- multiplicity of slots with overlapping time-blocks and high levels of granularity
- frequent revision and increasing granularity in pre-defined slots by exchanges
- overlapping trading windows between daily, weekly and monthly contracts
- multiple durations possible across contracts which increases flexibility but reduces liquidity

All of this increases the risk of price shopping and market fragmentation. We welcome the Commission's proposal to have only pre-defined slots to increase liquidity. Our detailed comments in this regard are:

A. <u>Uniform Pre-Defined Slots across all contracts, exchanges</u>: The Commission has proposed Base/RTC, Peak, Off-Peak (other than peak), and Night, wherein the peak period would be as defined by the NLDC. With increasing renewables, there is a significant price and volume difference noticed when load and net load diverge. To account for this, it is important that:
   a. There are Pre-defined slots are Base/ RTC, Day, Morning Peak, Evening Peak and Night. As per Grid India's Report on Performance and Experience of Power Exchanges on Long Duration Contracts most trades are in this pre-defined slots, and thus the change may not be disruptive.
   b. It must be ensured that there is no overlap in timings between Day, Morning/Evening Peak or Night.
   c. NDLC can declare timings for the pre-defined slots each quarter to allow for seasonal variation in demand but to also ensure certainty across contracts.
   d. With seasonal variation in pre-defined slots and with Day also being a separate slot, RE technologies like solar and wind would not be at a disadvantage. Further Hybrid and RE+Storage and Hydro can also bid in these pre-defined slots. Thus, G-TAM daily, weekly and monthly contracts can also have the same pre-defined slots as TAM. The current proposal in the order to give power exchanges "the liberty to pre-specify slots based on the generation profile of different technologies, as provided by the sellers" goes against the principal of pre-specification and could also result in fragmentation.

B. <u>Replace all Region-specific Contracts with National Contracts:</u> Currently some Daily, Monthly and Weekly Contracts are regional, while others are national. It is suggested that all contracts are national within a one year period to allow for longer duration trades over a wider pool of buyers and sellers towards market efficiency.

C. <u>Reduce overlaps in Delivery Period and duration:</u> To limit the possibility of price shopping and to provide certainty, while retaining some flexibility to buyers and sellers, the contracts should have fixed delivery periods and fixed durations such that, for the pre-defined slots:

a. Daily contracts are only available for D_{+2} to D_{+30} days for any one day or multiple days
b. Weekly contracts are available for W_{+1} to W_{+3} weeks for a minimum period of 7 days
c. Monthly contracts available for M_{+1} to M_{+3} months for a minimum period of 1 month f

The design ensures higher flexibility in the near term and with reducing granularity over time, it ensures higher certainty in the future. DISCOMs can sign multiple daily, weekly or monthly contracts to address fortnightly and seasonal requirements.

Our comments and suggestions regarding these contracts are summarized in Annexure 1.

4 Price Discovery: No open auctions for daily, weekly and monthly contracts

Presently, daily, weekly and monthly contracts have uniform step price auction which is designed as an open auction. Here, all order prices and aggregate quantities are displayed (in an anonymised manner) to all market participants during the call auction period. During this period, participants can modify, delete on enter new orders. After this period, matching takes place.

Uniform step price open auctions are designed for low liquidity contracts so buyers and sellers can make informed decisions. Closed auctions are better at eliciting true bids from participants leading to efficient price discovery but would be volatile leading to skewness and uncertainty in price when liquidity it low. Daily, weekly and monthly contracts have seen an increase in volume in recent years as shown in Table below.

Volume traded in Daily, Weekly and Monthly Contracts (MUs)			
2023-24	Daily Contracts	Weekly Contracts	Monthly Contracts
IEX	3054	598	1457
PXIL	1526	309	605
HPX	1245	170	1009
Total	5825	1077	3071

Source: Data as reported by CERC for trades in IEX, PXIL and HPX in monthly MMC reports

The volumes traded in Power exchanges in 2008-09 was 2.77 Bus which is comparable or lower than some of these contracts traded in FY24. In fact, there are still exchanges operating DAM contracts with volumes clearing lower than these volumes.

In this context, for daily weekly and monthly contracts, it is suggested that there are:

- Double sided, closed auctions for the pre-specified periods
- During the bid submission (which can be for a limited time period), bidders are constrained to submit bids only for pre-specified periods of RTC, Night, Day etc. This is akin in mechanism to the block bid order operational in some contracts.
- If there are less than two buyers and two sellers in any event, the auction should be cancelled.

- Clearing for Green Contracts and other TAM contracts can be done in an integrated fashion if the pre-specified slots (Day, Evening, Night, Base/RTC etc) for the two contracts are the same.

Over time with national contracts, pre-specified periods, longer duration contracts and no revision in bids, liquidity will increase even in these segments. Volumes are also bound to increase with discontinuation of ADSS contracts as suggested in Point 8 of this submission.

5 Payment in case of default by buyer and sellers

As volumes and participants increase, stringent mechanisms to prevent default and mitigate price shopping across contracts is critical. This is particularly important as there are TAM contracts with overlapping periods for price discovery.

Presently, in case of change in schedules for which the buyer or seller is responsible the penalty is:

- In IEX and PXIL: 20% of the trade price on the quantity of shortfall.
- In HPX: 125% of the trade price and last settlement price in the market subject to a cap of 20% of trade price. Thus, it is 20% of trade price or lower, applied on the quantum of shortfall.

It is strongly urged that the penalty for default is substantial and uniform across Power exchanges. In this vein we suggest that the penalty is:

125% of shortfall in contracted quantity. i.e., [Contracted Quantity – Delivered Quantity] * trade price* 1.25

6 Minimum Bid Volume

The minimum bid volume is different for different power exchanges as per their business rules. This is detailed in below:

- Minimum bid Volume in IEX TAM- 1 MW and IEX G-TAM is 0.1 MW
- Minimum bid Volume in PXIL for TAM and G-TAM- 1 MW for buyers, 0.1 MW for sellers
- Minimum bid volume in HPX for TAM and G-TAM- 1 MW

It is suggested that minimum bid volume for all contracts is revised to 0.1 MW for all contracts in TAM to allow for participation from a wide range of buyers and sellers. As requisite permissions for open access will be necessary for participation in the market, there need not be concerns about scheduling and other implementation issues for a minimum bid.

7 Revise Ceiling tariff design and discontinue all HP (High Price) contracts

Presently, the ceiling in TAM and DAM contracts is Rs. 10/unit. This ceiling is applicable on all contracts, except High Price contracts. Such a strict ceiling constraints market operations and does not provide adequate price signals to indicate periods of significant demand-supply mismatch.

It is suggested that:

- Ceiling tariffs change with time of day/month in I-DAM, RTM and DAC/I-DAC/G-DAC contracts. To illustrate, day ceiling can be lower for an hourly/three hourly period than evening peak/ night periods, which can be higher than Rs. 10/unit. The ceiling can also each month/quarter. This will ensure liquidity increases during stress periods and buyers do not bid aggressively to secure power as in constrained market.
- The ceilings can also be designed in such a way to maintain an annual average ceiling or less than Rs. 10/unit. This is likely given ceiling would only need to be higher in peak periods and day/off-peak period ceilings can also be lower than Rs. 10.
- For daily, weekly and monthly contracts, Ceiling tariffs are clear for all pre-defined slots. These ceilings are revised on a quarterly basis. To prevent price shopping, the ceiling can be uniform across contracts and exchanges but can differ only for pre-defined slots.
- All High Price Contracts in DAM and TAM segment are discontinued as they lead to poor liquidity and market fragmentation. In FY24, there have been no trades in Monthly and weekly HP-TAM contracts across exchanges and only 325 MU of trade in Daily HP-TAM contracts.

8 Remove DEEP and all ADSS contracts

Any Day Single Side Contracts provide are user-defined offering significant flexibility. However, like other similar RA contracts, they are also non-standardized with high risk of price shopping and gaming. Generators have the option of choosing between several user-defined overlapping events leading to high risk of non-clearance for DISCOMs. Bid revisions due to changes in other contracts (including extensions) also contribute to this risk.

Ideally short-term trades especially contracts closer to delivery date, should be conducted via standard contracts in liquid markets with efficient price discovery. This is much more critical that providing flexibility to bidders. Analysis of ADSS (as well as DEEP RA results) shows that the option of flexibility, though available is also seldom exercised by DISCOMs as the bid-slots for these events are quite standard as offered in the existing daily, weekly and monthly contracts.

Therefore, it is suggested that:

- **All ADSS contracts should be discontinued on Power exchanges**: All TAM trades in Power exchanges should be on standard contracts (daily, weekly, monthly). Over time, DEEP contracts should be discontinued and replaced with standard products on the power exchanges. In the interim, to ensure complementary and rather competing products are available which can lead to further fragmentation, **DEEP contracts should only be permitted for contracts with durations > 3 months but less than 1 year**. This will ensure there is no overlap with standard Daily, Monthly and Weekly contracts and DEEP RA contracts.

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Annexure 1: Prayas Suggestion as compared to existing aspects on Daily, Weekly, Monthly Contracts

Contract Type	Daily	Weekly	Monthly	Prayas Suggestion
Day of Delivery	T+2 up to T+90	TW+1 up to TW+12	TM+1 up to TM+3	Daily - T+2 to T+30 Weekly - TW+1 to TW+3 Monthly - TM+1 to TM+3
Contract geography	National or Region specific contract			National contracts only
Pre-defined Slots	Multiple pre-defined overlapping slots with provision for user-defined block-wise and hourly bids.			Pre-defined non-overlapping slots as defined by NLDC on a quarterly basis. Slots are: - Base/RTC; Morning peak; Day; Evening peak; Night
Contract Period	One Day	One week	User-defined days in the month	Daily - One day or multiple days Weekly - Minimum of one week Monthly - Minimum of one month
Minimum bid volume	IEX& HPX - TAM 1 MW; GTAM 0.1 MW PXIL - Buyer 1 MW; Seller 0.1 MW			0.1 MW
Price Discovery Mechanism	Uniform Price Step Open Auction			Double sided closed auction for each pre-specified slot with uniform clearing price
Ceiling Tariff	10 Rs./Unit			Dynamic with variations across slots and months. However, weighted average annual ceiling tariff and still be 10 Rs./Unit
Penalty for revision of schedule	IEX & PXIL - (Contracted quantity - delivered quantity) * Trade Price * 0.20 HPX - 125% of difference b/w trade price and last settlement price, subject to a cap of 20% of trade price			(Contracted Quantity - Delivered Quantity) * Trade Price * 1.25
High Price (HP) Contracts	Exchanges offer High price segment in following contracts: TAM:- Daily, Weekly, Monthly, ADSS & DAC			Discontinue all HP contracts