

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 6/SM/2022**

**Coram:**

**Shri P. K. Pujari, Chairperson**

**Shri I. S. Jha, Member**

**Shri Arun Goyal, Member**

**Shri P. K. Singh, Member**

**Date of Order: 9<sup>th</sup> May, 2022**

**IN THE MATTER OF:**

Transmission Corridor Allocation among Power Exchanges for Collective Transactions.

**ORDER**

At present, two Power Exchanges are in operation in India, namely, the Indian Energy Exchange Limited (IEX) and the Power Exchange India Limited (PXIL). A third Power Exchange, viz., ‘Hindustan Power Exchange Limited’ has also been granted registration and is likely to be operationalized soon. Therefore, it is considered necessary to review the existing methodology of allocation of available transmission margins in case of congestion in collective transaction segment of the Power Exchanges, which was approved in the context of two functional Power Exchanges.

**Background**

1. On 29.08.2013, the Petition No.158/MP/2013 was filed by PXIL under Regulation 63 and Regulation 64 of the Central Electricity Regulatory Commission (Power Market) Regulations, 2010 (in short “PMR 2010”) seeking changes in the system of transmission corridor allocation for collective transactions made through the Power Exchanges.
2. In the Petition, PXIL submitted that for trading in Day Ahead Market (DAM), the National Load Despatch Centre (NLDC) coordinates the power flow allocation among the two Power Exchanges. The Power Exchanges run an unconstrained process of

trade matching where they consider all the buy-sell orders and assume infinite flows on their inter-regional transmission corridors. The orders derived in this process are used to derive net flows of each region and the flows required on each inter-regional transmission corridor. Thereafter, NLDC compares the power flow request sent by both the Power Exchanges with the actual flow feasible on the corridor and allocates the corridor to both Exchanges proportionate to the flows requested by the Exchanges.

3. PXIL submitted that this methodology of pro-rata allocation of corridor between the two Power Exchanges has many operational issues and is detrimental for sustenance of smaller Power Exchange. Imbalance in terms of market design against smaller Power Exchange can be taken care of by allocating a fixed amount of corridor between the operating Exchanges, along with a caveat that if a particular Power Exchange is not able to use the allocated corridor, then the other Exchange will have the right to use the residual corridor.
4. The Commission vide its Order dated 30.4.2015 in the Petition No.158/MP/2013 decided that the issue needs to be examined by an Expert Group for finding out an acceptable solution which will also achieve social welfare maximization. The Expert Group held extensive discussions and deliberation on the subject and then submitted its report to the Commission. Key recommendations of the report were as follows:

*“7.3 The present method has been implemented with the direction of the Hon’ble Commission and agreed between NLDC, IEX and PXIL in October, 2008. Hence, for the present, the existing method of allocation of transmission corridor based on pro-rata allocation may be continued with the modification as suggested in para 7.4 below.*

*7.4 A priority allocation of corridor upto 15% on constrained corridors to the smaller Power Exchange may be made when only two Power Exchanges are functioning (if there are only two Power Exchanges functioning, then the Power Exchange with a market share less than 20% is considered the smaller Power Exchange. To start with, requisition upto 10% by the smaller Power Exchange on a constrained corridor would be allocated corridor on priority and the balance would be shared as per the existing pro-rata methodology. On the uncongested transmission corridors, no priority allocation is necessary to the smaller Power Exchange and it would continue as per the existing methodology based on pro-rata.*

*7.5 The methodology suggested in para 7.4 above may be tried on a pilot basis for a period of 6 months and both Power Exchanges and NLDC shall submit a report covering various aspects such as trade volumes, prices, impact of priority allocation of corridor to the smaller Power Exchange on market participation, etc. Based on the experience gained, the priority allocation for sharing of transmission corridors may be reviewed by the Commission.”*

5. Considering the recommendations of the Expert Group, the Commission, in its Order dated 04.04.2016 in Petition No.158/MP/2013 noted that it has been advocating multiple Power Exchanges from the very beginning and therefore, it is essential that both the Power Exchanges thrive as viable market institutions. The Commission felt that even though priority allocation of transmission corridor in favor of one Exchange is against the principle of competition and market philosophy, PXIL needs some hand holding to enable it to increase its market share. Accordingly, the Commission directed that priority allocation of 10% in the constrained corridor shall be made in favor of PXIL for the next six months beginning from 01.04.2016. It was, however, clarified that beyond 10%, allocation of corridor will be on pro-rata basis as per the existing methodology. In the first week of November 2016, NLDC shall submit a report on the impact of priority allocation of corridor to PXIL and accordingly, the Commission will take a view on continuation of priority allocation based on the report submitted by NLDC.
  
6. NLDC, in its report dated 25.11.2016 submitted that almost full volume requisitioned by PXIL was getting allocated on implementation of priority allocation methodology. However, the trade volumes at PXIL did not witness any significant increase during the period, thereby indicating that corridor allocation methodology has little impact on the volumes traded on the Power Exchange. In terms of corridor utilization, the margin allocated by NLDC on the congested corridors, primarily towards the import of Southern Region and Northern Region, generally sufficed the requirement of PXIL. Further, the congestion hours have reduced after the implementation of priority allocation of 10% in the constrained corridor to PXIL. NLDC suggested that the Commission may like to consider continuing the priority allocation of 10% in the constrained corridor to PXIL in DAM for a further period of one year, i.e., up to October, 2017. The situation may be reviewed again thereafter.

7. In 2020, the Commission approved another contract in collective transaction segment, in Real time Market (RTM) for trading of power on real time horizon on the Power Exchanges. For allocation of transmission corridor among operational Power Exchanges in RTM, the Commission through its Order dated 28.05.2020 in its Suo-motu Petition No. 10/SM/2020 provided as follows:

*“The allocation of transmission corridor in case of congestion shall be based on the ratio of initial market clearing volume of RTM in the respective Power Exchanges. At the Gate Closure, the NLDC shall announce the available transfer capability (ATC) for Real time transactions. Both the Power Exchanges shall run the process of bid matching considering all the buy and sell bids on their platform, factoring ATC for Real time transactions, announced by the NLDC. The initial market clearing volume derived in this process shall be submitted to the nodal agency, NLDC. NLDC shall verify the combined volume cleared in both the Power Exchanges against the ATC for RTM. If the combined cleared volume of the two Power Exchanges is within the ATC for Real time transaction, the initial results shall be confirmed by NLDC to the Power Exchanges. In the event of the combined volume exceeding the ATC for RTM, the allocation of available corridor margin between the Power Exchanges shall be in the ratio of the initial market clearing volume of RTM in the respective Power Exchanges, and accordingly, this shall be communicated to the Power Exchanges. The Power Exchanges shall thereafter submit the final trades in conformity with the available corridor margin as provided by the NLDC.”*

8. Thus, as on date there exist different methodologies of transmission corridor allocation for collective transactions in case of congestion – in the Day Ahead Market, priority allocation of 10% in the constrained corridor in favor of PXIL and beyond 10%, allocation of corridor on pro- rata basis between the two Exchanges; and in the Real Time Market in the ratio of the initial market clearing volume of RTM in the respective Power Exchange.
9. The Commission, in the matter of Petition No. 287/MP/2018 and Petition No. 160/MP/2021, has granted registration to the third Power Exchange, viz., Hindustan Power Exchange Limited (HPX). Accordingly, it has become necessary to revisit the

methodology of allocation of transmission corridor to Power Exchanges for collective transactions in the Day Ahead Market and the Real Time Market.

10. In this regard, POSOCO vide its letter dated 12.01.2022, has also requested the Commission for revisiting the methodology of allocation of transmission corridor for collective transactions.

### **Analysis & Decision**

11. We note that congestion for the volume of electricity dispatched through collective transaction in the Power Exchanges has reduced significantly during last few years. There is a declining trend in the volume of electricity that could not be cleared as percentage to unconstrained cleared volume in both the Power Exchanges. As per the information received from POSOCO, during the period from 01.01.2017 to 31.03.2022, the percentage of congested time blocks where reserved margin got cleared was in the range of 0.54%, which shows that the congestion remained insignificant. During 2021-22, in PXIL, the unconstrained cleared volume and the actual volume transacted were 0.043 BU and 0.043 BU respectively for DAM segment, whereas no transaction was made in RTM segment of PXIL. Therefore, the actual transacted volume was equal to the unconstrained volume in DAM segment of PXIL showing no congestion on PXIL side.

12. We note that in the Day Ahead Market, priority allocation of 10% in the constrained corridor was made in favor of PXIL being the “smaller Power Exchange”, as per the suggestion of the Expert Committee in the background of only two functional Power Exchanges. In view of the fact that the third Power Exchange (which has been granted registration under PMR 2021) is likely to be operationalized soon, the context with reference to “smaller Power Exchange” gets altered. Further, continuance of priority allocation of 10% in the constrained corridor to PXIL will disturb the level playing field among the three operational Power Exchanges, thereby acting as a barrier to the growth for the third Power Exchange.

13. In this regard, POSOCO vide its letter dated 12.01.2022 has proposed as under:

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*With the introduction of third Power Exchange, the following need to be reviewed:  
(a) Sharing of available transmission margins for Day Ahead Market & Real Time Market between the operational Power Exchanges, in case of congestion.*

*(b) Reservation of 10% in transmission corridor allocation provided to the Power Exchange with smaller volumes.*

*In regard to the above, it is proposed that that the available transmission margins may shared in proportion to the Market Clearing Volume (MCV) in the provisional trades amongst the operational Power Exchanges in case of congestion. Further, the reservation of 10% as mentioned above may be withdrawn/removed. These may be applied for both DAM and RTM transactions.*

*Hon'ble Commission may kindly consider issuing necessary directions in this regard.”*

14. Therefore, in view of the developments highlighted in the preceding paragraphs, the Commission has decided to revisit the methodologies of transmission corridor allocation for collective transactions in the Day Ahead Market. Pertinently, the priority allocation of 10% in the constrained corridor in favor of PXIL was a temporary measure. Initially, it was granted for six months from April, 2016. However, the same has continued for a period of more than six years. The Commission notes that PXIL has not been able to effectively utilize the facility of priority allocation transmission corridor in the Day Ahead Market. Further, congestion situation has improved during the last few years. On introduction of the Real Time Market in June 2020, no priority allocation in the constrained corridor was assigned to the “smaller Power Exchange” for the transactions in the said Real Time Market and this Market has been running smoothly.

15. Now that the third Power Exchange is likely to commence its operations soon, the Commission directs that the allocation of transmission corridor among the Power Exchanges shall be governed based on the following principles:

15.1. For the collective transactions in DAM:

- (a) At the end of bidding session of DAM, all the operating Power Exchanges shall run the process of bid matching, considering all buy and sell bids on their platform.
- (b) The initial unconstrained market clearing volume derived in this process shall be submitted to the NLDC. NLDC shall verify the combined volume cleared in all the Power Exchanges against the ATC for DAM. If the combined cleared volume of the Power Exchanges is within the ATC for Day Ahead transactions, the initial results shall be confirmed by NLDC to the Power Exchanges.

- (c) In the event of the combined volume exceeding the ATC for DAM in any transmission corridor, the allocation of available corridor margin among the Power Exchanges shall be in the ratio of the initial unconstrained market clearing volume of DAM in the respective Power Exchanges, and accordingly, this shall be communicated to the Power Exchanges.
- (d) The Power Exchanges shall thereafter submit the final trades in conformity with the available corridor margin as provided by the NLDC.

15.2. For the collective transactions in RTM, the transmission corridor allocation shall continue to be as per the methodology provided in the Order dated 28.05.2020 in Suo-motu Petition No. 10/SM/2020, but shall be applicable to all the operating Power Exchanges as under:

- (a) At Gate Closure, the NLDC shall announce the available transfer capability (ATC) for different transmission corridors for Real time transactions.
- (b) All the Power Exchanges shall run the process of bid matching considering all the buy and sell bids on their platform, factoring ATC of different transmission corridors announced by the NLDC for Real time transactions.
- (c) The initial market clearing volume derived in this process shall be submitted to the NLDC. NLDC shall verify the combined volume cleared in all the Exchanges against the ATC for RTM.
- (d) If the combined cleared volume of all the Power Exchanges for Real time transaction is within the ATC, the initial results shall be confirmed by NLDC to the Power Exchanges.
- (e) In the event of the combined volume for RTM exceeding the ATC , the allocation of available corridor margin between the Power Exchanges shall be in the ratio of the initial unconstrained market clearing volume of RTM in the respective Power Exchanges, and accordingly, this shall be communicated to the Power Exchanges. The Power Exchanges shall thereafter submit the final trades in conformity with the available corridor margin as provided by the NLDC.
- (f) In the extreme event of failure of communication between the NLDC and the Power Exchange(s) or for reasons such as data transfer failure, if the final cleared trades are not received by NLDC for scheduling through the RLDCs, or if the information regarding available corridor margin is not received by the Power

Exchange(s), the schedules for such RTM session(s) shall be made zero by NLDC.

(g) The entire process as above shall be completed within 15 minutes.

16. The principles of transmission corridor allocation among Power Exchanges as directed above shall be effective from 01.06.2022.

17. Accordingly, the Commission directs the NLDC to incorporate the above directions suitably in the detailed procedure for scheduling of collective transactions in the Day Ahead Market and the Real Time Market. The Commission further directs the Power Exchanges to act as per the above directions.

18. With the coming into effect of the direction as contained in this Order, that is, with effect from 01.06.2022, the Order dated 04.04.2016 in Petition No.158/MP/2013 extending priority allocation of 10% in the constrained corridor in favor of PXIL shall stand superseded.

19. The Petition 6/SM/2022 is disposed of in terms of the above.

Sd/  
(P.K. Singh)  
Member

Sd/  
(Arun Goyal)  
Member

Sd/  
(I. S. Jha)  
Member

Sd/  
(P. K. Pujari)  
Chairperson