



Delhi Electricity Regulatory Commission

Viniyamak Bhawan, 'C' Block, Shivalik, Malviya Nagar, New Delhi – 17.

No. F.11(2062)/DERC/2022-23/7614

Petition No. 78/2022

In the matter of: Petition under Section 63, Section 86(1)(b) and 86(1)(e) of the Electricity Act, 2003 for seeking adoption of tariff discovered under Competitive Bidding Process for procurement of 255 MW Wind-Solar Hybrid Power from grid connected Wind-Solar Hybrid Power Project with a Greenshoe option of additional 255MW to meet the RPO as per Regulation 4 of the DERC (RPO and Renewable Energy Certificate Framework Implementation) Regulations, 2021 read with Regulation 27 of DERC (Business Plan) Regulations, 2019 filed by TPDDL.

Tata Power Delhi Distribution Ltd.

.... Petitioner

Coram:

Hon'ble Dr. A. K. Ambasht, Member

Appearance:

Mr. Anand Srivastava, Adv. TPDDL

ORDER

(Date of Order: 16.02.2023)

1. The instant Petition has been filed by M/s Tata Power Delhi Distribution Co. Ltd. for seeking adoption of tariff discovered under Competitive Bidding Process for procurement of 255 MW Wind-Solar Hybrid Power from grid connected Wind-Solar Hybrid Power Project with a Greenshoe option of additional 255MW to meet the RPO as per Regulation 4 of the DERC (RPO and Renewable Energy Certificate Framework Implementation) Regulations, 2021 read with Regulation 27 of DERC (Business Plan) Regulations, 2019. The Petitioner has prayed the following;
 - i. To approve the adoption of Tariff as discovered through the process of competitive bidding as mentioned in Table 12;
 - ii. To approve the provisions which have been modified pursuant to the approval of the bidding documents vide the Commission's Order dated 27.07.2022.
 - iii. To approve the purchase of power for a period of 25 years and subsequent signing of the PPA with the successful bidder for total capacity of 510 MW after exercising the Greenshoe option;
 - iv. To approve to make this power eligible for meeting the Wind-Solar RPO requirement of the Petitioner;

Petitioner's Submissions

2. The Petitioner vide Petition No. 50 of 2021 sought approval of the documents of the bids consisting of the Request for Selection ("RFS") and Power Purchase Agreement ("PPA") (collectively referred as "Bidding Documents"). The Commission vide its Order dated 27.07.2022 approved the Draft Bidding Documents for the procurement of 255MW capacity from grid connected Wind Solar Hybrid Power Projects ("Project") through competitive bidding process for meeting the Renewable Purchase Obligation ("RPO").
3. The Commission has issued DERC (Renewable Purchase Obligation and Renewable Energy Certificate Framework Implementation) Regulation, 2021 ("RPO Regulations") dated 13.04.2021 and DERC Business Plan Regulations, 2019 ("Business Plan Regulations, 2019") dated 27.12.2019 as amended on 25.006.2021. According to these Regulations, the obligated party is required to achieve a defined percentage of the total procurement from the pertinent renewable energy sources i.e., the Petitioner as a Distribution licensee must procure specific percentage of its power requirement through renewable sources to meet its RPO obligation under the extant regulatory framework.
4. Further, the MoP vide its Order dated 22.07.2022, has stipulated the RPO and Energy Storage Obligation ("ESO") Trajectory till FY 2019-30. The Petitioner vide the present Petition is also seeking approval of the Commission to procure an additional capacity of 255MW through Greenshoe option as the MoP Order dated 22.07.2022 to ensure fulfilment of its RPO targets. The long term growth trajectory as per the MoP Order dated 22.07.2022 are reproduced in the table below:

Year	Wind RPO	HOP	Other RPO	Total RPO
FY 22-23	0.81%	0.35%	23.44%	24.61%
FY 23-24	1.60%	0.66%	24.81%	27.08%
FY 24-25	2.46%	1.08%	26.37%	29.91%
FY 25-26	3.36%	1.48%	28.17%	33.01%
FY 26-27	4.29%	1.80%	29.86%	35.95%
FY 27-28	5.23%	2.15%	31.43%	38.81%
FY 28-29	6.16%	2.51%	32.69%	41.36%
FY 29-30	6.94%	2.82%	33.57%	43.33%

5. There was no trajectory by MoP during the stage of approval of Draft Bidding Documents by the Commission. Further, as per the assumptions of the Petitioner

whilst seeking approval of the Draft Bidding Documents vide Petition No. 50 of 2021, the total RPO percentage was kept at 25% till FY 29-30, however as set out in the aforementioned paragraph, the RPO percentage requirement now stands at 43%. Given the present scenario after the MoP Order dated 22.07.2022, the Petitioner beseeches the Commission to accord approval for procurement an additional capacity of 255MW through Greenshoe option in order to meet its RPO requirements.

6. Greenshoe option is a method in which an additional capacity of power may be procured via the process of competitive bidding so as to meet the Renewable Purchase Obligation and the Energy Storage Obligation. The Petitioner vide its RFS has incorporated a method of additional capacity allocation by the Greenshoe Option under Clause 3.4 of the RFS. However, during the Pre-Bid meeting scheduled on 15.09.2022 with the interested bidders, clarification was sought regarding the methodology of allocation of capacity under Greenshoe Option which has been addressed in Addendum – 1 issued by the Petitioner subject to the approval of the Commission.
7. In view of the MoP Order dated 22.07.2022, the Petitioner seeks to procure an additional capacity of 255MW through the Greenshoe Option along with its original capacity of 255 MW already approved by the Commission. Thus, the total capacity of the Project is proposed to be 510MW now subject to the approval of the Commission. It is most respectfully submitted that it is of utmost importance for the Petitioner to include 255MW through Greenshoe Option in order to meet its RPO and ESO targets. The Petitioner vide the instant petition is beseeching this Commission to seek approval to procure an additional capacity of 255MW through the Greenshoe Option in view of this MoP Order dated 22.07.2022.
8. As per internal analysis of the Petitioner, even after procuring an additional capacity of 255MW through the Greenshoe Option, the Petitioner will be unable to meet its RPO target. Thus, it is necessary for the Petitioner to undertake this Greenshoe Option along the original capacity subject to the approval of the Commission.
9. The Petitioner on 31.08.2022 floated the tender for procurement of 255MW Wind-Solar Hybrid Power from the grid connected with an additional Greenshoe Option of 255MW. Therefore, the total capacity of the Project was 510MW including the Greenshoe Option. Pre-bid meeting with interested bidders was held on 15.09.2022 at 11:00 hours. Accordingly, on 20.09.2022 the Petitioner issued Response to Bidders Queries regarding TPDDL tender for Setting up of 255MW Wind-Solar Hybrid Power Projects with Greenshoe Option of Additional 255MW Wind Solar Hybrid Power

Projects ("Addendum-1"). It is further submitted that Addendum – 1 provides response to the queries of the Bidders regarding the Project subject to the approval of the Commission. Summarily, the issues addressed by the petitioner were on the following points;

- i. Clarification on allocation of capacity under the Greenshoe Option;
- ii. Clarification on Delivery Point; and
- iii. Amendment in the definition of Power Project/Projects under the bidding documents.

10. Based on the multiple representations received from several bidders (as a part of pre-bid queries initially and later for seeking extension of time for bid submission) and since only one bid was received by 13.10.2022 viz from TPREL, the Petitioner extended the bid submission date to 09.11.2022 vide Corrigendum dated 14.10.2022 to provide better clarity to the bidders and ensure better participation in the bidding process.
11. Accordingly, considering the abovementioned queries regarding clarification/amendments/modifications, the Petitioner vide Addendum - 3 dated 22.10.2022, modified the definition of the term "Delivery Point" subject to the approval of the Commission. It was further clarified by the Petitioner that the CTU charges and losses shall be borne by the Petitioner as per the provisions of the Connectivity and General Network Access to the Inter-State Transmission System Regulations, 2022 ("GNA Regulations, 2022") as and when the same is notified. However, bidder shall be responsible for all the activities associated with obtaining CTU & STU access/general network access till the Delivery Point. The monthly bills shall be issued by the Bidder considering the energy delivered at the Delivery Point as per the applicable Regional Energy Accounts ("REA") and shall contain the details of CTU losses incurred by the Bidder, which shall be paid to the Bidder by TPDDL in addition to the energy bills at the tariff determined. The aforesaid mentioned was stated to be brought into effect only after due approval of the Commission. Therefore, in view of the above, the Petitioner beseeches the Commission to also approve the aforementioned modality.
12. Based on the multiple representation received from the bidders (as part of prebid queries initially and later for seeking extension of time for bid submission). The Petitioner modified a few conditions of the approved bid documents (as approved by the Commission vide its order in Petition No. 50 of 2021) to provide better clarity to the bidders and ensure better participation in the bidding process. Summarily, the modified conditions are provided in table reproduced under:

Sr. No	Original Clause	Modified Clause	Justification
1.	<p>“Delivery Point” shall mean the point at which energy is delivered at Tata Power DDL periphery; (i.e. the interconnection point of DTL network with Tata Power-DDL network). All the transmission charges and losses from generator ex-bus till the delivery point shall to be to the account of the successful bidder/developer. Taking all necessary consents/arrangements for delivering the power at TPDDL periphery shall remain entirely with the successful bidder. Please note that all the bidders are required to quote the tariff (inclusive of all charges, losses, taxes, royalty, cess, duties and any other involved costs whatsoever) at the delivery point. All-inclusive tariff at delivery point shall be used for purpose of further bid evaluation.</p>	<p>“Delivery Point” shall mean the point at which energy is delivered at the Delhi STU periphery (i.e. the interconnection point of CTU network with the DTL network). All the transmission charges and losses from generator ex-bus till the Delivery Point shall be to the account of the Successful Bidder/developer. Taking all necessary consents/arrangements for delivering the power at Delivery Point shall remain entirely with the Successful Bidder. Please note that all the Bidders are required to quote the tariff (inclusive of all charges, losses, taxes, royalty, cess, duties and any other involved costs whatsoever) at the Delivery Point. All-inclusive tariff at Delivery Point shall be used for the purpose of further bid evaluation.</p>	<p>The change in the definition of delivery point was done based on the requests received from bidders. Major reason for the same was implementation of GNA regime wherein, CTU Drawal/transmission charges post implementation of GNA is to be borne by the buyers. Nearly all the bidders requested for change in delivery point considering the fact that they would not be eligible to apply/pay for CTU transmission charges post implementation of GNA. Further, Bidders were also having apprehensions regarding uncertainties associated with STU charges of DTL and requested TPDDL to</p>

			<p>remove STU charges from the scope of the bidders.</p> <p>Accordingly, to make bids more competitive and to remove the uncertainties associated with PGCIL/STU charges the delivery point was modified as Delhi STU periphery (i.e. the interconnection point of CTU network with the DTL network). This was also necessary to ensure adequate participations of the bidders.</p>
2.	<p>"Power Project" or "Project" shall mean the Wind-Solar hybrid power generation facility of Contracted Capacity of (insert capacity) MW, located at (Insert name(s) of the District(s) and State(s) having a separate control system, metering and single point or separate points of injection into the grid at Delivery/Interconnection / Metering point(s) at ISTS substation or in case of</p>	<p>"Power Project" or "Project" shall mean the Wind-Solar hybrid power generation facility of Contracted Capacity of (insert capacity) MW, located at (Insert name(s) of the District(s) and State(s) having a separate control system, metering and single point or separate points of injection into the grid at Delivery/Interconnection / Metering point(s) at ISTS substation or in case of</p>	<p>A very minor change has been done in the definition of project wherein, limitation of two injection points was removed. In order to bring in more transparent and competitive participation as per the market trend. The same was done as per the request of the bidders and</p>

<p>sharing of transmission lines, by separate injection at pooling point. In case of multiple points of injection points for each Project, will be two (2). The rated capacities of the various Project components are as follows: Solar PV component: _____ MW Wind Power component ____MW. This includes all units/modules and auxiliaries and associated facilities, bay(s) for transmission system in the switchyard, dedicated transmission line up to the interconnection/Metering Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility, whether completed or at any stage of development or intended to be developed and constructed for the purpose of supply of the power to TPDDL;</p>	<p>sharing of transmission lines, by separate injection at pooling point. The rated capacities of the various Project components are as follows: Solar PV component: _____ MW Wind Power component ____MW. This includes all units/modules and auxiliaries and associated facilities, bay(s) for transmission system in the switchyard, dedicated transmission line up to the interconnection/Metering Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility, whether completed or at any stage of development or intended to be developed and constructed for the purpose of supply of the power to TPDDL;</p>	<p>also has been used by SECI in various tenders. This was aimed to avoid the associated technical issues anticipated by the bidders and to enable them in submitting more competitive bids. Further, the RFS sought minimum bid capacity as 50 MW with at least 50 MW of project capacity being proposed of one project site. Hence, limiting the point of injection to two (2) will restrict the bid capacities and hence, restrict the participation. Further, in the said amendment there will be no adverse financial ramifications to TPDDL or consumers in its license area.</p>
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13. The clarifications/ amendments/modifications done by the Petitioner is subject to the approval of the Commission vide this instant petition. Accordingly, the execution of the PPA with the Shortlisted Bidder shall take place after the approval by the Commission. As per the standard competitive bidding process, on 10.11.2022, a Bid Evaluation Committee ("BEC") was formed for evaluation of bids and compliance required in the formation of the BEC has been fulfilled. Over a span of 12 days, the BEC issued the bid evaluation report regarding the bids which were received by 09.11.2022.
14. After evaluation of the technical bids, the Bid Evaluation Committee declared the bidders as qualified bidders and requested for the Financial Bid Opening and conducting E-Reverse Auction. The Bidders were accordingly informed via email dated 22.11.2022 about the results of techno-commercial evaluation and the date of Financial Bid Opening and E-Reverse Auction.
15. The financial bids of the bidders were opened on 23.11.2022 at 14:00 hours followed by E-Reverse Auction at 11:00 hours on the 30.11.2022. The Reverse auction result is provided below;

Sr. No.	Bidder Name	Initial Bid		E-Revers Auction	
		Capacity (MW)	Rate (INR/kWh)	Capacity (MW)	Rate (INR/kWh)
1	Tata Power renewable energy limited	255	3.15	255	3.00
2.	Avaada Energy Private Limited	255	3.23	255	3.01
3.	ReNew Solar Power Private Limited	255	3.80	255	3.80

16. The Petitioner wishes to apprise the Commission that the final tariff of INR 3.00/kWh discovered through E-Reverse Auction is competitive and the same can be compared with some of the recent bids of Hybrid Power.
17. TPREL being the successful bidder through the E-Reverse Auction vide its email dated 30.11.2022, sought for the procedure for additional capacity of 255MW under Greenshoe Option as mentioned in Clause 3.4.6 of Annexure A of Addendum-1. The petitioner vide email dated 01.12.2022, informed TPREL the methodology regarding 255MW capacity to be awarded under the Greenshoe option under the hybrid tender. Consequently, TPREL vide its email dated 05.12.2022 informed the

petitioner regarding its willingness to accept the additional capacity of 255MW under Greenshoe option (in additional to 255MW capacity) at the discovered prices of Rs. 3/kWh in the E-Reverse Auction conducted on 30.11.2022. TPREL further submitted all the relevant required documents in order to accept the additional 255MW through Greenshoe option.

18. The Petitioner submits the instant petition to the Commission for adoption of following tariff obtained through the process of Competitive Bidding under Section 63 of the Act;

Table 12 – Details of final bid Award

Bidder Name	Capacity (MW)	Rate (INR/kWh)
Tata Power Renewable Energy Ltd.	510MW (255MW+255MW)	3.00

19. The Petitioner therefore, requests the Commission to allow for signing of the PPA for a period of 25 years with the successful bidder at the tariff discovered through competitive bidding process (followed by E-Reverse Auction) for procurement of 255MW wind-solar hybrid power from grid connected hybrid power projects with a Greenshoe option of additional 255 MW to fulfil its Non-Solar and Solar RPO.
20. The Petitioner has further submitted the additional documents wherein it is stated that;
- i. The Commission vide its order dated 12.01.2023 directed TPDDL to meet the officials of the Commission in order to figure out the actual need and accordingly determine actual quantum of the capacity required by TPDDL. Accordingly, on 18.01.2023 a meeting was held between the TPDDL and officials of the Commission pursuant to which the following queries were raised by the Commission vide email dated 18.01.2023:
 - a. Power Demand and Power Supply from existing and future plants wherein Power Purchase Agreement ("PPA") is approved by the Commission as per the format provided by the Commission.
 - b. Compliance to Standard Bidding Guidelines.
 - c. Process Flow Chart Instructions during e-reverse auction and detailed e-bidding/auction report from initial bid to discovered price to be submitted.
 - ii. Vide its emails dated 25.01.2023 and 27.01.2023, TPDDL provided detailed responses to the aforementioned queries raised by the Commission vide its email dated 18.01.2023. On 30.01.2023 another meeting was called upon by

the officials of the Commission to discuss on the data provided by TPDDL, vide its emails dated 25.01.2023 and 27.01.2023, to specifically address the following queries:

A. Requirement for additional capacity of 255MW Hybrid Power Project through greenshoe option given that the supply/demand scenario has almost remained the same since the approval of the bidding documents by the Commission vide its Order dated 22.07.2022 in Petition No. 50 of 2021

Response to Query A

That tariff applicable for additional capacity of 255MW Hybrid Power Project through greenshoe option of INR 3 per kWh was compared with Merit Order Despatch (MOD) of the various coal-based power stations currently forming part of TPDDL long term supply portfolio. Presently, TPDDL has long term PPA with CLP Jhajjar Thermal Power Plant for 132 MW Capacity and APCPL Jhajjar Thermal Power Plant for 614 MW. The Energy Charge Rate ("ECR") of these power plants is in range of INR 3.60 per unit (with no imported coal blending) to INR 5.40 per unit (with imported coal blending up to 20%) depending upon the percentage of imported coal blending.

That CLP Jhajjar Thermal Power Plant and APCPL Jhajjar Thermal Power Plant run above Minimum Technical Limit (MTL) which is @ 55% presently.

Accordingly, the scheduling from both the plants can be technically brought down to 55% (i.e. MTL). Therefore, considering that the applicable tariff on additional capacity of 255MW Hybrid Power Project, such hybrid power can also substitute the high-cost thermal power from these plants. It is estimated that potential benefit through such substitution of thermal power with hybrid power could range between INR 116 Crores to INR 284 Crores annually for FY 2025-26 onwards for a period of eleven (11) years till the end of the respective PPAs in FY 2037-38. The detailed calculations for the aforesaid cost benefit analysis are provided as Annexure-B of Additional Affidavit filed by the Petitioner on 02.02.2023.

It may also be considered that in case of comparison of the cost of 510 MW Hybrid Power Project to that of slot wise and month wise power purchased from power exchanges during 2022, there is an estimated saving of up to INR 216 Crores annually through adoption of 510 MW Hybrid Power Project. The cost benefit analysis with respect to power purchased from power exchanges provided as Annexure-C of Additional Affidavit filed by the Petitioner on 02.02.2023.

8. It is pertinent to note that in all scenarios, (i) whether TPDDL may draw energy from both Jhajjar Power Limited's project and Aravali Power Project above MTL and/or (ii) whether TPDDL sells some quantum of hybrid green power to meet the actual demand/supply scenario. There is always a case of potential power purchase savings.

B. No reduction in tariff for the green shoe capacity of 255MW Hybrid Power Project.

Response to Query B

That the Commission had approved the bidding documents (RFS and PPA) for Hybrid Power Project for procurement equivalent to 255MW. Thereafter, TPDDL initiated bidding process seeking firm capacity of 255 MW Hybrid Power Project with a greenshoe option of additional procurement of 255MW from the Hybrid Power Project for the following reasons;

- a. That just before the passing of the Order dated 27.07.2022 by the Commission in Petition No. 50 of 2021 (wherein the Commission approved draft bidding documents for the procurement of 255MW capacity from grid connected Wind Solar Hybrid Power projects through competitive bidding process for meeting RPO), the Ministry of Power vide its order dated 22.07.2022 revised the RPO trajectory till FY 2029-30, wherein RPO target for FY 2029-30, wherein RPO target for FY 2029-30 is around 43% of the energy consumption whereas, the assessment of 255MW Hybrid Power Project capacity was undertaken at RPO Target of 25%.
- b. That MTL for thermal generating stations currently is 55% of its installed capacity. Thus there is scope to reduce the cost of power purchase by reducing the generation profile of thermal generating stations and keeping its closer to the respective MTLs.
- iii. Considering the time period contingency, the Petitioner looked into the bidding process being followed by the other State utilities and came across the 'greenshoe option' wherein the state utility may procure additional capacity of the power on the same terms and conditions but subject to due approval of the appropriate commission. On this basis bidding documents were issued by TPDDL, wherein it specified terms and conditions applicable for the greenshoe option. Further, clause 1.3.5 of the RFS provides TPDDL may/shall sign PPAs with the developers at the tariffs discovered after the e-reverse auction. The price discovered through e-reverse auction then would be submitted to the Commission's approval which would be binding on the Petitioner.

Commission's Analysis

21. The instant Petition has been filed by TPDDL seeking adoption of Tariff discovered under Competitive Bidding Process for procurement of 255 MW Wind-Solar Hybrid Power along with a Greenshoe option of additional 255MW under Regulation 4 of DERC (Renewable Purchase Obligation and Renewable Energy Certificate Framework Implementation) Regulations, 2021.
22. TPDDL filed Petition no. 50 of 2021 for approval of Bidding documents for Procurement of 300 MW Wind Solar Hybrid Power from Grid connected Wind-solar Hybrid Power Projects. During the meeting with TPDDL, it was pointed out that capacity addition through SECI (ACME Solar) for 100 MW quantum (approx 183 MUs) was not considered by them in their Demand-Supply Analysis. Accordingly, the capacity selection for proposed Hybrid RE plant was curtailed from 300 MW to 255 MW (i.e. 85 MW Solar & 170 MW Wind) and TPDDL was granted approval for procurement of 255 MW Wind-Solar Hybrid Power vide Commission's Order dated 27/07/2022.
23. In the present Petition, TPDDL submitted that they have floated RFS incorporating the provision of 255 MW additional capacity under Green-Shoe Option along with original capacity of 255 MW already approved by the Commission and a final Tariff of Rs. 3/ kWh was discovered during e-reverse auction as follows:

Bidder Name	Capacity (MW)	Rate (Rs./kWh)
Tata Power Renewable Ltd.	510	3

24. TPDDL also submitted that they have incorporated two deviations in Addendum-3 of the Petition regarding the Delivery Point and Injection Point in the RfS subsequent to 'In-principle' approval granted by the Commission. Since the deviations of the RfS are issued to remove uncertainties associated with STU charges and ensure adequate bidder participation, the same are accepted by the Commission.

25. The Tariff discovered in recent tenders of Power Utilities are as follows:

Tender details	Capacity	L1 Tariff (Rs./kWh)	L1 Bidder
TPDDL Wind Solar Hybrid Tender (Dec '22)	255 MW + 255 MW (Green shoe option)	3.00	Tata Power Renewable Ltd. (TPREL)
RUMSL Wind Solar Hybrid (Nov '22)	750 MW	3.03	Spring Ojas, TPREL & ReNew Solar
Gujrat Urja Vikas Nigum Ltd. for 300 MW Wind Tranche-IV (feb'23)	300 MW	2.96 to 3.01	Juniper, WYN & ACME

26. The Tariff discovered through e-reverse auction conducted by TPDDL translates to an Effective Tariff of Rs. 3.11 / kWh at STU periphery without Transmission Charges and the bidding process had been carried out through Bharat Electronics portal. Tata Power Renewable Energy Lt, emerged to be the lowest Bidder.

27. During the hearing dated 12/01/2023, the Commission raised a query regarding the actual need of the quantum of power as required by the Petitioner in the present Petition, as 255MW was already approved by the Commission earlier.
28. In view of the Interim Order dated 12/01/2023, the meeting between officers of the Commission & officers of TPDDL was held on 18/01/2023 & 30/01/2023. Based on the discussions during aforesaid meetings, TPDDL filed an additional affidavit on 2/02/2023. The discussion during the meeting and additional affidavit are already given in para 20(ii) of this Order.
29. The levelised rate of Rs. 3.11 / kWh is lower than the existing Average Power Purchase Cost (APPC) of Rs. 4.57/kWh for TPDDL as approved in *Tariff Order dated 30/09/2021*. Further, as far as demand is concerned, the Commission maintains the demand projected during the Demand-Supply Analysis for approval of procurement for 255 MW Hybrid Power. However, as far as supply part is concerned to meet demand, three specific Stations have been analyzed i.e. Maithon Power, Aravali Jhajjar & CLP Jhajjar because they have one-to-one Power Purchase Agreement (PPA) with TPDDL or higher allocation to TPDDL vis-a-vis other DISCOMs especially Maithon Power & CLP Jhajjar Station. Aravali Jhajjar has PPA with Other Delhi DISCOMs but for a small quantum, as follows:

Station	Plant Capacity (MW)	Delhi Share	TPDDL	BRPL	BYPL	Total
Maithon Power	2 x 525	26.76%	281	-	-	281
CLP Jhajjar	2 x 600	9.39%	124	-	-	124
Aravali Jhajjar	3 x 500	46.25%	614	69	10	693

30. The Energy Charge Rate (ECR) for these three stations Pre-blending & during blending with imported coal are as follows:

Pre-blending period

Station	ECR (Rs. /kWh)	
	2018-19	2019-20
Maithon Power	2.58	2.68
CLP Jhajjar	3.45	3.63
Aravali Jhajjar	3.40	3.88

During Imported Coal Blending Period FY 2022-23

Station	ECR (Rs. /kWh)			
	Aug'22	Sept'22	Oct'22	Nov'22
Maithon Power	2.87	2.78	2.71	2.70
CLP Jhajjar	5.42	5.18	4.72	4.76
Aravali Jhajjar	5.16	5.22	4.89	4.36

31. Landed cost of electricity at DISCOM periphery from 510 MW Wind-Solar Hybrid RE project is less than the Electricity Tariff for Maithon Power, Aravali Jhajjar & CLP

Jhajjar considering Transmission Charges. Hence, the Deficit Power by running these three higher cost Thermal Power Stations from Normative Annual Plant Availability Factor (NAPAF) i.e. 85% to Minimum Technical Limit (MTL) i.e. 55% can be substituted with incremental power of 255 MW Hybrid RE project to achieve potential savings. As per TPDDL commitment in additional affidavit dated 2/02/2023, TPDDL will run the plants at Minimum Technical Limit (MTL) and recoup the additional Power requirement through differential Power i.e. 255MW Hybrid RE capacity.

32. Accordingly, this being a situation where demand projected in DERC Order dated 27/07/2022 is same but in supply side, deficit Power by running Maithon Power, CLP Jhajjar & Aravali Jhajjar Stations at 55% MTL from 85% NAPAF will be recouped by 255 MW additional RE Power at weighted average rate at Rs. 3.16/ kWh, is in consumer interest, reduces dependence on conventional fossil-fuel based Power Plants & increases reliance on Green Energy.
33. Further, the Hybrid RE project will help in fulfilling the RPO compliance for TPDDL & even if a DISCOM is surplus in Power considering Hybrid RE Project as a 'Must Run' Station, then also the Sale rate at Power Exchanges even at off-peak period will fetch revenue out of it which will subsidize the ARR and provide reduction of ARR benefit to the consumer. RTC rates at IEX for FY 2022-23 is tabulated as follows:

Rate at IEX for FY 2022-23*	N2 Region (Rs./ kWh)
RTC	5.90
Evening	7.78
Day	4.76
Night	5.49
Morning	5.82

*Up to 06/02/2023

34. In view of above and being a Single-part Tariff project without any Fixed Cost implication, the Commission accords '*In-principle*' approval for procurement of 510 MW Wind-Solar Hybrid Power for a period of 25 years from COD of the plant subject to conditions that:
- Based on then Actual Demand situation, Maithon Power, CLP Jhajjar & Aravali Jhajjar Stations will operate at 55% MTL and Deficit Power, if any, to be recouped by additional 255 MW Wind-Solar Hybrid Power.
 - Benefit of waiver of Inter-State Transmission Charges on the Wind-Solar Hybrid RE project to be availed by TPDDL.
35. Ordered Accordingly.

Sd/-
(Dr. A.K. Ambasht)
Member