

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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IA No. 48 of 2024 in Case No. 155 of 2024

Interlocutory Application (IA) of Maharashtra State Electricity Distribution Company Ltd. (MSEDCL) for urgent listing in Case No. 155 of 2024.

Case No. 155 of 2024

Petition by Maharashtra State Electricity Distribution Company Ltd. (MSEDCL) seeking adoption of weighted average tariff discovered in composite bids through the competitive bidding process held for long term procurement of 1600 MW thermal power and 5000 MW solar power in the State of Maharashtra.

Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)...

Petitioner

Coram

Sanjay Kumar, Chairperson
Anand M. Limaye, Member
Surendra J. Biyani, Member

For the Petitioner

: Ms. Deepa Chawan (Adv.)
Mr. Lokesh Chandra (Rep.)

ORDER

Date: 26 September, 2024

1. Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) has filed the present Petition being Case No. 155 of 2024 on 13 September 2024 under Section 63 of the Electricity Act, 2003 read with Regulation 21 of the MERC (Multi Year Tariff) Regulations, 2019 and Regulation 39 (c) of MERC (Transaction of Business and Fees &

Charges) Regulations, 2022. In present Petition, MSEDCL is seeking adoption of weightage average tariff discovered in composite bids through competitive bidding for long term procurement of 1600 MW Thermal and 5000 MW Solar power.

2. On 13 September 2024, MSEDCL filed IA No.48 of 2024 in Case No.155 of 2024 for urgent listing of matter.
3. The IA along with main matter was listed for hearing on 20 September 2024. The Representative of the Petitioner stated that the Petition has been filed for approval of adoption of weighted average tariff discovered in composite bids (Thermal + Solar) through the competitive bidding process for long term procurement of power. He narrated the chronology of the events held during the competitive bidding exercise. In reply to the queries of the Commission, it is stated that although the Commission has allowed MSEDCL to proceed further with bidding process, it has also approached the Government seeking approval for composite power procurement and deviation thereof from standard bidding document, to which the Government of Maharashtra has granted approval vide letter dated 6 September 2024. Thereafter E-Reverse Auction was conducted on 9 September 2024. It is stated that composite tariff discovered through bidding process is lower than Average Power Purchase Cost of MSEDCL and hence it will help in reducing power purchase cost of MSEDCL. Accordingly, MSEDCL requested the Commission to adopt such tariff discovered through competitive bidding process as prayed.

4. **MSEDCL's prayers are as under:**

“

- a) *To admit the Petition as per the provisions under Section 63 and Section 86 of the Electricity Act, 2003.*
- b) *To accord approval for the procurement of 1600 MW coal based thermal power at the discovered tariff Rs. 5.39 per kWh (fixed cost – Rs. 3.67 per kWh + Variable Cost – Rs. 1.72 per kWh) from the successful L1 bidder i.e. Adani Power Limited through competitive bidding*
- c) *To accord approval for the procurement of 5000 MW solar power at the discovered tariff of Rs. 2.70 per kWh from the successful L1 bidder i.e. Adani Power Limited through competitive bidding.*
- d) *To allow MSEDCL to consider the power procured under the PPA for meeting its solar RPO requirement under the provisions of the Regulation 19 of Maharashtra Electricity Regulatory Commission (Renewable Purchase Obligations, Its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2019.*

- e) *To consider the submission made by the Petitioner and consider the same positively while deciding the Petition.*
 - f) *To pass any other order/relief as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.*
 - g) *To condone any error/omission and to give opportunity to rectify the same.*
 - h) *To permit the Petitioner to make further submissions, addition and alteration to this Petition as may be necessary from time to time.*
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5. MSEDCL in its Petition has stated as follows:

- 5.1. MSEDCL’s power demand is primarily catered by procuring power from the long term contracts with generation sources such as Maharashtra State Power Generation Company Limited (MSPGCL), NTPC Limited, Nuclear Power Corporation of India Limited (NPCIL), Independent Power Producers and Renewable Energy Generators. In case of any shortfall in generation to cater for the power demand, MSEDCL procures power through short term power purchase tenders/power exchanges. Further, in view of the availability data up to year 2029-2030, MSEDCL will be obligated to purchase power in peak hours in addition to the long term contracts as currently in place.
- 5.2. In the Report on Resource Adequacy Plan for Maharashtra (MSEDCL) (2024-25 to 2033-34) published by the Central Electricity Authority (CEA) , the peak demand projections of MSEDCL are as below:

FY	Energy Projection (MU)	Peak Demand Projection (MW)
2024-25	167746	24963
2025-26	175261	27621
2026-27	183949	30892
2027-28	192180	34298
2028-29	200590	35596
2029-30	210874	37163
2030-31	216301	38726
2031-32	221229	39000
2032-33	230034	40414
2033-34	239511	41956

- 5.3. CEA also mandates undertaking of ‘Resource Adequacy Studies’ of distribution utilities on an annual rolling basis considering the contracted capacity as a part of the system and optimisation required for additional capacity. The Distribution Licensees are also required to demonstrate to the Commission, it’s plan to meet their peak demand and energy

requirement with a mix of long-term, medium-term and short-term contracts, including through power exchanges.

- 5.4. On 28 June 2023, the Govt. of India has issued guidelines for Resource Adequacy Planning Framework for India with key objectives to ensure that adequate generation capacities are available, round-the-clock, to reliably serve demand under various scenarios. In line with the guidelines, the Commission has also formulated the MERC (Framework for Resource Adequacy) Regulations, 2024 (**RA Regulations-2024**).
- 5.5. The RA Regulations-2024 entails the planning of generation and transmission resources for reliably meeting the projected demand in compliance with specified reliability standards for serving the load with an optimum generation mix. The MERC RA Regulations Framework also mandates that any non-compliance in terms of the said regulations would result in non-compliance charges being applicable to the Distribution Licensee.
- 5.6. MoP Notification dated 20 October 2023 has notified inter alia the revised Renewable Purchase Obligation trajectory till FY 2029-30 Accordingly, the Commission modified its regulations to stipulate RPO trajectory in line with the said notification. RPO trajectory is as below:

Year	Wind RPO	HPO	Other RPO	Total RPO
2022-23	0.81%	0.35%	23.44%	24.61%
2023-24	1.60%	0.66%	24.81%	27.08%
2024-25	2.46%	1.08%	26.37%	29.91%
2025-26	3.36%	1.48%	28.17%	33.01%
2026-27	4.29%	1.80%	29.86%	35.95%
2027-28	5.23%	2.15%	31.43%	38.81%
2028-29	6.16%	2.51%	32.69%	41.36%
2029-30	6.94%	2.82%	33.57%	43.33%

- 5.7. CEA has conducted the Resource Adequacy study for MSEDCL and the capacity projected by CEA considering ‘Loss of Load Probability’ and ‘Expected Energy Not Served’ is as under:

	Year	Coal	Gas	Nuclear	Bagasse + Biomass	Hydro	Wind	Solar	Hybrid (wind + Solar)	STOA/OA	Storage (4 Hours) + PSP	Total
CEA	2033-34	27562	1076	1186	3439	3949	15905	30285	0	1457	2668	87528

The present contracted and consented capacity of MSEDCL is as below:

	Coal	Gas	Nuclear	Bagasse + Biomass	Hydro	Wind	Solar	Hybrid (wind + Solar)	FDRE	Storage (4 Hours) + PSP	Total
MSEDCL	22733	1077	1191	3439	4273	3905	24785	2880	1468	574	66325

Thus, capacity addition required by MSEDCL by FY2033-34 is as under:

	Coal	Gas	Nuclear	Bagasse + Biomass	Hydro	Wind	Solar	Hybrid (wind + Solar)	DRE	Storage (4 Hours) + PSP	Total
MSEDCL	4829	0	0	0	0	12000	5500	0	12693	2094	37116

5.8. Purpose of Procurement

5.8.1. Considering the requirement to boost resource adequacy and ensure stable round the clock power to its consumers, MSEDCL needs to add 4829 MW coal based thermal power and 5500 MW solar power to its energy procurement basket. Out of the above requirement, MSEDCL proposes to procure 1600 MW thermal power and 5000 MW solar power under the competitive bidding route.

5.8.2. The bid process has been designed such that both 1600 MW Thermal power and 5000 MW solar power will be procured from a single entity under a single tendering process. The additional benefit of economies of scale will benefit MSEDCL in the form of a lower tariff, taken on a weighted average basis, as the higher per unit cost of thermal power will be offset by the cheaper tariff for the solar power that will be procured in terms of the same tender. Further, the tariffs are being discovered through an e-reverse auction so that the increased competition can help in the discovery of competitive rates. The procurement of solar power in combination with the thermal power will also enhance MSEDCL's ability to meet its RPO obligations.

5.9. MSEDCL Tender and Approval of the Commission

5.9.1. MSEDCL floated a tender for procurement of 1600 MW thermal power and 5000 MW solar power through competitive bidding on 13 March 2024. Subsequently, MSEDCL filed a Petition on 13 June 2024 (Case No. 96 of 2024) before the Commission seeking approval for the tender documents for power procurement into one composite bid process. The Petition also sought approval for certain deviations to Competitive Bidding Guidelines and associated Model Bidding Documents.

5.9.2. The Commission *vide* its Order dated 12 July 2024 accorded its approval to:

- Initiating process for procurement of 6600 MW (1600 MW thermal + 5000 MW solar power) on long term basis through competitive bidding; and
- the Thermal Bid Documents and the Solar Bid Documents.

5.9.3. In the said Order, the Commission had directed MSEDCL to approach the Appropriate Government requesting approval for the deviations to Tariff Based Competitive Bidding (**TBCB**) Guidelines. However, MSEDCL had issued an ‘Addendum No. 15’ on 30 June 2024 by virtue of which MSEDCL has categorically complied with the stipulation of the TBCB Guidelines.

5.9.4. However, as per directives of the Commission, MSEDCL has submitted the proposal for approval to Government of Maharashtra (GoM) on 3 July 2024.

5.9.5. The GoM vide its letter dated 06 September 2024 opined following:

- An innovative measure taken by MSEDCL to ensure tie up of required thermal power while at the same time meeting RPO through procurement of Solar power while securing interest of consumers by way of discovery of combined lower effective tariff.
- Further, Central Government has notified TBCB guidelines for stand-alone Thermal power and Solar power procurement separately and for the implementation of innovative approach of combination of Thermal and Solar power procurement from one bidder, there is no reference notified bidding document available for it and furthermore, agreed with MSEDCL’s justification that there is no deviation from individual solar competitive bidding guidelines and accordingly, MSEDCL may proceed with competitive bidding process.

5.9.6. MSEDCL proceeded with the competitive bidding process and opened the technical bid in terms of the RfP and the RfS on 5 August 2024. On the said date, the following bidders submitted their bids:

Sr. No.	Bidder name	Capacity applied for Solar (MW)	Capacity applied for Thermal (MW)
1	Adani Power Limited	5000	1600
2	JSW Energy Limited	2500	800
3	MB Power (Madhya Pradesh) Limited	2500	800
4	Torrent Power Limited	2500	800

5.9.7. The technical evaluation of the bid submission was carried out as per the terms and conditions of both the RfP and the RfS and all the above bidders were found to be technically qualified.

5.9.8. The financial bids of the bidders were opened on 7 August 2024. The bidders were required to quote variable charge and fixed charge for thermal power, tariff for solar power and weighted average tariff in terms of bid documents. A summary of the financial bids received is provided below:

Particulars	Adani Power Ltd.	JSW Energy Ltd.	MB Power (MP) Ltd.	Torrent Power Ltd.
Solar				
Bid Capacity (in MW)	5000	2500	2500	2500
Tariff (in Rs./kWh)	2.99	3.18	3.10	3.12
Thermal				
Bid Capacity (in MW)	1600	800	800	800
Variable Cost (in Rs./kWh)	1.72	2.03	1.89	2.05
Fixed Cost (in Rs./kWh)	3.97	3.79	3.84	3.99
Quoted Weighted Average Tariff	4.38	4.54	4.45	4.62
Quoted Weighted Average Tariff (including transmission charges for ISTS Plants)*	4.38	4.77	4.69	4.86

* Note: As per Addendum XVI dated 16 July 2024, at the time of bid evaluation, MSEDCL has loaded applicable ISTS charges in the tariff quoted by the Bidder whose thermal plant will be located outside Maharashtra and to the Thermal plant located within Maharashtra & connected to ISTS (CTU) transmission system.

5.9.9. Accordingly, after the financial bid opening the following ranking of bidders was determined:

Sr. No.	Bidder name	Weighted Average Tariff (Rs./kWh)	Rank
1.	Adani Power Limited	4.38	L1
2.	MB Power (Madhya Pradesh) Limited	4.69	L2
3.	JSW Energy Limited	4.77	L3
4.	Torrent Power Limited	4.86	L4

5.9.10. MSEDCL submitted that, the weighted average tariff quoted by the bidders was in the range of Rs. 4.38/kWh to Rs. 4.86/kWh.

5.9.11. Based on the bids received, it was determined to conduct the e-reverse auction on the ETS bidding portal with the L1 price as mentioned above. Accordingly, the bidders were informed of such e-reverse auction and upon conduct of the e-reverse auction, which was concluded on September 09, 2024, the following weighted average tariffs were discovered:

Sr. No.	Bidder name	Weighted Average Tariff (Rs. /kWh)	Rank
1.	Adani Power Limited	4.08	L1
2.	MB Power (Madhya Pradesh) Limited	4.36	L2
3.	JSW Energy Limited	4.37	L3
4.	Torrent Power Limited	4.86	L4

5.9.12. The detail of rates quoted by the bidders (upon conduct of e-reverse auction) is as follows:

Particulars	Adani Power Limited	Torrent Power Limited	MB Power Madhya Pradesh Limited	JSW Energy Limited
Quoted thermal quantum (MW)	1496	748	748	748
Quoted Solar quantum (MW)	5000	2500	2500	2500
Quote for Thermal (Fix Charge) (Rs./kWh)	3.67	3.99	3.73	3.72
Quote for Thermal (Energy Charge) (Rs./kWh)	1.72	2.05	1.72	1.72
Transmission Charges (Rs./kWh)	0.00	0.46	0.46	0.46
Total Quote for Thermal (Rs./kWh)	5.39	6.50	5.91	5.90
Quote for Solar (Rs./kWh)	2.7	3.12	2.72	2.75
Bid Value (Rounded Wt. Avg. Tariff after RA) (Rs./kWh)	4.08	4.86	4.36	4.37

5.10. Test of market reflectiveness of discovered tariff

Thermal Projects

5.10.1. There are no recent comparable thermal projects of similar size which have been awarded through tariff based competitive bidding process. Therefore, MSEDCL compared the

discovered tariff with offers for sale of power from thermal power projects which MSEDCL has received in the recent past, which would otherwise serve as an alternative.

5.10.2. MSEDCL has received the following two offers for purchase of power from thermal power plants:

(A) Nabinagar STPP Stage II (3X800 MW)

NTPC Limited (NTPC) vide its letter dated 4 September 2024 has requested MSEDCL to provide its consent for purchase of power from Nabinagar Super Thermal Power Project. In the said letter, NTPC has indicated a levelized tariff of ~Rs. 4.96/kWh comprising of a fixed cost of Rs. 2.61/kWh and variable cost of Rs. 2.35/kWh. The units are planned to be commissioned in FY30-31/FY31-32.

(B) Mahanadi Basin Power Limited (MBPL) (2X800 MW)

MSEDCL has also received an offer wherein MBPL requested to consider purchasing power from the supercritical thermal power pit head project being set up in Odisha. As per the said letter, a levelized tariff of ~Rs. 4.67/kWh comprising of a fixed cost of Rs. 2.56/kWh and variable cost of Rs. 2.11/kWh. The units are planned to be commissioned in FY27-28. MSEDCL has already provided consent for purchase of power from MBPL.

5.10.3. In addition to the levelized tariff mentioned above, MSEDCL will also have to incur transmission charges and losses for procuring power from these ISTS projects. As on date, the applicable transmission charges for inter-state transmission are Rs. 0.46/kWh. Further, the transmission losses work out to ~Rs. 0.07/kWh.

5.10.4. Accordingly, the cost of procurement of power for MSEDCL (taking into consideration the transmission charges & losses) works out to be as under:

Particulars	Levelized Tariff / kWh	Transmission Charges & Losses / kWh	Effective Levelized Tariff/ kWh
Nabinagar STPP Stage -II	4.96	0.53	5.49
Mahanadi Basin Power Ltd	4.67	0.53	5.20

5.10.5. It may also be noted that the tariff quoted by NTPC and MBPL are indicative as mentioned in their offer letters and shall be subject to change upon determination by the Appropriate Commission as per extant guidelines. Further, the transmission charges of Rs. 0.46/kWh

(which shall be additional cost to MSEDCL) are as on date and would be subject to increase over the tenure of the PPA that would be entered into with NTPC and/or MBPL.

5.10.6. The tariffs quoted are based on current estimates of the project costs and it has been observed that the final project costs and the actual cost may be higher than estimated. Being on cost plus basis, additional capitalization / additional expenditure may be permitted going forward as has been approved in the past for several such projects.

5.10.7. In view of the above, the discovered tariff of Rs. 5.39/kWh which translates to a levelized tariff of Rs. 5.20/kWh compares favourably with the tariff being offered by the Central Public Sector Undertakings.

Solar Projects

5.10.8. SECI Tenders:

The tariffs discovered in case of various tenders for solar power procurement by SECI between July 2023 and August 2024 range between Rs. 2.48/kWh to Rs. 2.61/kWh. Considering SECI's trading margin of Rs. 0.07/kWh, the range of tariffs discovered works out to Rs. 2.55/kWh to Rs. 2.68/kWh.

The procurement of power under a power purchase agreement with SECI also entails transmission losses which are to the account of procurer. This currently amounts to ~Rs. 0.07/kWh for MSEDCL. A further cost of Rs. 0.10/kWh is also applicable, which is payable in lieu of non-availability of State Government Guarantee towards payment security. In view of the above, the mentioned range of discovered tariff from SECI works out to Rs. 2.72/kWh to Rs. 2.85/kWh.

5.10.9. GUVNL Tenders:

Tariffs discovered in case of recent tenders for solar power procurement floated by GUVNL between January 2024 and March 2024 range between Rs. 2.54/kWh to Rs. 2.75/kWh.

5.10.10. MSEDCL Tenders:

Details of tariffs discovered in recent solar power procurement tenders of MSEDCL are provided below:

Sr. No.	Bidder	Auction Date	Capacity (MW)	Tariff Rs./kWh
1.	Sael Industries	Apr-23	100	2.87
	Avaada Energy		400	2.88
2.	SJVN Green Energy	Nov-22	200	2.90
	Juniper Green Energy		75	2.90
	Tata Power Renewable Energy		150	2.91
	SAEL		50	2.91
	Avaada Energy		25	2.91
3.	NTPC Renewable Energy	Jun-22	200	2.82
	Avaada Energy		300	2.83

5.10.11. It may be noted that post the e-reverse auction the solar tariff discovered for 5000 MW is Rs. 2.70/kWh, which is comparable to the tariffs discovered in other recent bids as mentioned above.

5.10.12. Weighted Average Tariff

The weighted average tariff discovered as per the terms of the tender process is as under:

Particulars	UoM	Thermal	Solar
Capacity	MW	1,496	5,000
PLF	%	85%	24%
Annual Energy	MUs	11,139	10,512
Fixed Charge	Rs./kWh	3.67	-
Fuel Charge	Rs./kWh	1.72	-
Quoted Tariff	Rs./kWh	5.39	2.70
Weighted Average Tariff	Rs./kWh	4.08	

5.10.13. The PPA provides for ensuring that weighted average tariff (Solar + Thermal) is available throughout the tenure of the PPA and not just for evaluation, which is incorporated by way of a penalty mechanism to ensure that the penalty in case of shortfall in generation of solar power is adequate to ensure that the weighted average tariff for a particular year is protected.

5.10.14. The above discovered weighted average tariff can be compared with the 'Average Power Purchase Cost' (APPC) of MSEDCL. It may be noted that the Average Power Purchase Cost, approved by the Commission for FY2023-24 is Rs. 4.70/kWh.

Particulars	MUs	Fixed Cost (Rs. Cr.)	Variable Cost (Rs. Cr.)	Other Cost (Rs. Cr.)	Total Cost (Rs. Cr.)	Average Cost (Rs./kWh)
Must Run	41,667	308	15,177	534	16,019	3.84

Particulars	MUs	Fixed Cost (Rs. Cr.)	Variable Cost (Rs. Cr.)	Other Cost (Rs. Cr.)	Total Cost (Rs. Cr.)	Average Cost (Rs./kWh)
MSPGCL Thermal	53,802	8,692	20,080		28,772	5.35
NTPC	27,475	5,340	5,885		11,225	4.09
IPPs and UMPP	23,437	4,350	8,436		12,785	5.46
Total Power Purchase w/o Transmission	1,46,380	18,690	49,577	534	68,800	4.70

However, it may be noted that the actual tariff for FY2023-24 is Rs. 4.82/kWh.

Particulars	MUs	Fixed Cost (Rs. Cr.)	Variable Cost (Rs. Cr.)	Other Cost (Rs. Cr.)	Total Cost (Rs. Cr.)	Average Cost (Rs./kWh)
Total MSPGCL	57,147	8,511	19,878	864	29,253	5.12
Total NTPC	39,004	5,260	8,961	1,496	15,717	4.03
Other Must Run	6,457	13.52	2,211	54	2,279	3.53
RGPPL		1,329			1,329	
Renewable	19,573	48.85	8,537	25	8,610	4.40
IPPs and UMPP	38,823	4,214	15,151	17	19,382	4.99
Short Term and DSM	5,765		3,826		3,826	6.64
Total Power Purchase w/o Transmission	1,66,769	19,376	58,564	2,456	80,397	4.82

The tariff discovered is lower than the approved as well as actual APPC.

5.14.1. Additional key factors:

Transmission Charges:

- (a) Considering that the successful bidder is implementing a non-ISTS connected project, the fixed tariff offered is inclusive of transmission charges, that are otherwise applicable to MSEDCL on purchase of interstate power as per the CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022 (as amended) which currently is ~Rs. 0.46/kWh. In view of the same, MSEDCL will not be impacted on account of transmission charges, which are otherwise subject to increase from time to time.
- (b) Further, the PPA provides that if there is an increase in transmission charges that are applicable for inter-state transfer of solar power, on account of project

getting commissioned beyond scheduled commercial operation date/extended scheduled commercial operation date, such increase in transmission charges shall be to the account of the power producer. This is not the case in respect of PPA entered into by SECI, where such increases are also to the account of procurer.

Variable Charges (Thermal):

- (a) The PSA allows only fuel charges and transportation charges as components of Variable Charge. Hence, any other charges viz. secondary fuel oil, fly ash disposal, limestone, reagent etc. all form part of fixed charges itself and hence will not be subject to pass through in case of any increases in prices of such components. Moreover, the fixed charges are also subject to a decrement of 2% annually in terms of the PSA.

5.11. Considering the aforesaid, the discovered weighted average tariff of Rs. 4.08/kWh may be considered reasonable and market reflective.

Commission’s Analysis and Rulings:

- 6. The Commission notes that MSEDCL has filed this Petition under Section 63 of the Electricity Act, 2003 read with Regulation 21 of the MERC MYT Regulations 2019 and Regulation 39 (c) of MERC (Transaction of Business and Fees & Charges) Regulations, 2022. In present Petition MSEDCL is seeking adoption of weighted average tariff (Rs. 4.08/kWh), which is discovered through transparent competitive bidding process for procurement of long term power (Thermal-1600MW and Solar-5000MW)..
- 7. Before delving into merits of the matter, it would be appropriate to highlight previous proceedings in the matter as tabulated below:

Date	Particulars
13.06.2024	- MSEDCL approached the Commission by way of Petition in Case No. 96 of 2024 wherein it sought the Commission’s approval for long term procurement of 1600 MW Thermal and 5000 MW Solar power through competitive bidding process and deviations from the Guidelines/Model Bidding Documents.

Date	Particulars
12.07.2024	- The Commission vide its Order in Case No.96 of 2024 accorded its approval to deviations proposed in RFQ, RFP and PSA for long term procurement of thermal power. With regards to Solar power long term procurement, the Commission directed MSEDCL to approach the Appropriate Government requesting approval for these deviations in respect of procurement of Solar Power.
19.07.2024	- MSEDCL filed Petition in Case No.108 of 2024 seeking directions and clarifications in respect of the Commission's Order dated 12 July 2024 in Case No.96 of 2024. - MSEDCL emphasized that post issuance of addendum to Bid Documents, there is no deviation from competitive bidding guidelines for solar power procurement.
24.07.2024	- The Commission vide its Order in Case No.108 of 2024 noted that it is for the Distribution Licensee to identify and seek approval of deviation if any, from competent Authority before floating tender for power procurement. As MSEDCL has now stated that there is no deviation from solar competitive bidding guidelines, MSEDCL may proceed with competitive bidding process as per Guidelines.
05.08.2024	- Mr. Rajesh Sharma has filed Public Interest Litigation (PIL No. 100 of 2024) before Hon'ble Bombay High Court regarding MSEDCL's tender for procurement of 1600 MW Thermal and 5000 MW Solar power.

8. In view of above chronology of events, the Commission notes that MSEDCL's long term procurement of 1600 MW Thermal and 5000 MW Solar power has been challenged before the Hon'ble Bombay High Court. As no stay has been granted by the Hon'ble High Court, the Commission is proceeding further in present matter. However, this Order of the Commission will be subjected to direction issued by the Hon'ble High Court in the said PIL.
9. It is also important to note that in its Order dated 12 July 2024 in Case No. 96 of 2024, the Commission has principally approved the concept of composite procurement of thermal and solar power through competitive bidding. Relevant part of the said Order is reproduced below:

“13.5. The Commission notes that above clause of solar generator requiring to compensate MSEDCL to maintain weighted average tariff will ensure that benefit of composite procurement of Thermal and Solar power will be ensured throughout the PPA tenure.

13.6. Further, such composite procurement reduces the burden of Distribution Licensee as bidder has to ensure that required solar generation is always achieved, otherwise compensation has to be paid to Distribution Licensee.

13.7. It is also important to note that Government of India has yet not issued any guidelines under Section 63 of the EA 2003 which allows such composite procurement of Thermal and Solar power. At the same time, it is well settled position that non-issuance of Guidelines under Section 63 of the EA, 2003 does not restrict Distribution Licensee to proceed with competitive bidding process for procurement of power. In present case, MSEDCL has option of running separate bidding process of Thermal and Solar power but MSEDCL has opted for composite bidding. MSEDCL has listed various benefits of such composite bidding which has been summarized under para 5 above. For consumers of distribution licensee, ultimate benefit is achieved if power is procured at cheapest possible tariff. MSEDCL has stated that its proposed approach will reduce the tariff to be discovered through competitive bidding. Such claim of MSEDCL can be verified only after completion of bidding process and scrutinizing discovered tariff vis-à-vis prevalent market rate.

13.8. In view of above, the Commission allows MSEDCL to go ahead with proposed combined procurement of Thermal and Solar power. At the time of tariff adoption Petition, MSEDCL shall justify that discovered tariff vis-à-vis prevalent market conditions.”

10. Further, as guidelines for composite procurement of thermal and solar power is yet to be framed, in above said Case No. 96 of 2024, MSEDCL has relied upon respective competitive bidding guidelines for thermal and solar power long term procurement and sought certain deviations. In its Order dated 12 July 2024, the Commission has approved deviation from bidding guidelines for thermal power and directed to approach Appropriate Government (which is competent authority to approve deviation for solar power procurement) for approval of deviation in respect of solar power long term procurement. In its subsequent Petition in Case No. 108 of 2024, MSEDCL has clarified that post issuance of addendum to the bidding documents, there is no deviation from bidding documents and hence the Commission vide Order dated 24 July 2024 in Case No.

108 of 2024 has allowed MSEDCL to proceed with bidding process for composite long term procurement of thermal and solar power.

11. Meanwhile, MSEDCL has also approached the Government of Maharashtra seeking approval for composite power procurement and deviations thereof from standard bidding documents. The GoM vide letter dated 6 September 2024 has approved the same as follows:

“2. In case of Combined long term procurement of 1600 MW thermal power and 5000 MW Solar power in State of Maharashtra and deviation thereof from applicable standard bidding documents, MERC allowed the petition in case no. 96 and 108 of 2024 and duly approved it.

It is noted that an innovative measure taken by MSEDCL to ensure tie up of required thermal power while at the same time meeting RPO through procurement of Solar power while securing interest of consumers by way of discovery of combined lower effective tariff.

Central Govt has notified TBCB guidelines for stand-alone Thermal power and Solar power procurement separately and for the implementation of innovative approach of combination of Thermal and Solar power procurement from one bidder, there is no any reference notified bidding document available for it.

Hence Govt. of Maharashtra agrees with the MSEDCL’s justification submitted to MERC that there is no any deviation from Individual solar competitive bidding guidelines. Accordingly MSEDCL may proceed with competitive bidding process.”

12. As the Government, who is competent authority to approve deviation from bidding guidelines for procurement of solar power has stated that no deviation is envisaged in MSEDCL’s proposed composite procurement of thermal and solar power, the Commission is proceeding with present matter on its merits.
13. Considering the above background and submissions on record, the Commission frames following issues for its consideration:

(A) Whether Competitive bidding process undertaken is in accordance with the Guidelines notified under Section 63 of the EA, 2003.

(B) Evaluation of composite bid structure and discovered weighted average tariff.

(C) Whether tariff discovered through competitive bidding is in accordance with market condition.

(D) Way forward.

14. Issue (A): Whether Competitive bidding process undertaken is in accordance with the Guidelines notified under Section 63 of the EA, 2003:

14.1. The Commission notes that for long term power procurement, MSEDCL has circulated the following documents:

For Thermal Power:

- a. Request for Qualification (RfQ) - Design, Build, Finance, Own and Operate (DBFOO);
- b. Request for Proposal (RfP) – DBFOO; and
- c. Draft Power Sale Agreement (PSA).

For Solar Power:

- a. Request for Selection (RfS);
- b. Draft Power Purchase Agreement (PPA).

14.2. For thermal power procurement, MSEDCL has prepared the bidding documents i.e. RFQ, RFP and PSA on the basis of Guidelines dated 6 March 2019 and Model Bidding documents dated 5 March 2019 for Tariff based Competitive Bidding for long-term procurement of thermal power set up on DBFOO basis.

14.3. For solar power procurement, MSEDCL has prepared the bidding documents i.e. RfS on the basis of Guidelines dated 28 July 2023 (Tariff based Competitive Bidding process for procurement of power from grid connected Solar PV projects).

14.4. MSEDCL floated the NIT on 13 March 2024. In response, (4) bids of cumulative capacity of 16,500 MW (Thermal- 12,500 MW+ Solar- 4,000 MW) were received. All bids were found technically qualified and financial bids were opened on 7 August 2024. Weighted

average tariff quoted by the bidders was in the range of Rs.4.38/kWh to Rs.4.86/kWh. Thereafter, e-Reverse Auction process was conducted on 9 September 2024. Post e-RA process, weighted average tariff of Rs. 4.08/kWh is discovered and M/s. Adani Power Ltd. (Thermal-1600 MW and Solar- 5000 MW) emerged as a successful bidder (L1).

14.5. **The Commission notes that MSEDCL has conducted transparent process of competitive bidding which is in accordance with the guidelines notified by the Government of India. Further 4 bids with 2.5 times bid capacity has been received which represent competition amongst the bidders. Hence, mandate of competitive bidding guidelines has been duly fulfilled.**

15. **Issue (B)- Evaluation of composite bid structure and discovered weighted average tariff**

15.1. The Commission notes that, after e-reverse auction, the rates quoted by M/s Adani Power Ltd. are as follows:

Particulars	Adani Power Limited
Quoted thermal quantum (MW)	1496
Quoted Solar quantum (MW)	5000
Quote for Thermal (Fixed Charge) (Rs./kWh)	3.67
Quote for Thermal (Energy Charge) (Rs./kWh)	1.72
Transmission Charges (Rs./kWh)	0.00
Total Quote for Thermal (Rs./kWh)	5.39
Quote for Solar (Rs./kWh)	2.70
Bid Value (Rounded Wt. Avg. Tariff after e-RA) (Rs./kWh)	4.08

15.2. As per proposed modality, the Commission noted that higher per unit cost of thermal power will be offset by the cheaper tariff from solar. This will lead to reduction in average power purchase cost. Further, said composite tariff is lower than average power purchase cost of MSEDCL and hence will help in reducing its power purchase cost.

15.3. For maintaining the weighted average tariff throughout the PPA period, MSEDCL has provided the compensation mechanism in Solar PPA. The above aspect is important from consumers perspective and has been deliberated extensively in Order dated 12 July 2024 in Case No.96 of 2024. Relevant Paras read as under:

“

13.4 MSEDCL highlighted that for ensuring reduced tariff, it is important to have committed solar generation. For the said purpose, MSEDCL has framed following conditionality in Draft PPA for solar procurement:

“Clause 5.4.2

...

Notwithstanding anything contained above, the compensation for shortfall in generation in a year as calculated above, shall in no event be less than an amount that would be required to arrive at a weighted average tariff, that is not more than the weighted average tariff determined for that year calculated as per the evaluation methodology provided in the Notice Inviting Tender for selection of Successful Bidder. (Emphasis added)*

* Illustration for calculation of weighted average for a particular year:

Particulars	Thermal	Solar
Capacity (MW)	1496	5000
PLF/CUF	85%	24%
CUF after tolerance @10%	-	21.6%
Generation (MUs)	11,139	9,461
Applicable Tariff for the year	5.50	3.00
Weighted Average Tariff	4.35	

13.5 The Commission notes that above clause of solar generator requiring to compensate MSEDCL to maintain weighted average tariff will ensure that benefit of composite procurement of Thermal and Solar power will be ensured throughout the PPA tenure.

13.6 Further, such composite procurement reduces the burden of Distribution Licensee as bidder has to ensure that required solar generation is always achieved, otherwise compensation has to be paid to Distribution Licensee.”

15.4. MSEDCL need to be vigilant on above aspect and implement the above provisions of the bidding /PPA with its letter and spirit.

16. **Issue (C)- Whether tariff discovered through competitive bidding is in accordance with market condition.**

16.1. The Commission notes that vide its Order dated 12 July 2024; it has directed MSEDCL to justify that discovered tariff vis-à-vis prevalent market conditions.

16.2. Thermal Power Procurement:

16.2.1. Generally, market reflectiveness of proposed/discovered tariff is tested by comparing it with similarly placed projects.

16.2.2. MSEDCL submitted that there are no recent comparable thermal projects of similar size which have been awarded through tariff based competitive bidding. In such scenario, MSEDCL has referred to offers received from NTPC and MBPL. Details are as below:

Particulars	Fixed Cost/ kWh	Variable Cost / kWh	Levelized Tariff / kWh
Nabinagar STPP Stage -II	2.61	2.35	4.96
Mahanadi Basin Power Ltd	2.56	2.11	4.67

16.2.3. The Commission notes that above tariff is not vetted or approved by CERC. It has been indicated by Generating Company to procurers. Further, MSEDCL will also have to bear transmission charges (Rs.0.46/kWh) and transmission losses (Rs.0.07/kWh). After considering impact of the same effective levelized tariff works out to be 5.49/kWh and Rs.5.20 /kWh for NTPC and MBPL respectively.

16.2.4. M/s. Adani Power Ltd. Quoted following competitive bidding tariff:

Fixed Cost (Rs/kWh)	Variable Cost (Rs/kWh)	Transmission Charges (Rs/kWh)	Levelized Tariff (Rs/kWh)
3.67	1.72	0.00	5.39

Thus, tariff of Rs. 5.39/kWh discovered in present competitive bidding process is comparable to the tariff being offered by NTPC and MBPL. Further, as stated by MSEDCL, as per bid conditions, PSA allows only fuel charges and transportation charges as components of Variable Charge. Hence, any other charges viz. secondary fuel oil, fly ash disposal, limestone, reagent etc., are forming part of fixed charges and hence it will not be subject to pass through in case of any increases in prices of such components. Further, the fixed charges are also subject to a decrement of 2% annually in terms of the PSA.

16.2.5. Considering the above, effective tariff quoted by M/s. Adani Power Ltd. for thermal power is in line with market conditions.

16.3. Solar Power Procurement:

16.3.1. MSEDCL has stated that tariff discovered under the present bidding process i.e. Rs. 2.70/ kWh for Solar Component is reflective of market conditions.

16.3.2. To test the competitiveness of tariff discovered by MSEDCL in present bidding process, the Commission compared it with recently discovered tariff in SECI tenders, which are tabulated below:

Sr. No.	Project Particulars	Date of RA	Awarded Project capacity (MW)	Discovered Tariff (Rs./kWh)
1	500 MW ISTS-connected Solar PV Power Projects (SECI-ISTS-XVI)	12.08.2024	450	2.47
2	1500 MW ISTS-Connected Solar PV Power Projects in India (SECI-ISTS-XIV)	15.03.2024	1500	2.57-2.58
3	1500 MW ISTS-connected Solar PV Power Projects in India under Tariff-Based Competitive Bidding (SECI-ISTS-XIII)	07.03.2024	1500	2.56-2.57
4	1000 MW ISTS-connected Solar PV Power Projects in India under Tariff-Based Competitive Bidding (SECI-ISTS-XII)	20.12.2023	1000	2.52-2.53

Recent GUVNL's tender results are as below:

Sr. No.	Project Particulars	Tender timeline	Awarded Project capacity (MW)	Discovered Tariff (Rs./kWh)
1	1,125 MW of grid-connected solar power projects to be set up in Gujarat State Electricity Corporation Limited's (GSECL) renewable energy park at Khavda, stage 3.	Tender was issued in January 2024 & Results were announced in March-2024	1125	2.62-2.67

16.3.3. The Commission notes that Tariff quoted by M/s. Adani Power Ltd for solar power component is Rs.2.70/kWh is slightly higher than the discovered tariff in SECI and GUVNL's tenders. But the discovery of tariff is also impacted by

project financing. Interest rates are one of the most significant determinants for solar tariffs. Interest rates charged by the Banks and Non-Banking Financial Corporation (NBFC) dependent on type of project, loan tenure and credit rating of borrower. Apart from this, Off-takers risk profile will also be one of the factors to differentiate interest rates offered by the Banks and NBFC. Gujarat Discoms as a borrower have better credit rating than MSEDCL. Hence, it is evident that historically lower tariffs have been discovered in GUVNL's tenders.

16.3.4. For SECI tendered projects trading margin of Rs. 0.07/kWh is payable. Further, in most of the SECI tenders Rs. 0.10/kWh is payable in lieu of non-availability of State Government Guarantee towards payment security. If the impact of the same is considered, then Solar tariff discovered in present matter is comparable with tariff discovered by SECI.

17. **Accordingly, the present discovered tariff of Rs.5.39/kWh for thermal power and Rs. 2.70/kWh for Solar component seems reasonable and reflective of the current market situation. Section 63 of the Electricity Act, 2003 mandates the Commission to adopt the Tariff if such tariff has been discovered through transparent process of competitive bidding. In view of the foregoing, the Commission notes that tariff discovered by MSEDCL fulfills mandate and requirements for adoption as set out in Section 63 of the EA, 2003. Accordingly, the Commission adopts the following tariff for MSEDCL:**

Particulars	UoM	Thermal	Solar
Bidder		M/s Adani Power Ltd.	
Capacity	MW	1,496*	5,000
Fixed Charge	Rs./kWh	3.67	-
Fuel Charge	Rs./kWh	1.72	-
Quoted Tariff	Rs./kWh	5.39	2.70
Weighted Average Tariff	Rs./kWh	4.08	

**Net capacity after deducting auxiliary consumption from 1600 MW*

18. **Issue (D)- Way Forward.**

- 18.1. The Commission notes that availability of transmission corridors for such power procurement is one of the most important issues that must be addressed on priority. At present, Maharashtra is facing Inter-State Transmission capacity constraints to bring and transfer the power from outside Maharashtra. Therefore there is a urgent need to increase inter-state transmission transfer capacities so as to flow outside contracted power into the State of Maharashtra.

18.2. Hence , MSEDCL shall coordinate with STU to plan and timely implementation of strengthening and augmentation of inter-state transmission transfer capacities on urgent and priority basis. If required, a suitable intervention from various Government Departments may be sought to resolve issues in clearances and Right of Way for timely implementation of such planned schemes.

19. Hence, the following Order:

ORDER

1. Petition in Case No. 155 of 2024 is allowed and IA No.48 of 2024 is disposed of accordingly.
2. The Commission adopts tariff discovered through competitive bidding under Section 63 of the Electricity Act 2003 for composite long term procurement of Thermal and Solar power for the period of 25 years as stated in Para (17) above.
3. MSEDCL shall file the signed copies of Power Purchase Agreements for record of the Commission.
4. This Order is subject to the decision of the Hon'ble Bombay High Court in PIL No. 100 of 2024, as stated in Para (8) above.

Sd-
(Surendra J. Biyani)
Member

Sd/-
(Anand M. Limaye)
Member

Sd/-
(Sanjay Kumar)
Chairperson


(Dr. Prafulla Varhade)
I/c Secretary

