

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 148 of 2022

Petition for approval and adoption of tariff determined through transparent bidding process for procurement of short-term power for October-22 and March-23 to May-23 and approval for increase in ceiling rate for short term power purchase at higher cost than the ceiling rate approved by the Commission in its MYT Order dated 30 March 2020 Case No. 322 of 2019.

Maharashtra State Electricity Distribution Co. Ltd.

..... Petitioner

Coram

Sanjay Kumar, Chairperson

I.M. Bohari, Member

Mukesh Khullar, Member

Appearance:

For the Petitioner

: Shri. Murhari Kele (Rep)

Shri. Rahul Sinha (Adv.)

ORDER

Date: 30 August, 2022

1. Maharashtra State Electricity Distribution Company Ltd. (MSEDCL) has filed this Case on 21 July 2022 under Sections 63 of the Electricity Act, 2003 (EA, 2003) read with Ministry of Power's Guidelines dated 30 March 2016 for short term Procurement of Power by Distribution Licensees through Tariff based bidding process and Regulation 106 of the MERC (MYT) Regulations 2019 seeking approval for Tariff discovered through Competitive Bidding for Short -Term bilateral Power Purchase for October-22 and March-23 to May-23. Further, MSEDCL has sought increase in ceiling rate for short term power

purchase as specified by the Commission in its MYT Order dated 30 March 2020 Case No. 322 of 2019.

2. After first hearing dated 29 July 2022, MSEDCL made its additional submission dated 05 August 2022 & 12 August 2022 and brought certain new developments on record. Accordingly, MSEDCL has revised its prayers.
3. **Revised Main prayers of MSEDCL are as follows:**

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- 8.2. *To accord approval for Short Term power purchase tender floated on Deep E-Bidding Portal vide ET-100 for procurement of RTC power upto 1000 MW for October-22 and March-23 to May-23.*
- 8.3. *To accord approval for Short Term power purchase tender floated on Deep E-Bidding Portal vide ET-115 for procurement of RTC power upto 1000 MW for October-22, March-23, May-23 and June-23 (Upto 15th June)*
- 8.4. *To adopt and approve short term power procurement, from first tender ET-100, for the months of October-2022 and March-2023 to May-2023 at the rate discovered in the range of Rs. 7.44 per unit to 7.85 per unit for the quantum of 100 MW in October-22, 300 MW in March-23 and 400 MW in April-23 and May-23 as mentioned in para 3.1.*
- 8.5. *To adopt and approve short term power procurement, from second tender ET-115, for the months of October-2022 and March-2023, April-2023 to May-2023 at the rate discovered in the range of Rs. 8.68 per unit to 9.34 per unit for the quantum of 100 MW to 375 MW in October-22, 200 MW in March-23 to May-23 as mentioned in para 6.3.*
- 8.6. *To consider the title of petition as “Petition for approval and adoption of tariff determined through transparent bidding process for procurement of short term power for the period October-22 and March-23 to May-23 and approval for increase in ceiling rate for short term power purchase at higher cost than the ceiling rate approved by Hon’ble commission”.*
- 8.7. *To meet out the demand supply gap, Hon’ble Commission may accord in principle approval for short term power purchase at higher rate than the ceiling rate approved by Hon’ble commission over the 4th Control period vide MYT Order dated 30th March 2020.*

8.8. *The Hon'ble Commission kindly requested to fix an appropriate ceiling rate for purchase of short term power based on the prices discovered on DEEP portal through e-bidding for short term purchase as submitted in this Petition.*

...”

4. **MSEDCL in its Petition has stated as follows:**

4.1. MSEDCL has filed the present Petition under Regulation 106 of MYT Regulations, 2019, which stipulate the Commission's power to remove difficulties. MSEDCL is seeking approval for Short Term power purchase (RTC basis) up to 1000 MW for the months of October-22 and March-23 to May-23.

4.2. **MSEDCL's power Position in October-2021 and March-2022 to May-2022:**

October-2021:

4.2.1 In the month of October-2021, MSEDCL's peak demand reached up to 20135 MW, due to the increase in agricultural load. In the same month, around 2750 MW generation was under outages due to coal shortage, around 1700 MW generating capacity was under forced outage and around 1200 MW generation capacity was under planned outages (AOH/COH) leading to shortfall of around 5650 MW generation capacity.

4.2.2 Due to the nationwide reduction in generation availability because of coal/gas shortage, in the month of September-2021 and October-21, the rates in exchanges were high. The RTC average rate in the IEX was in the range of Rs. 3.50 to Rs. 16.42 per unit. In addition to that during the peak demand period, the rates reached to its ceiling rate i.e. Rs. 20.00 per unit in some of the blocks.

4.2.3 To cater to the rising demand, MSEDCL was compelled to procure costly power from Energy Exchange, in the month of October-21. MSEDCL procured 285.64 MU at average rate of Rs. 7.30 per unit.

March-2022 to May-2022

4.2.4 In the months from March-2022 to April-2022, an unprecedented rise in demand was observed and the demand reached an all-time high 25144 MW. The major factors contributing to the demand was post Covid effect reflected in rise in demand and increase in agricultural load which was mainly due to good monsoon during 2021.

4.2.5 Furthermore, in these months due to the nationwide coal shortage, the generation availability from long term contracted generators hampered severely which created the shortfall up to 5000 MW against contracted capacity. Due to such unpredicted shortfall, MSEDCL was compelled to procure power from exchanges at the available rates. In the months from March-2022 to May-2022, MSEDCL procured about 1090 MU at the average rate of Rs. 8.12 per unit through energy exchanges.

4.3. **Expected power position:**

4.3.1 Expected Generation availability from August-22 to May-23:

Following assumptions have been made for ascertainment of expected generation:

- (i) The thermal Unit outages as projected in LGBR- 2022-23 have been considered for the months from July-22 to May-23. Generally, in the Operations Coordination Committee (OCC) meetings conducted every month by Western Regional Power Committee, the schedule of unit's planned outage is proposed and approved accordingly in consultation with the stake holders.
- (ii) It is observed that MSPGCL's generation availability varies on month-to-month basis/seasonal basis due to the issues of coal quality mainly during the monsoon season, unit outages, etc. Considering all factors and historical trend, MSPGCL availability has been considered.
- (iii) The generation availability of NTPC stations is worked out by considering the proposed planned outages and its historical trend.
- (iv) The generation availability from IPPs is considered based on the unit's proposed outages plan.
- (v) The generation from Co-gen/bagasse power plant is considered based on the historical trend as well as average MW computed from the actual billed MUs of FY 2021-22.
- (vi) The wind generation availability is considered as average of wind availability based on last year's respective month's actual wind. Similarly, the generation from Solar is also considered, further the Solar addition of @450 MW is considered for FY 2022-23.
- (vii) The installed Capacity of Koyna Hydro Generation is 1920 MW with Annual Water Quota of 67.5 TMC. The Water quota is to be utilized every water year i.e. during

June to May months. Considering the historical utilization of Koyna hydro generation and the demand pattern of MSEDCL, Maximum water Quota is being reserved for High Peak Demand months.

4.3.2 Expected Demand August-2022 to May-2023:

- (i) For projection of hourly demand, the CAGR of each hour is calculated from the hourly average demand of each month based on the hourly demand data of period 2017 to 2022.
- (ii) By considering the historical trends, seasonal variations and intermittent unexpected rise, hourly demand for the period Aug-2022 to May-2023 has been forecast.

4.3.3 Expected Surplus/ shortfall Position:

- (i) Based on expected generation availability, Koyna Hydro Plan and expected demand, the expected surplus (+)/Shortfall (-) is worked out. The abstract of demand, availability and shortfall is as below

Months	Night Peak (22 to 6 hrs)			Morning Peak (6 to 10 hrs)			Day Peak (10 to 18 hrs)			Evening Peak (18 to 22 hrs)		
	Demand	Availability	Shortfall	Demand	Availability	Shortfall	Demand	Availability	Shortfall	Demand	Availability	Shortfall
Aug-22	17731	17347	-384	19458	18474	-984	19537	19266	-272	18379	17289	-1090
Sep-22	17432	16663	-769	20020	18045	-1975	19611	18627	-985	19045	17721	-1324
Oct-22	19996	18883	-1112	20802	19785	-1017	21977	20585	-1392	20028	19043	-985
Nov-22	18885	18885	0	20049	20049	0	21724	20678	-1046	19416	18596	-821
Dec-22	17626	18755	1129	20139	20139	0	21362	21362	0	19058	19058	0
Jan-23	17726	19484	1758	20922	20922	0	23057	22502	-555	19261	19339	79
Feb-23	19565	19419	-146	21712	21838	126	23605	23051	-554	19866	19885	19
Mar-23	23246	21364	-1882	23288	22557	-731	25338	23879	-1459	22522	21340	-1182
Apr-23	24009	21658	-2351	23331	21603	-1728	25850	23713	-2137	22878	21602	-1275
May-23	23780	21707	-2073	23109	21699	-1410	24799	22870	-1930	22436	21512	-924

(-) shortfall / (+) surplus

4.4. **Plans to mitigate the shortfall and short-term tender thereof.**

- 4.4.1 The surplus power is available majorly during the July-2022 and August-2022 month and during the night hours of Sept-2022, November-2022 to February-2023 due to the monsoon effect and winter effect respectively.
- 4.4.2 To manage the surplus and to help mitigate the shortfall, option of banking arrangement with other utilities is explored and Power Banking tender was floated for supply of power by MSEDCL to other utility for the period from 16 June 2022 to 15 September 2022 and return of banked power during the period from 1 October-2022 to 31 October-2022 and 1 March-2023 to 31 May 2023.

4.4.3 In response to the banking tender, MSEDCL issued LOI to the successful bidders as given below:

Bidder	Supply of Power by MSEDCL				Supply of Power to MSEDCL				
	From	To	Duration (Hrs.)	Qtm	From	To	Duration (Hrs.)	% Return	Source of Power)
PTC	21-06-2022	30-06-2022	RTC	300	01-03-2023	15-03-2023	RTC	110%	Punjab State Power Corporation Ltd
	01-07-2022	31-07-2022	RTC	300	16-03-2023	15-04-2023	RTC		
	01-08-2022	31-08-2022	RTC	200	16-04-2023	15-05-2023	RTC		
	01-09-2022	15-09-2022	RTC	300	16-05-2023	31-05-2023	RTC		
KEIPL	01-07-2022	31-07-2022	RTC	100	01-10-2022	31-10-2022	RTC	110%	BSES Yamuna Power Ltd Delhi
					01-03-2023	31-03-2023			
SPTPL	01-07-2022	31-07-2022	RTC	100	01-03-2023	15-03-2023	RTC	110%	India Power Corporation Ltd
					16-03-2023	15-04-2023	RTC		
	01-08-2022	31-08-2022	RTC	100	16-04-2023	15-05-2023	RTC		
					16-05-2023	31-05-2023	RTC		

4.4.4 Further, MSEDCL has floated a tender (ET-100), as per the guidelines issued by Ministry of Power for procurement of short-term power of 500 to 1000 MW RTC on DEEP E-bidding portal for the period from 01 October 2022 to 31 May 2023.

4.4.5 After following the due process and after E-Reverse auction, the rates discovered in the tender is as below:

Sr. No	Period	Timings (Hour)	Tender Quantum in (MW)	IPO Rate (Rs/Unit)	L1 rate (Rs/Unit)	Quantum (MW)	Bidder	Source
1	01.10.2022 to 15.10.2022	00:00 to 24:00	500	9.60	7.44	100	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
2	16.10.2022 to 31.10.2022	00:00 to 24:00	500	9.60	7.44	100	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
3	01.03.2023 to 15.03.2023	00:00 to 24:00	700	8.82	7.44	200	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
				10.39	7.44	100	NVVNL	Adhunik Power and Natural Resources Ltd
4	16.03.2023 to 31.03.2023	00:00 to 24:00	1000	8.82	7.44	200	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
				10.39	7.44	100	NVVNL	Adhunik Power and Natural Resources Ltd
5	01.04.2023 to 15.04.2023	00:00 to 24:00	1000	11.30	7.85	100	NVVNL	Jaypee Nigrie Super Thermal Power Plant, Madhya Pradesh
				9.34	7.85	200	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
				10.39	7.85	100	NVVNL	Adhunik Power and Natural Resources Ltd

Sr. No	Period	Timings (Hour)	Tender Quantum in (MW)	IPO Rate (Rs/Unit)	L1 rate (Rs/Unit)	Quantum (MW)	Bidder	Source
6	16.04.2022 to 30.04.2022	00:00 to 24:00	1000	11.30	7.85	100	NVVNL	Jaypee Nigrie Super Thermal Power Plant, Madhya Pradesh
				9.34	7.85	200	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
				10.39	7.85	100	NVVNL	Adhunik Power and Natural Resources Ltd
7	01.05.2023 to 15.05.2023	00:00 to 24:00	1000	11.30	7.85	100	NVVNL	Jaypee Nigrie Super Thermal Power Plant, Madhya Pradesh
				9.34	7.85	200	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
				10.39	7.85	100	NVVNL	Adhunik Power and Natural Resources Ltd
8	16.05.2023 to 31.05.2023	00:00 to 24:00	700	11.30	7.85	100	NVVNL	Jaypee Nigrie Super Thermal Power Plant, Madhya Pradesh
				9.34	7.85	200	NVVNL	Jindal Power Limited, Tamnar, Chhattisgarh
				10.39	7.85	100	NVVNL	Adhunik Power and Natural Resources Ltd

4.5. Competitiveness of the rates Discovered in tender ET-100.

4.5.1 The rates discovered are after following the due process as stipulated in Guidelines by Ministry of power for procurement of short-term power.

4.5.2 As on date, the rates discovered in the short-term power purchase tender floated by other utilities on DEEP E-bidding portal is as below:

Sr. No	Utility	Period	Qtm (MW)	L1 rate (Rs/Unit)
1	BSES Delhi	October-22	250	9.18
2	Jindal Steel and power Distribution	August-22 to March-23	150	5.50
3	Tata Power Company Ltd	October-22	100	8.99 to 12.00
		March-23	50	8.94
		April-23	100	8.92
		May-23	100	8.94
4	BEST Mumbai	October-22	50	8.66
5	Gujrat	October-22	500	7.35 to 7.36
6	Tata Power Delhi Distribution Ltd	October-22	100	7.92
7	Andhra Pradesh	October-22	450	8.37 to 9.99
8	Punjab	October-22	280	10.55 to 12.00
9	Torrent Power Ltd	October-22 to March-23	70	9.99
10	Uttarakhand Power Corporation Ltd	Mar-23	400	7.50 to 9.00