

**Before the**  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
**World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai 400005**  
**Tel. 022 22163964/65/69**  
**Email: mercindia@merc.gov.in**  
**Website: [www.merc.gov.in](http://www.merc.gov.in)**

**Case No. 32 of 2022**

**Case of Adani Electricity Mumbai Ltd.-Distribution seeking approval for Long Term procurement of power qua 1000 MW (500 MW + additional 500 MW under green shoe option) from grid connected Renewable Energy Power Projects, complemented with Power from Coal based Thermal Power Projects on RTC basis, under Tariff-based Competitive Bidding process.**

**Coram**

**Sanjay Kumar, Chairperson**  
**Mukesh Khullar, Member**

Adani Electricity Mumbai Ltd.-Distribution (**AEML-D**) ..... Petitioner

V/s

Maharashtra Energy Development Authority (**MEDA**) ..... Respondent

State Transmission Utility (**STU**) ..... Impleaded Respondent

**Appearance:**

For AEML-D ..... Shri Kishor Patil (Rep.)

For MEDA ..... Shri. Arif Shaikh (Rep.)

For STU ..... Shri Sanjeev Bhole (Rep.)

**ORDER**

**Dated 1 November 2022**

1. Adani Electricity Mumbai Ltd.-Distribution (**AEML-D**) has filed a Petition on 21 January 2022, under Section 86(1)(b) read with Section 63 of the Electricity Act, 2003 (**EA**) seeking approval of Long Term procurement of power qua 1000 MW (500 MW + additional 500 MW under green shoe option) from grid connected

Renewable Energy (**RE**) Power Projects, complemented with power from Coal based Thermal Power Projects on Round the Clock (**RTC**) basis, under Tariff-based Competitive Bidding process.

2. **AEML-D's main prayers are as follows:**

- i. *“grant approval to the Petitioner to procure 1000 MW (500 MW + additional 500 MW under green shoe option) of Power from grid connected Renewable Energy Power Projects, complemented with Power from Coal based Thermal Power Projects in India on Round the Clock (RTC) on long term through tariff based Competitive Bidding;*
- ii. *approve the bid documents i.e., draft RfS and draft long term PPA annexed as Annexures P-5 and P-6, along with deviations as sought in the present Petition;*
- iii. *extend the PPA executed between the Petitioner and ADTPS till 15.10.2024 or actual commissioning date of the successful bidder under the future Competitive Bidding process (which would be conducted by the Petitioner), whichever is earlier;*
- iv. *approve consideration of procurement of power from RE sources, which will be procured in future in terms of the present petition, towards meeting the current and future RPO requirement of AEML as approved under Case No. 140 of 2020 vide its order dtd. 12.07.2021;”*

3. **AEML-D's Petition states as follows:**

- 3.1 Reliance Infrastructure-Distribution (**RInfra-D**) (the predecessor of AEML-D) had filed its Petition (Case No. 5 of 2017) for approval of the Power Purchase Agreement (**PPA**) executed between its Generation business and Distribution business for supply of power from Dahanu Thermal Power Station (**DTPS**) to RInfra-D. The Commission vide its Order dated 8 February 2018 directed RInfra-D to approach the Commission for approval of its plans for future power procurement, after exploring all available options of sources and modes of procurement and considering the then market conditions and transmission availability, sufficiently in advance and at least one year before the expiry of the extended PPA.
- 3.2 Thereafter, the Commission vide its Multi Year Tariff (**MYT**) Order dated 30 March 2020 for AEML-D, inter-alia, directed AEML-D to approach the Commission at least 6 months before expiry of its PPA for power supply from DTPS, in case of extension of arrangement or power purchase from alternate source. The Commission ruled that it may take a considered view on the extension of the arrangement or approval of the alternate source, at the appropriate time. AEML-D was also directed to ensure that the most optimum power purchase tie-ups are made to secure the supply for its consumers, irrespective of whether the generator is a Group Company or otherwise.

- 3.3 Thus, the Commission directed AEML-D to rationalize its Power Procurement Plan with the view to ensure security of power supply considering its high dependency on Short Term Market and also opined that AEML-D ought to secure power supply by tying up from Long Term/Medium Term Sources at optimum rates for bulk of its requirement and rely on short term power for only around 10-12% of its power requirement.
- 3.4 The share of short-term power, out of AEML-D's power procurement portfolio, increased on account of termination of PPA with Vidarbha Industries Power Ltd.- Generation (**VIPL-G**). However, such high dependency on short term market is not sustainable in the long run as volume of electricity and price at which it is available is uncertain in Short Term Market, as a result of which Tariff payable by the end consumers can be volatile.
- 3.5 In compliance of the above direction of the Commission and to ensure reliable power supply at competitive rate to its consumers, the Petitioner filed a Petition (Case No. 140 of 2020) seeking approval for procurement of long term 1000 MW of power from grid connected RE Projects, complemented with power from Coal based Thermal Power Projects on RTC basis, under Tariff-based Competitive Bidding process.
- 3.6 The Commission vide its Order dated 12 July 2021 in the above-mentioned Petition passed the following directions:
- a. Direction related to Bidding Document:

AEML-D was directed to modify the Bidding document as per Commission's ruling in that Order and to submit the modified Bidding documents to the Office of the Commission for information. AEML-D was also directed to initiate the bidding process with the deviations approved in that Order with a further direction to approach the Commission for any further deviation, if required.
  - b. Direction related to procurement of power in steps:

In the Order, the Commission also ruled that the demand-supply projections as worked out by AEML-D either needed to be revisited or needed to be justified. The Commission, in-principle, approved the long term power procurement Petition and directed AEML-D to procure the power in phased manner by initiating bidding process for 500 MW in first phase and subject to conditions stipulated in that Order.
  - c. Direction related to procurement of power with green shoe option:

The Commission also held that alternatively, AEML-D can carry out a detailed analysis based on the observations of the Commission in that Order and resubmit a Petition justifying the requirement of 1000 MW vis-à-vis the financial sensitivity analysis. The Commission held that AEML-D can consider the tender of 1000 MW with a Green shoe option (500 MW+500MW)

based on the discovered Tariff. For that, AEML-D was directed to carry out a detailed analysis based on the observations of the Commission in that Order and resubmit a fresh Petition justifying the requirement of 1000 MW along with the financial sensitivity analysis. AEML-D was asked to ensure reasonability of Tariff and provide justification of Demand projection.

- 3.7 Accordingly, the Petitioner has approached the Commission vide the present Petition.
- 3.8 In its Order dated 12 July 2021 in Case No. 140 of 2020, the Commission has determined the shortfall and has considered continuation of 500 MW power supply from DTSPS and therefore directed the Petitioner to procure additional 500 MW.
- 3.9 PPA with DTSPS is valid till 22 February 2023. Further, the Commission vide its Order dated 8 February 2018 in Case No. 5 of 2017 and Order dated 30 March 2020 in Case No 325 of 2019, directed AEML-D to approach the Commission at least 1 year and 6 months, respectively, before expiration of its PPA with DTSPS for either extension of arrangement or power purchase from alternate source after exploring all available options of procurement considering the market conditions and transmission availability.
- 3.10 Pursuant to the above direction, AEML-D is now proposing to procure 1000 MW (500 MW + additional 500 MW under green shoe option) power from grid connected Renewable Energy Power Projects, complemented with power from Coal based Thermal Power Projects on RTC on long term basis for the period of 10 years, under Tariff-based Competitive Bidding process wherein all thermal power plants located in the country will be allowed to participate.
- 3.11 Further considering the period required for disposal of the present Petition by the Commission, six months' period required for completion of bidding process, time required for Tariff adoption process, signing/ execution of PPA, and thereafter 24 months period from date of PPA signing to Scheduled Commissioning Date (**SCD**), commencement of supply of power after successful completion of Competitive Bidding process will take some time.
- 3.12 Approximately 33 months' period may be required for power supply to commence under competitive bidding process from date of this present Petition i.e., October 2024. Accordingly, the PPA with DTSPS which is valid till 22 February 2023, may require to be extended by the Commission, so that there is no power deficit except for the Petitioner.
- 3.13 Accordingly, the Petitioner has proposed to extend the present PPA between DTSPS and AEML-D till 15 October 2024 or actual commissioning date of the successful bidder's project under the future competitive bidding process, whichever is earlier.
- 3.14 The Commission, vide Order dated 12 July 2021 in Case No. 140 of 2020, allowed following deviations in the bidding documents from those proposed in the standard documents:

- i. Delivery Point as Maharashtra State Transmission Utility (STU) Periphery instead of Central Transmission Utility (CTU) Interconnection Point;
  - ii. Provision for Payment Security Fund and State Government Guarantee to be deleted;
  - iii. Variable Components of Non-RE Power to be quoted as on bid submission date instead of schedule date of commissioning.
- 3.15 Accordingly, the Petitioner sought to retain the above deviations in the present Petition which has already been approved by the Commission in Case No. 140 of 2020.

3.16 Apart from the above deviations already approved by the Commission in Case No. 140 of 2020, AEML-D now proposed following additional deviations from Standard Guidelines issued by Ministry of Power (MoP, Government of India (GoI):

**iv. Evaluation of bids with respect to the Escalation Factors; AEML-D proposed to evaluate bids at first year quoted Tariff**

3.17 Central Electricity Regulatory Commission (CERC) has notified the escalation rates for evaluation purpose as 4.21% for domestic and 1.17% for imported coal. However, actual escalation in imported coal prices as seen during last 24 months period is 71% as against CERC escalation of 1.17 %. While the actual escalation for domestic coal prices during the same period is 0.09% as against CERC escalation rate of 4.21%.

**v. PPA term of 10 years instead of 25 years**

- 3.18 In the bid process to be floated, AEML-D has considered the PPA term of 10 years based on following advantages:
- a. As per Regulation 19.2 (a) of the MERC (Multi Year Tariff) Regulations, 2019 (MYT Regulations), Long term power procurement duration under any arrangement or agreement is a duration exceeding seven years but not exceeding twenty-five years.
  - b. Sufficient existing capacity is available for thermal and wind: Bidding guidelines provide for scheduled commercial operation date (SCOD) to be 24 months from effective date i.e., date of signing of PPA. New thermal plant takes about 48 to 56 months for commissioning their generation units. Therefore, AEML-D has envisaged supply of thermal generation from existing plants. At present, there is existing thermal untied capacity of 17205 MW which have been commissioned mainly after the year 2008, and that therefore, the plants that do not have a residual life of 25 years. Also, there is significant untied existing RE capacity available which is already depreciated. Previously renewable PPAs were entered for the term of 13 years thereby having the residual life of 10 to 12 years. The State of Maharashtra alone has untied existing RE capacity of 800 MW. As such,

keeping PPA term of 10 years is most suited as consumers of the Petitioner will get benefited by utilization of existing depreciated power plants.

- c. New evolving clean energy technologies: Significant Research and Development (**R&D**) effort is going on across the world to promote clean energy sources which are sustainable, and efforts are being undertaken for their commercial viability. These technologies will be matured in next 6 to 7 years and will reach commercial viability. Further, the cost of coal will be continuing to escalate whereas, with respect to other technologies, the cost will be stable and will yield to long term cost savings to consumers;
- d. Cost of battery for storage: Cost of battery for storage of energy is reducing and the new storage techniques are evolving. The price of battery for storage is likely to stabilize in next 5-10 years which will give additional impetus to controllability and thereby absorption of low cost RE power in a big way.

3.19 Thus, in view of the above, the power procurement for a long term period of 10 years is suitable option, keeping in mind the continuous availability of power, as well as cost effectiveness, which will ultimately be in the interest of the consumers. Accordingly, AEML-D sought approval of the above deviations from the bidding documents.

3.20 Hence, AEML-D has undertaken to adhere to the deviation approved by the Commission in its Order dated 12 July 2021 in Case No. Case No. 140 of 2020, and the proposed deviation sought in the present Petition for incorporation in the draft RFS and PPA.

3.21 AEML-D sought to place on record the draft Request for Selection (RfS) and draft Long Term Power Purchase Agreement, for the necessary approval by the Commission.

#### 4. **At the E-Hearing held through Video Conferencing dated 22 March 2022:**

4.1 The representative of the Petitioner reiterated its submission as made out in the Petition and stated that:

- i. It has sought certain deviations from the guidelines issued by the MoP, GoI and necessary justifications for such deviations have been given in the Petition.
- ii. It has retained the deviations which had been allowed by the Commission in earlier similar Petition in Case No. 140 of 2020.
- iii. It has proposed thermal power as the non-RE component, however same shall be subject to the approval of the Commission.
- iv. The Petitioner has proposed to extend its present PPA with Adani Electricity Mumbai Ltd.- Generation Business (**AEML-G**) for supply of power from DTPS till 15 October 2024 or actual commissioning date of the successful bidder under the proposed competitive bidding process, whichever is earlier.

- v. The key Mumbai Transmission Projects such as 400 kV Vikhroli Substation and Kudus-Aarey HVDC Project are likely to be commissioned by October 2024 and hence it is expected that the constraints for bringing power from outside of Mumbai would get eliminated.
- 4.2 Representative of Maharashtra Energy Development Authority (**MEDA**) stated that it may be granted an additional period of one week for filing their reply in the matter.
- 4.3 Having heard the Parties, the Commission observed that:
  - i. The quantum of 1000 MW for proposed procurement needs to be justified by AEML-D with its demand supply projections in terms of energy requirement and peak demand, past and expected future load growth, existing contracts (long term, medium term and short term), status of its renewable purchase obligation (**RPO**) compliance till FY 2021-22, target as per Regulations, RPO fulfilled, RPO shortfall, existing RE contracts, expected yearly RPO compliance till the end of current control period and other relevant factors.
  - ii. AEML-D needs to clarify whether it has taken into account various risk factors impacting timely availability of power from the proposed procurement. In case constraints for bringing power from outside of Mumbai would not get eliminated as envisaged by October 2024, what is the proposed action plan to overcome such risk factors.
  - iii. AEML-D may check the Tariff discovered in similar tenders of Solar Energy Corporation of India (**SECI**) and may submit the Tariff that it expects from the proposed procurement which would be acceptable to AEML-D.
  - iv. AEML-D needs to compare its bid document with SECI's most recent bid document and submit a detailed comparison elaborating the differences, if any, and justification for such differences.
  - v. AEML-D has envisaged depreciated plants also for the proposed procurement. Under that case, AEML-D may consider a ceiling Tariff since depreciated plants may offer lower Tariff as compared to new plants.
  - vi. Since AEML-D has considered the PPA term of 10 years instead of 25 years as per the guidelines, AEML-D needs to evaluate impact on Tariff that may be discovered as the recovery of project cost would happen in a shorter duration.
- 4.4 The Commission observed that as per the bid document, the plant can be located anywhere in India. Hence, capacity constraints, if any, in CTU/STU interconnections needed to be examined and accordingly, the Commission directed that STU should be impleaded as a Party Respondent in the matter. AEML-D was directed to serve a copy of the Petition on STU and STU was directed to file its reply on the Petition within a week.
- 4.5 The Commission granted the request of MEDA for additional period for filing its reply. MEDA was directed to file its reply within a week and with a direction that

rejoinder may be filed by the Petitioner within a week thereafter, responding to the replies of MEDA and STU and also addressing the queries raised during the hearing.

5. **MEDA, vide its reply dated 4 April 2022, stated as follows:**

5.1 The Commission, vide its Order dated 12 July 2021 in Case No. 140 of 2020, has approved the power procurement plan. Based on the Commission's direction, AEML-D has submitted the revised 1000 MW power procurement proposal. Hence, the Commission may allow AEML-D's prayer for procurement of 1000 MW RE power on RTC basis.

5.2 AEML-D has considered the 10 years' PPA based on the following advantages:

- a. As per MYT Regulations, the PPA exceeding 7 years falls under the long term tie up.
- b. At present, sufficient wind and solar capacity is available.
- c. New technologies are evolving across the globe for clean energy sources and efforts are being taken for ensuring their commercial viability.
- d. Costs of Battery Storage are reducing and the new storage technologies are evolving.

5.3 Considering these factors, the Commission may consider the deviations in bidding documents on merit.

5.4 The prayer for extending PPA with DTSPS may be considered by the Commission subject to no extra burden on Tariff.

6. **STU, vide its reply dated 8 April 2022 stated as follows:**

6.1 Details of Available Transfer Capacity (ATC) Margin are as follows:-

<b>ATC of Maharashtra</b>	9760 MW
Total Long Term Access (LTA) operationalized	10519.83 MW
Available ATC Margin (A)	0 MW (-759.83 MW)
LTA Granted but not operationalized (B)	1400 MW
NOC issued but LTA not granted (C)	225 MW
NOC applications under process (D)	725 MW
<b>ATC Requirement by strengthening (B+C+D-A)</b>	<b>3109.83 MW</b>

6.2 Thus, presently there is no ATC margin available in the CTU-STU network.

6.3 Following is the list of schemes which are being expedited for enhancing ATC of Maharashtra and schemes which are under execution and under planning stage /approval.



Sr. No.	Scheme	Tentative increase in import capability	Status
1	Boisar (Power Grid) - Boisar (MSETCL) D/C line conversion to HTLS	560 MW	One Ckt completed, 2nd Ckt will be completed by May 22
2	220 kV D/C line from 220 kV Solapur (Power Grid) — Bale S/s: 40 ckt. Kms	281 MW	One Ckt. completed (140 MW ) 2nd Ckt will be completed by March 23
3	220 kV Yawatmal SS and associated interconnection lines with CTU with CTU network	281 MW	WIP- June 22
4	400 kV Kudus SS and associated interconnecting lines with CTU network	750 MW	WIP-Dec 22
5	400 kV Vikhroli and associated interconnecting lines	750 MW	WIP-Dec 22
6	400 kV Pimpalgaon S/s	500 MW	Dec. 24
7	400 kV GMR Warora S/s	200 MW	LoI issued, June 23
8	Upgradation of Existing 400 kV Parli (PG) to 400 kV Parli (Girawali) by HTLS Conductor	550 MW	Proposal to PGCIL in progress- June 2023

7. **AEML-D filed its rejoinder dated 1 June 2022 to STU’s reply and stated as follows:**

7.1 MSETCL/STU has submitted list of schemes which are being completed on urgent basis for enhancing ATC of Maharashtra. There would be sufficient ATC margin to be available by December 2024. The summary is as under:

ATC requirement after considering LTA operationalized, LTA granted, NoCs issued and NoCs under process	3109.83 MW
ATC addition expected after execution of schemed planned by CTU and STU as per CoD dates (last date Dec-2024) specified by STU in its submission	3872 MW

7.2 Thus, 762.17 MW ATC will be available by the time power flow under this Petition commence. Further, in case of proposed 1000 MW Long-Term Procurement by AEML-D, once approved by the Commission, CTU and MSETCL/STU will plan for additional transmission strengthening schemes, if required to bring additional power from outside of Maharashtra.

7.3 Further AEML-D has considered the sufficient time ~ 33 months for commencement of supply of power from proposed procurement. Therefore, even if augmentation/strengthening is required for operationalization of LTOA, same can be undertaken by CTU/STU.

7.4 Thus, there would be enough ATC margin to accommodate power from proposed 1000 MW long Term PPA which is expected to be available from October 2024.

8. **Vide, its additional submission dated 1 June 2022, AEML-D filed its replies to the queries raised by the Commission during E-Hearing dated 22 March 2022 which are summarized below:**

8.1 **The quantum of 1000 MW needs to be justified by AEML-D:**

**Reply:** AEML-D has considered and adhered to the demand supply projections as considered by the Commission in its Order dated 12 July 2021 in Case No. 140 of 2020, wherein the Commission has approved initiation of Bidding Process for procurement of 500 MW considering continuation of 500 MW DTSP PPA. As observed by the Commission in that Order, presently, there is power shortfall in the range of 200 to 750 MW at different hours in a day. Such shortfall needs to be replaced with medium/long term power contract. 500 MW RTC power can be easily absorbed with limited surplus at few hours. Still there would be shortfall for 9 hours of evening to midnight (200 – 320 MW) which in the initial years can be sourced through short-term contract/medium term contracts or through banking contracts with other Distribution Licensees. AEML-D has proposed procurement of 1000 MW (500 MW + additional 500 MW under green shoe option) with the intention to replace ADTSP power in case discovered rates are competitive. Therefore, proposed procurement is in line with the demand supply projection considered by the Commission in Case No 140 of 2020.

8.2 **AEML-D needs to clarify whether it has taken into account various risk factors impacting timely availability of power from the proposed procurement, such as Mumbai transmission constraints and what is the proposed action plan to overcome such risk factors:**

**Reply:** In the scenario where part capacity is coming from outside Mumbai but within Maharashtra, there would be no constraints considering projected enhancement of ATC margin of Maharashtra post execution of various transmission strengthening schemes under execution, planning/ approval stage. Further, in case of Long-Term Procurement, CTU and STU will plan additional transmission strengthening schemes, if so required which shall be useful in eliminating transmission constraints. There is sufficient period available for CTU/STU to plan and execute new schemes as AEML-D has considered around 33 months for power to flow under present petition. Also, with the proposed commissioning of New Transmission line of 400 KV Kharghar- Vikhroli line and HVDC Kudus-Aarey Link, there will be no transmission constraints in the internal network to bring power to Mumbai.

In scenario where full capacity coming from outside Maharashtra, various transmission strengthening schemes are under execution, planning/ approval stage to enhance ATC margin of Maharashtra as stated in STU submission. CTU/STU will plan additional transmission strengthening schemes, if so required to bring additional power from outside of Maharashtra in case of Long-Term Procurement.

The proposed procurement of power is not a new demand and majority of it is towards replacement short-term power presently procured by AEML-D from exchanges or through bi-lateral contracts. Therefore, power can be scheduled on short term basis as it being done currently by utilities in Maharashtra. Currently ~ 2583 MW power is being schedule by Maharashtra Utilities on daily basis through short term open access. Hence, AEML-D is not envisaging any constraints in bringing power from outside of Mumbai. However, if there prevail any constraints, then AEML-D shall approach the Commission to further extend existing PPA with DTSP till such constraints are eliminated.

If so desired by the Commission, AEML-D shall add appropriate clause in bidding documents and PPA so that AEML-D does not get impacted due to delay in flow of power due to transmission constraints.

**8.3 AEML-D may check the Tariff discovered in similar tenders of SECI and may submit the Tariff that it expects from the proposed procurement which would be acceptable to AEML-D:**

**Reply:** In recent SECI Tender, discovered Tariff was in the range of Rs 3.01/kWh to Rs 4.56/kWh for PPA duration of 25 years. Indication of any expected rate before initiation bid, may impact Tariff to be quoted by the bidders and hence, it is prudent not to indicate any expected Tariff at this juncture.

Moreover, AEML-D will approach the Commission with discovered rates for adoption of Tariff after completing bid process under Section 63 of the EA. Further, for green shoe option, AEML-D shall proceed further only if discovered rates are lower than ADTPS rate as approved by the Commission. Under such situation, AEML-D may seek approval of the Commission for further extension of existing PPA with ADTPS.

**8.4 AEML-D needs to compare its bid document with SECI's most recent bid document and submit a details comparison elaborating the differences, if any, and justification for such differences:**

**Reply:** AEML-D has submitted the comparison with justification.

**8.5 AEML-D has envisaged depreciated plants also for the proposed procurement. Hence, AEML-D may consider a ceiling Tariff since depreciated plants may offer lower Tariff as compared to new plants:**

**Reply:** Competitive Bidding Guidelines do not prescribe ceiling rate in bidding process. Further, presence of ceiling rate will defeat purpose of Bidding. Moreover, it may happen that it will restrict biding participation and in turn growth in RE in the country. Number of tenders called by SECI and other major utilities where ceiling rate was set, had received tepid response and these party had to extend the times of bid and thereby delaying procurement of Renewable power. Further, SECI is not specifying ceiling rate in its recent Tenders. Hence, AEML-D is not inclined to keep any ceiling rate for proposed bid to enhance participation.

As regards depreciated power plants, there is untied capacity of 17,205 MW from existing thermal capacity which have been commissioned mainly after the year 2008 and also, there is significant untied existing RE capacity available (~ 800 MW) which is already depreciated. These depreciated plants (i.e. 800 MW), based on their economics after considering funds required for renovation, may participate in proposed bid and may offer comparatively lower rate as compared with non-depreciated plants.

**8.6 Since AEML-D has considered the PPA term of 10 years instead of 25 years as per the guidelines, AEML-D needs to evaluate impact on Tariff that may be discovered as the recovery of project cost would happen in a shorter duration:**

**Reply:** AEML-D has proposed 10 years PPA terms instead of 25 years for the sole reason to take advantage of new evolving clean energy technologies like Hydrogen, pumped storage, Marine Power generation technology, tidal barge power plants and to make them commercially viable. It is expected that these technologies will mature in next 6 to 7 years and will reach commercial viability. Further, cost of battery for storage of energy is reducing and the new storage techniques are evolving.

In case AEML-D opts for 25 years PPA, then there will not be any room left for AEML-D to incorporate future clean and cheaper technology in its power portfolio. This may also impact AEML-D's ability to fulfil increasing RPO targets in future.

The other reason as specified under the Petition for justifying tenure of 10 year is that there is sufficient existing capacity of thermal and wind is available which will bring more competition. The 10 years PPA term is most suited as consumers will get benefited by utilization of existing depreciated power plants.

There will be Tariff impact due to 10 years PPA term as compared to 25 years, with decrease in cost of Renewable Project PPA term of 10 years is enough.

AEML-D has evaluated Tariff of ADTPS PPA Tariff v/s new technology under three scenarios and computed levelized Tariff. AEML-D has assumed Tariff of Rs. 4/kWh and Rs. 4.5/kWh for new technology after 10 years.

With only ADTPS for 25 years, the levelized Tariff for 25 years works out to be Rs. 7.43/kWh.

With ADTPS for 10 years and thereafter, new technology of Rs. 4/kWh, the levelized Tariff works out to be Rs. 5.37/kWh.

With ADTPS for 10 years and thereafter new technology of Rs. 4.5/kWh, the levelized Tariff works out to be Rs. 5.54/kWh.

Tariff with new technology will be beneficial for the consumers of AEML-D.

**9. At the E-Hearing held through video conferencing dated 15 July 2022:**

**9.1 The representative of the Petitioner re-iterated its submissions as made out in the additional submissions dated and stated that:**

- i. The Commission, vide its Order in Case No. 140 of 2020, has already approved the demand projections of AEML-D and the Commission has suggested that after carrying out a detailed analysis based on the observations recorded in that Order, AEML-D may consider the tender of 1000 MW with a Green shoe option (500 MW+500MW) based on the discovered tariff.
  - ii. AEML-D has existing contracts of around 1344 MW out of which 700 MW contract is for Wind-Solar Hybrid power. Since the CUF of this Hybrid power is 50%, the net capacity available for Hybrid source is 350 MW. Further, some of these contracts are expiring in year 2026. Hence, there is a need to enter into further contract of adequate capacity.
  - iii. There would be a RPO shortfall of around 580 MW upto FY 2024-25.
  - iv. As directed by the Commission, AEML-D has submitted a comparison with SECI's bid documents and it can be seen that there is no material change in AEML-D's bid document of AEML-D vis-à-vis the SECI's bid document.
- 9.2 The representative of MEDA stated that they have already filed their reply which may be considered by the Commission for deciding the present Petition.
- 9.3 The representative of STU Petitioner re-iterated its submissions as made out in its reply.
- 9.4 Representative of AEML-D stated that AEML-D may incorporate "Right of Firm's Refusal" option to get comfort on Tariff. It was also confirmed by AEML-D that if the discovered Tariff is more than the Tariff of ADTPS, green shoe option will not be exercised.

### **Commission's Analysis and Ruling**

10. Vide its Petition in Case No. 140 of 2020, AEML-D had approached the Commission seeking approval for procurement of 1000 MW of Power from grid connected RE Power Projects, complemented with Power from Coal based Thermal Power Projects on RTC basis.
11. While passing the Order dated 12 July 2021, the Commission had directed AEML-D to initiate bidding process for procurement of power upto 500 MW on RTC basis from grid connected Renewable Energy Power Projects, complemented with other Non-Renewable Energy source or alternatively to file a fresh Petition justifying the requirement of 1000 MW with a Green shoe option (500 MW+500MW) vis-à-vis the financial sensitivity analysis. The relevant extract of the Order reads as follows:

*" 13.8. In view of above analysis, instead of bidding for 1000 MW, the Commission directs AEML to bid for its requirement in phased manner. To start with, AEML is allowed to bid for capacity upto 500 MW. Thereafter, on detailed study and realistic demand-supply projections, if AEML requires to contract additional capacity, then it can approach the Commission with detailed study justifying such requirement for initiating fresh process for additional power procurement. Such approach is essential in the present*

*matter especially when there is no precedence/reference tariff rate for type of power procurement (RE supplemented with non-RE source) AEML has proposed in present Petition. Post discovery of tariff and its financial benefits, AEML may take decision on initiating bidding process for contracting additional capacities through same type of power procurement or opt for different power source.*

*13.9. Alternatively, AEML can carry out a detailed analysis based on the observations of the Commission in paras 13.1 to 13.8 and resubmit a petition justifying the requirement of 1000 MW vis-à-vis the financial sensitivity analysis. In this case, subject to approval of the Commission, AEML can consider the tender of 1000 MW with a Green shoe option (500 MW+500MW) based on the discovered tariff, as was opted in the long term power procurement contract of 700 MW.”*

12. In terms of the aforesaid directions, the present Petition has been filed by AEML-D.

13. Vide its Daily Order dated 22 March 2022, the Commission raised certain queries on AEML-D’s present Petition such as justification of proposed quantum of 1000 MW with a Green Shoe option (500 MW +500 MW), risk analysis undertaken by AEML-D, comparison with SECI tender, expected Tariff, consideration of ceiling Tariff, impact due to 10 year’s PPA instead of 25 years’ PPA and other details. Also, STU has made its submission on the adequacy of transmission capacity in CTU-STU interconnections. MEDA has also filed its reply on the present Petition. Based on submissions of the Parties, the Commission notes that following issues are arisen for its consideration:

**I. Whether proposed power procurement process for 1000 MW under Green Shoe option is justified?**

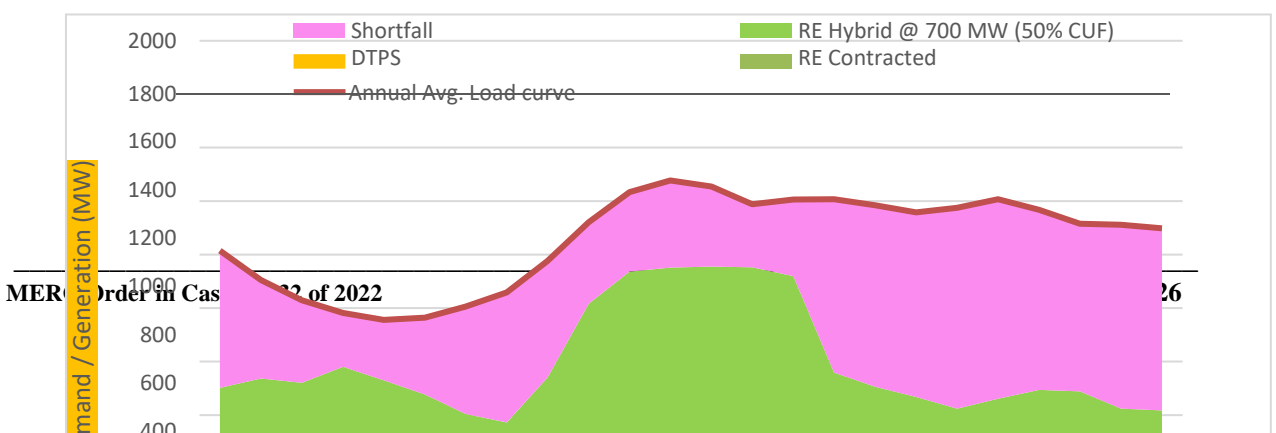
**II. Whether deviations sought by AEML-D in present proceedings are justified?**

**III. Whether the PPA signed by AEML-D with AEML-G for ADTPS can be extended upto October 2024 as prayed by AEML-D?**

14. The Commission is addressing above issues in following paragraphs.

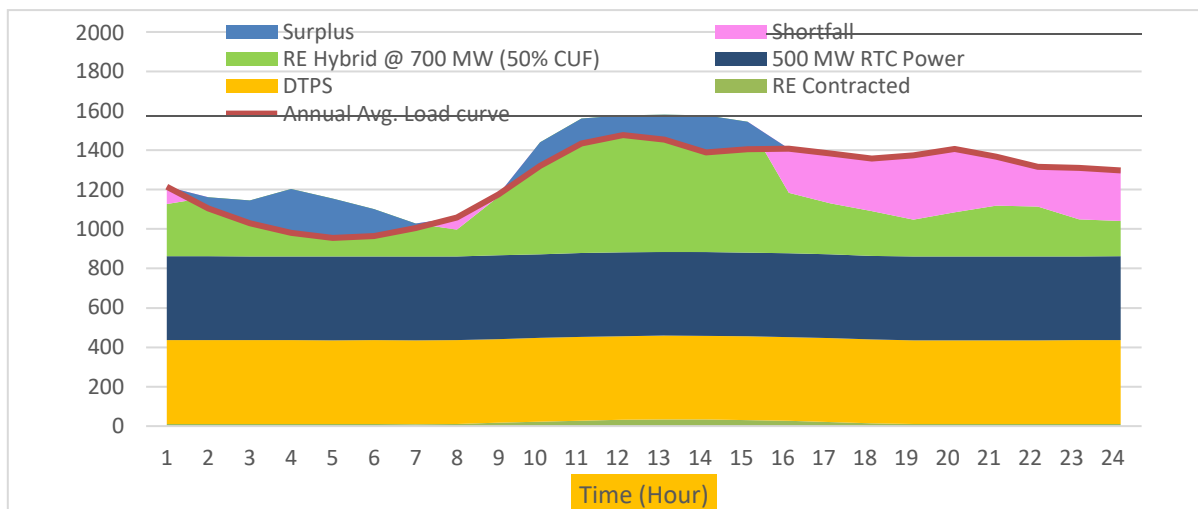
15. **Issue I:- Whether proposed power procurement process for 1000 MW under Green Shoe option is justified?**

15.1 In its Order dated 12 July 2021 in Case No. 140 of 2021, the Commission had considered the following Load Curve of AEML-D for FY 2024-25 for analyzing the demand supply position of AEML-D:



15.2 The Commission had also observed that there was power shortfall in the range of 200 to 750 MW at different hours in a day and such shortfall needed to be replaced with medium/long term power contract.

15.3 Further, the Commission noted that if additional procurement of 500 MW on RTC basis was considered, then above Load Curve would be updated as follows:



15.4 The Commission had observed that 500 MW RTC power could be easily absorbed with limited surplus at few hours. Still there would be shortfall for 9 hours of evening to midnight (200 – 320 MW) which in the initial years can be sourced through short-term contract/medium term contracts or through banking contracts with other Distribution Licensees (complementing the daily load curves of other Distribution Licensees), if it is economical.

15.5 Further, as is evident from the above load curve, 500 MW ATDPS power has been considered as a part of the AEML-D’s portfolio. The PPA with ADTPS is valid till 22 February 2023. AEML-D has envisaged that the power flow from the proposed procurement process would commence from October 2024 and hence, post expiry of the PPA with ADTPS, AEML-D would be required to have a tie up for 500 MW source, preferably on a RTC basis, as a replacement of this 500 MW ADTPS power.

15.6 **In view of the above, the Commission finds that AEML-D’s proposed quantum of 1000 MW with a Green shoe option (500 MW+500 MW) is justified provided that 500 MW Green shoe option will be exercised only if there is no further extension of 500 MW ADTPS once the power flow from the proposed procurement process commences i.e., post October 2024.** AEML-D also has confirmed that if the discovered Tariff is more than the Tariff of ADTPS, green shoe option will not be exercised meaning thereby it will limit the proposed procurement upto 500 MW only. However, the Commission clarifies that continuation of PPA with ADTPS shall not be deemed continuation even if the Tariff discovered under the proposed procurement process is higher than the Tariff of ADTPS and **it is directed that AEML-D would have to approach the Commission separately for approval of its plans for future power procurement, after exploring all available options of sources at that point in time and modes of procurement and considering the then market conditions and then transmission availability, sufficiently in advance. In case such situation arises, Adani Electricity Mumbai Ltd.-Distribution shall file its separate Petition by 31 December 2023.**

15.7 The Commission further notes that at present, following PPAs are in place for AEML-D:

Sr. No	Name of Supplier Company	Long Term/Medium Term	Contracted Capacity (MW)	Period of Contract
<b>A</b>	<b>Thermal</b>			
1	Adani Dahanu Thermal Power Station (ADTPS)	Long Term	500	23 Feb 2018 to 22 Feb 2023
<b>B</b>	<b>Renewable</b>			
<b>A</b>	<b>Solar</b>			
1	Dhursar solar power private limited	Long Term	40	28 March 2012 to 27 March 2037
<b>B</b>	<b>Non-Solar</b>			
1	Reliance Innoventures limited (RINL)	Long Term	45	1 April 2009 to 30 Sept 2022
2	Triumvirate Sons Enterprises Private Limited (Formerly known as AAA & Sons Private Limited)	Long Term	3.375	9 April 2009 to 8 April 2022
3	Vector Green Energy Private Limited (VGEPL)	Long Term	6	28 April 2010 to 27 April 2023



4	Tembhu Power Private Limited (TPPL)	Long Term	4.5	1 Dec 2012 to 20 April 2045
5	Reliance Power Limited (RPL)	Long Term	45	30 June 2013 to 29 June 2026
<b>C</b>	<b>Others: Hybrid (Wind+Solar)</b>			
1	Adani Hybrid Energy Jaisalmer Four Limited	Long Term	700	25 year from CoD (COD in FY22-23)

15.8 The Commission notes that AEML-D' PPA (3.375 MW) with Triumvirate Sons Enterprises Private Limited (Formerly known as AAA & Sons Private Limited expired on 8 April 2022. Further, the PPA (45 MW) with Reliance Innoventures limited expired on 30 September 2022. Thus, as on date, AEML-D has PPA for total 1298.875 MW, out of which the 500 MW PPA is with thermal generator i.e., ADTPS and rest 798.875 MW PPA is with RE Generators including the Hybrid power generator. The Commission further notes that the PPA with ADTPS is valid till 22 February 2023 and hence post 22 February 2023, AEML-D will have a PPA of only 798.875 MW that too with RE generators only.

15.9 While passing the MYT Order dated 30 March 2020 in Case No. 325 of 2019 for AEML-D, the Commission had analysed the growth trend (CAGR of actual consolidated sales for the past eight years, i.e., FY 2010-11 to FY 2018-19) of the category-wise total energy sales for past period for projecting the sales for the MYT control period for FY 2020-21 to FY 2024-25. Further, considering the distribution loss reduction by 0.25% annually and considering the transmission loss of 3.18%, the Commission approved the following Energy requirement at Generation-Transmission (G-T) level.

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Energy Requirement at G-T Interface	9,869.67	10,082.19	10,297.29	10,515.36	10,736.51

15.10 It is seen from the above that there is an annual growth of 2% in the energy requirement at G-T interface for the MYT control period. Since this growth rate has been arrived based on past actual data, it can be said that it is a realistic scenario of projections for the control period.

15.11 The Commission notes that the peak demand of AEML-D for last three financial years is 1704 MW (FY 2019-20), 1445 MW (FY 2020-21) and 1410 MW (FY 2021-22). Also, the peak demand of AEML-D during calendar year 2021 was 1547 MW. If annual growth rate of 2% is considered (as considered in the MYT Order dated 30 March 2020), the expected demand for AEML-D would be as under:

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
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Peak demand (MW)	1547	1578	1609	1642	1675	1708	1742	1777	1813	1849	1886	1924	1962	2001
RE Contracts (MW)	840	840	792	786	786	786	741	741	741	741	741	741	741	741
Req. (MW) with ADTPS	207	238	317	356	389	422	501	1277	1313	1349	1386	1424	1462	1501
Req. (MW) In absence ADTPS	PPA DTPS is valid Feb. 20223			856	889	922	1001	1777	1813	1849	1886	1924	1962	2001

*Note:- for simplified analysis, auxiliary consumption is not considered. If same is considered, the requirement of contract would increase further to some extent.*

- 15.12 AEML-D has envisaged that power from the proposed arrangement shall commence from October 2024 and AEML-D has proposed PPA for the period of 10 years. Hence, for the 10 years' period between year 2024 to year 2034, the peak demand, would be between 1642 MW to 2001 MW if conservative assumption of 2% annual growth, as considered under MYT Order (as mentioned at para. 15.9 above), is considered. Thus, subsequent to expiry of the PPA with ADTPS, there would be a requirement of around 856 to 2001 MW between the year 2024 to year 2034. Since some part of the requirement would have to meet through short term power, the Commission is of the view that 1000 MW RTC Power can be absorbed with marginal surplus during the initial years.
- 15.13 AEML-D, in present Petition, has proposed procurement of 1000 MW (500 MW + additional 500 MW under green shoe option) and stated that it has an intention to replace ADTPS power in case discovered rates are competitive as compared to ADTPS power. Thus, from AEML-D's submission, it is seen that the green shoe option will be exercised only if the discovered Tariff is competitive and under that scenario, ADTPS will not be continued meaning thereby that in the event ADTPS continues after 2024, the requirement of AEML-D would be 500 MW.
- 15.14 **In view of the above, the Commission is of the view that AEML-D's assessment of procurement of 1000 MW (500 MW + additional 500 MW under green shoe option) is justified provided that 500 MW Green shoe option will be exercised only if there is no further extension of 500 MW ADTPS once the power flow from the proposed procurement process commences i.e. post October 2024. It is directed that after discovery of Tariff pursuant to competitive bidding, AEML-D shall seek prior approval of the Commission before exercising the green shoe option under the proposed procurement.**
- 15.15 AEML-D's RfS document has stipulated that the proposed project/s can be located anywhere in India. Hence, the Commission deemed it appropriate to direct that STU should be impleaded as a Party Respondent in the present proceeding, in order to get its input on CTU/STU interconnections, if any, to bring the power in Maharashtra. STU made its submission highlighting that presently, there is no ATC margin

available in the CTU-STU network for grant of further Long Term Access (**LTA**). Further, considering the LTA granted, NOC issued and NOC applications under process, there is an additional requirement of 3110 MW in the present ATC.

- 15.16 STU has also provided a list of 8 schemes which may increase the import capability of Maharashtra by approx. 3872 MW, and it is expected that these schemes would be completed by December 2024. Out of these eight schemes, the scheme for 400kV Vikhroli Substation is a scheme for strengthening of Mumbai Transmission System and as such this scheme on standalone basis may not help to increase the ATC at CTU-STU interconnection, however, its interconnection with the proposed CTU network would help to bring power from outside Maharashtra.
- 15.17 The Commission notes that due to constraints in the transmission system, limitations are being faced in bringing cheaper power into Mumbai. If the constraints persist in CTU/STU interconnections also, similar limitations would be faced in bringing the cheaper power from outside Maharashtra to the Distribution Licensees in Maharashtra such as AEML-D.
- 15.18 The Commission notes that monitoring of implementation of Transmission schemes is important in order to ensure the availability of reliable power at competitive rate. The scheme for 400 kV Vikhroli Project is being monitored by the Monitoring Committee appointed by the Commission under suo Moto Order dated 28 May 2021 in Case No. 202 of 2020. Similar credible monitoring is necessary for rest of the schemes mentioned by STU for enhancing ATC of Maharashtra. The Commission notes that under Regulation 7.1 (a) of the MERC (State Grid Code) Regulations, 2020, the Maharashtra Transmission Committee (**MTC**) is responsible for planning and monitoring timely execution of transmission projects in the Maharashtra State including Mumbai area. **Accordingly, it is directed that the MTC, in close co-ordination with STU and CTU, shall ensure implementation of these schemes as per the planned targeted timeframes. These schemes should form part of agenda items of Grid Co-ordination Committee to ensure that there is a due monitoring for implementation of these schemes which would ensure availability of long term contracted power to Discoms of the Maharashtra.**
- 15.19 **STU is also directed to periodically review the validity of NOC/ LTA issued by it and it may take necessary steps, in consultation with the project developers and procurer, in case it is observed that the project against which the NOC/LTA has been issued, has not materialized.**
16. **Issue II- Whether deviations sought by AEML-D in present proceeding are justified?**
- 16.1 AEML-D has stated that the Commission, vide its Order dated 12 July 2021 in Case No. 140 of 2020, has allowed following deviations in the bidding documents from those proposed in the standard documents:
- i. Delivery Point as Maharashtra STU Periphery instead of CTU Interconnection Point;

- ii. Provision for Payment Security Fund and State Government Guarantee to be deleted;
  - iii. Variable Components of Non-RE Power to be quoted as on Bid Submission date instead of Schedule date of Commissioning.
- 16.2 AEML-D has sought to retain the above deviations in the present Petition.
- 16.3 In addition to above, AEML-D has proposed the following additional deviation from Guidelines issued by Ministry of Power, Government of India:
- i. Evaluation of Bid with respect to the Escalation Factors; AEML-D proposed to evaluate bids at first year quoted tariff**
- 16.4 AEML-D has stated that CERC has notified the escalation rates for evaluation purpose as 4.21% for Domestic and 1.17% for Imported coal. However, actual escalation during last 24 months in domestic coal prices is 0.09% and in imported coal prices is 71% as against CERC escalation of 1.17 %. AEML-D has proposed to evaluate the bids based on first year quoted Tariff.
- 16.5 Thus, AEML-D has cited the difference between CERC escalation factors for domestic and imported coal and the recent actual escalation for last 24 months in the prices of domestic and imported coal. Since there is substantial difference in these escalation rates, AEML-D has sought non-consideration of CERC escalation factors for evaluation purpose.
- 16.6 In this context, the Commission notes that for computing the escalation rates for domestic coal, the data of Wholesale Price Index for non-coking coal for preceding 12 years is considered by CERC. Further, for computing escalation rates for imported coal, CERC considers the data regarding the composite index of difference sources such as Indonesian coal, South African coal etc. for imported coal for 12 years period. On the other hand, AEML-D has considered the variation in coal prices for only 24 months. Thus, the comparison of escalation rates has been done for different periods. Hence same is not a proper comparison and cannot be a justified ground for seeking deviation from the guidelines.
- 16.7 The Commission also notes that AEML-D, in its earlier Petition in Case No. 140 of 2021, had sought approval for this deviation. However, the Commission did not allow the deviation stating that different fuel sources are to be considered for non-RE power, consideration of CERC escalation rates would be mandatory. The relevant extract of the Order reads as follows:

***“ 14.6. d) Evaluation of Bid with respect to the Escalation Factors.***

*i. AEML has submitted that as it has proposed to restrict non-RE power to only domestic fuel based thermal power plant, the CERC escalation index which otherwise required for arriving at levelized tariff for other sources of fuel will not be required in present case. As only one source of fuel is proposed, it will have uniform escalation index and hence it has proposed to evaluate the bid based on the quoted variable components of tariff.*

*ii. In this regard, the Commission notes that as it has not allowed AEML's deviation to restrict the non-RE capacity to only domestic fuel based Thermal Generation and directed AEML to allow all type of non-RE sources to participate in the bidding process, CERC escalation index for different non-RE sources as mentioned in SBG is mandatory now. Hence, the Commission cannot allow such deviation sought by AEML."*

16.8 The Commission notes that although initially, AEML-D had envisaged only coal based thermal power plants as non RE source, while submission of comparison of its bid document with SECI document as a part its data gap replies, it has confirmed that AEML may consider firm power from any other source in line with the Commission Order in Case No. 140 of 2021. Further, the RfS document of AEML-D provides that the Developer shall set-up generating system(s) for supply of RE Power and complement/balance the RE Power through supply of firm power from any other source in order to meet the commitment of RTC supply. Hence, since different fuels are envisaged as source for non RE power, the Commission is of the view that stand taken by the Commission in Case No. 140 of 2021 needs to be retained in present case also. Accordingly, the Commission is not inclined to allow the deviation sought by AEML-D.

16.9 Further, the RFS document of AEML-D provides that the quoted tariff shall comprise of four part – Fixed component for RE power, Fixed part for Non RE power, variable component for non RE escalable for fuel and variable power for Non RE power escalable for transportation. The Fixed component of tariff for Non RE power is to be quoted for each year of the term of PPA. The variable component of the Non RE escalable for fuel and transportation is to be quoted as on bid submission date. RFS provides that weighted average first year Tariff shall be computed as follows:

Evaluated Weighted Average first year Tariff= X % \*( Fixed RE Tariff) + Y % \* (Levelized Fixed Non RE Tariff + quoted variable component of Non RE power escalable for fuel + quoted variable component of Non RE power escalable for transportation))

where X=% quoted RE energy supply

Y= % quoted Non RE energy supply

16.10 In this context, the Commission notes that the as per amendment dated 26 August 2022 made in the guidelines (which has been issued after filing of the present Petition and after closing the Petition for Order), the first year weighted average levelized Tariff in Rs./kWh and the bidder shall be selected on the basis of least quoted weighted average levelized Tariff\*. The relevant extract of the guidelines reads as follows:

*"6.4 Weighted Average Levelized Tariff as the Bidding Parameter: The bidding evaluation parameter shall be the weighted average levelized tariff per unit supply of RTC power. The Procurer shall invite bids wherein the bidder shall quote the first year weighted average levelized Tariff in Rs./kWh. The quoted*

*tariff shall comprise of four part – Fixed component [RE power (fixed), non-RE power (fixed)] and Variable component [Non -RE power (escalable for fuel), and non-RE power (escalable for transportation)]. The Fixed component of tariff of the RE power and Non RE power shall be quoted for each year of the term of PPA. The variable component of the Non RE power shall be quoted as on scheduled date of commissioning. The levelised tariff shall be arrived at using the CERC escalation indices for the type of fuel quoted by the bidder and the discount factor to be specified in the bidding document. The bidder shall also quote the proportion of energy from RE sources and non-RE source that he wishes to supply. The weighted average levelised tariff per unit supply shall be arrived at for the term of PPA and proportion of energy from RE sources and Non RE source.”*

16.11 Thus, the guidelines envisage that all the four components of the Tariff shall be levelized whereas AEML-D's RFS provides that only Fixed component of non-RE power shall be levelized. Thus, the evaluation parameter as per the guidelines is Weighted Average Levelized Tariff. However, in case of AEML-D's bid document, the bid evaluation parameter is Weighted Average first year Tariff. The Commission is of the view that if AEML-D's aforementioned deviation is accepted, there would not be clarity on the Tariff to be paid to successful bidder as it would amount to accepting the bid at some Tariff and paying the successful bidder during the contract period for some different Tariff.

16.12 **In view of the above, the Commission does not accept this deviation and AEML-D is directed to modify its bid document in line with the guidelines.**

**ii. PPA term of 10 years instead of 25 years**

16.13 AEML-D has stated that with PPA term of 10 years instead of 25 years, the consumers of the Petitioner will get benefited by utilization of existing depreciated power plants. Further, according to AEML-D, in future, there is a possibility of further improvement in the cost competitiveness of clean energy sources and battery storage technologies. Hence, tie up for ten years is desirable at this point in time, instead of the twenty five years' PPA.

16.14 In this context, the Commission notes that the guidelines provide that the PPA period shall be 25 years from the date of SCD or the date of commissioning of full project capacity, whichever is later whereas the bid document of AEML-D provides that the PPAs shall be valid for a period of 10 years from the SCD or from the date of full commissioning of the Projects, whichever is earlier. This deviation needs to be examined on merit.

16.15 The Commission is aware of the fact that getting tied up for 25 years would help the recovery of the project cost over a longer period and such longer period for recovery helps to get lower Tariffs. However, AEML-D has envisaged the supply of non RE power from existing plants. There is a greater possibility that such depreciated plants would have a lower Tariff to offer. Hence, the objective of the longer period PPA

may not get defeated even if a comparatively lower term PPA such as a 10 year PPA is considered.

16.16 The Commission further notes that as per Regulation 19.2 (a) of the MYT Regulations, 2019, procurement for a duration exceeding seven years falls under the category of long term power procurement. Hence, AEML-D's proposal for a 10 years' PPA is in accordance with the MYT Regulations.

16.17 **Hence, the Commission deems it appropriate to accept the deviation proposed by AEML-D regarding PPA term.**

17. **Issue III:- Whether the PPA signed by AEML-D with AEML-G for ADTPS can be extended upto October 2024 as prayed by AEML-D?**

17.1 AEML-D has stated that approximately 33 months' period may be required for power supply to commence under competitive bidding process from date of this present Petition i.e., October 2024. Accordingly, the PPA with DTSPS which is valid till 22 February 2023, may require to be extended by the Commission, so that there is no power deficit except for the Petitioner. AEML-D, therefore, has prayed for extension of the present PPA between DTSPS and AEML-D till 15 October 2024 or actual commissioning date of the successful bidder's project under the future competitive bidding process, whichever is earlier.

17.2 The Commission notes that the existing PPA with ADTPS is valid till 22 February 2023 and the power from the proposed long term procurement will not be available till October 2024. Thus, after February 2023, there would be a shortfall of 500 MW on account of expiry of PPA with ADTPS.

17.3 The Commission also notes that AEML-D had initiated a competitive bidding process on 3 June 2022, through the Discovery of Efficient Electricity Price (DEEP) Portal for procurement of 500 MW RTC Power for period starting from 1 September 2022 to 14 October 2024 on medium term basis and the Commission, vide its Order dated 29 August 2022 has adopted the Tariff of Rs. 5.98/kWh for this period. It is observed that the above procurement is aimed at replacement of short term power purchase on which AEML-D is depending heavily due to delay in commencement of power flow from the long term Hybrid source. This medium term power would not help to address the issue of shortfall of 500 MW on account of expiry of ADTPS PPA.

17.4 The Commission also notes that the transmission constraints for bringing the power to Mumbai still exists and will take some time to ease out.

17.5 **In light of the above, the Commission is inclined to accept the prayer of AEML-D seeking extension of present PPA between AEML-D and ADTPS, being the embedded generation, till 15 October 2024 or actual commissioning date of the successful bidder's project under the future competitive bidding process, whichever is earlier.**

18. AEML-D has also prayed to consider the proposed procurement of power from RE sources towards meeting the current and future RPO requirement of AEML-D as approved under Case No. 140 of 2020 vide its Order dtd. 12 July 2021. In this context, the Commission notes that vide its Order dated 12 July 2021, the Commission has already directed that the RE Power procured by AEML-D from the project to be commissioned shall be counted towards its RPO Targets for the respective periods. Further, the guidelines also provide that RE component (including Energy Storage System (ESS) component charged with RE sources) brought under this Scheme shall be eligible for RPO compliance. The Guidelines also provide that if RE power has both solar and non-solar component, the apportionment of RPO between solar and non-solar shall be on the lines of principle adopted in case of hybrid plants. Accordingly, it is directed that the RE power procured by AEML-D from the RE project/s shall be counted towards its RPO Targets for the respective periods.
19. AEML-D, while justifying the proposed PPA term of 10 years, has stated that there is significant untied existing RE capacity available which is already depreciated and which are having the residual life of 10 to 12 years. The aforesaid submission of AEML-D gives an impression that existing operational RE plants can participate in the proposed bidding. However, upon perusal of the bidding documents, it is seen that already commissioned RE projects cannot participate under the proposed bidding process. Also, enhancement and augmentation of already commissioned RE Projects, irrespective of their capacities will not be considered as eligible Project under the RfS. Thus, inspite of the contrary submission made in the Petition, consistency of RfS document with the guidelines on this aspect has been ensured.
20. Further, the Commission notes that subsequent to filing of the Petition, the Guidelines have been amended on 26 August 2022 wherein, inter alia, the availability requirement of 85% has been revised to 90% to be fulfilled by the RTC generator. Also, the clause related “First right of Refusal” has been included. Hence, the Commission thinks it fit to direct AEML-D to include these amendments appropriately in the bid document.
21. Further, in accordance with the directions of the Commission, AEML-D has submitted comparison of its bid document vis-à-vis that of SECI’s document. The Commission has examined the comparison. The Commission notes that certain clauses such as need for the approval of the Commission for PPA extension, part commissioning in the same ratio of RTC Configuration for the earlier contracted capacity, substitution of Promoters triggered by the Financial Institutions etc. are not matching with the SECI bid document. Also, there are not specific clauses in the guidelines on these aspects. Since there is no standard bid document for the long-term procurement of electricity on RTC basis, from grid connected RE Power Projects complemented/balanced with power from any other source, the Commission is of the opinion that AEML-D may take an appropriate view to include or modify these clauses as a part of the bid document of AEML-D if they are beneficial to



AEML-D. However, while filing of its Petition of adoption of Tariff, AEML-D shall provide the assessment of the impact of these clauses on the discovered Tariff and justify these clauses based on which the Commission would take a view on adoption of Tariff vis-à-vis the Tariff discovered in SECI tenders.

22. In view of above, the Commission rules that AEML-D shall modify the Bidding document as per Commission's ruling in earlier paragraphs. Thereafter, AEML-D shall submit the modified Bidding documents to the Office of the Commission for information and in parallel, shall initiate the bidding process for procurement of power 1000 MW (500 MW + additional 500 MW under green shoe option) for long term procurement on RTC basis from grid connected Renewable Energy Power Projects, complemented with Other Non-Renewable Energy source in terms of the directions issued in this Order.
23. **Hence the following Order:**

### **ORDER**


1. **Case No. 32 of 2022 is partly allowed.**
2. **Assessment of Adani Electricity Mumbai Ltd.-Distribution for the quantum of 1000 MW (500 MW + additional 500 MW under green shoe option) for long term procurement is justified provided that 500 MW Green shoe option will be exercised only if there is no further extension of Power Purchase Agreement with 500 MW Dahanu Thermal Power Station once the power flow from the proposed procurement process commences i.e., post October 2024.**
3. **After discovery of Tariff pursuant to competitive bidding, Adani Electricity Mumbai Ltd.-Distribution shall seek prior approval of the Commission before exercising the green shoe option under the proposed procurement.**
4. **Continuation of Power Purchase Agreement with Dahanu Thermal Power Station shall not be deemed continuation even if the Tariff discovered under the proposed procurement process is higher than the Tariff of Dahanu Thermal Power Station. Adani Electricity Mumbai Ltd.-Distribution would have to approach the Commission separately for approval of its plans for future power procurement, after exploring all available options of sources at that point in time and modes of procurement and considering the then market conditions and then transmission availability, sufficiently in advance. In case such situation arises, Adani Electricity Mumbai Ltd.-Distribution shall file its separate Petition by 31 December 2023.**
5. **The prayer of Adani Electricity Mumbai Ltd.-Distribution seeking extension of present Power Purchase Agreement between Adani Electricity Mumbai Ltd.-Distribution and Dahanu Thermal Power Station, being the embedded generation, till 15 October 2024 or actual commissioning date of the successful**

bidder's project under the future competitive bidding process, whichever is earlier, is hereby granted.

6. The deviation sought by Adani Electricity Mumbai Ltd.-Distribution on the issue of "Evaluation of Bid with respect to the Escalation Factors" is rejected for the reasons mentioned at para. 16.4 to para. 16.12 of this Order and Adani Electricity Mumbai Ltd.-Distribution is directed to modify its bid document in line with the guidelines.
7. The deviation sought by Adani Electricity Mumbai Ltd.-Distribution on the issue of " Term of Power Purchase Agreement" is accepted.
8. The Renewable Power procured by Adani Electricity Mumbai Ltd.-Distribution from this project shall be counted towards its Renewable Purchase Obligation Targets for the respective periods.
9. The Maharashtra Transmission Committee, in close co-ordination with State Transmission Utility and Central Transmission Utility shall ensure implementation of the schemes mentioned at para. 6.3 of this Order, as per the planned targeted timeframes. These schemes should form part of agenda items of Grid Co-ordination Committee to ensure that there is a due monitoring for implementation of these schemes.
10. State Transmission Utility is also directed to periodically review the validity of NOC/ LTA issued by it and it may take necessary steps, in consultation with the project developers and procurer, in case it is observed that the project against which the NOC/LTA has been issued, is not materialized.
11. Adani Electricity Mumbai Ltd.-Distribution shall modify the Bidding document as per Commission's ruling in this Order. Thereafter, Adani Electricity Mumbai Ltd.-Distribution shall submit the modified Bidding documents to the Office of the Commission for information and in parallel, shall initiate the bidding process for procurement of power 1000 MW (500 MW + additional 500 MW under green shoe option) for long term procurement on RTC basis from grid connected Renewable Energy Power Projects, complemented with Other Non-Renewable Energy source in terms of the directions issued in this Order.

Sd/-  
(Mukesh Khullar)  
Member

Sd/-  
(Sanjay Kumar)  
Chairperson

  
(Abhijit Deshpande)  
Secretary

