

**Before the**  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
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**Case No. 140 of 2020 and MA No. 7 of 2021**

**Case of Adani Electricity Mumbai Limited for seeking approval of procurement of 1000 MW 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) basis, under Tariff-based Competitive Bidding process**

Adani Electricity Mumbai Ltd.

..... Petitioner

Maharashtra Energy Development Agency

..... Impleaded Respondent

**Coram**

**Shri Sanjay Kumar, Chairperson**

**Shri I.M. Bohari, Member**

**Shri Mukesh Khullar, Member**

**Appearance**

For the  
Petitioner

: Sh. Kishore Patil (Rep.)  
: Sh. Vaibhav Tandon (Rep.)

Respondent

: Sh. Arif Shaik (Rep.)

**ORDER**

**Date: 12 July, 2021**

1. Adani Electricity Mumbai Ltd. (**AEML**) had initially filed the Petition on 7 July 2020 which was later amended through Miscellaneous Application No. 7 of 2021 dated 25 February 2021. The instant Petition has been filed seeking approval for procurement of 1000 MW of Power

from grid connected Renewable Energy (**RE**) Power Projects, complemented with Power from Coal based Thermal Power Projects in India on Round the Clock (**RTC**) basis, under Tariff-based Competitive Bidding process guidelines issued by Ministry of Power (**MoP**), and for approval of proposed deviations in bidding documents from Standard Bidding Guidelines (**SBG**) under Regulation 21 of MERC (Multi Year Tariff ) Regulation, 2019, Section 19 of MERC (RPO, Its Compliance and Implementation of REC Framework) Regulations, 2019 and Regulation 94 of MERC (Conduct of Business) Regulations, 2004

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

- a) *To accord approval for initiation of competitive bidding for procurement of 1000 MW Round-the-Clock (RTC) Power from Grid-Connected Renewable Energy (RE) Power Projects, complemented with Power from Coal based Thermal Power Projects having domestic coal linkage on long term basis.*
- b) *To approve bid documents i.e. draft RfS and draft PPA along with deviation as sought above in the Petition.*
- c) *To approve consideration of procurement of power from RE sources under this PPA towards meeting the current and future RPO requirement of AEML.*

**3. AEML in its Case has stated as follows:**

- 3.1. The established peak demand in FY 2019-20 of the AEML's area of supply is 1677 MW. Presently, this is met through AEML's own generating station at Dahanu to the extent of 500 MW (455 MW net of Auxiliary Power), ~162 MW from long term RE contracts and balance through procurement from short-term market either through bilateral arrangements (through e-tendering on Discovery of Efficient Electricity Price (DEEP) portal), Banking of Power or on Power Exchange on day ahead basis.
- 3.2. Currently, the share of short-term Power has increased due to termination of Power Purchase Agreement (PPA) with long term coal based RTC power Source, Vidarbha Industries Power Limited (VIPL) located at Butibori. This 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 and thus tariff to consumers can be volatile.
- 3.3. To manage consumers basic requirement of power, Distribution Licensee should have a major portion of its power procurement through long-term power procurement contracts in such a way that the base load requirement is met through it. Balance can be procured through short-term power contracts and the open market.

- 3.4. In view of the above and its continuous efforts to tie up long term power, AEML has signed long term contract for 700 MW wind plus solar hybrid power. The power from this contract is expected to be available from FY 2021-22 and will meet peak power & part of load curve, at about 50 -55% CUF. The power procurement plan for the tenure of present proposed PPA takes into account load growth based on commercial and infrastructure developments planned in Mumbai, expected growth in Electric Vehicle charging, etc. [Said power procurement plan as submitted by AEML is enclosed as Annexure A to this Order] It can be seen that the major portion of proposed power gets absorbed in initial 2-3 year time.
- 3.5. Further, the Commission in its Order dated 16 December 2019 in Case No 247 of 2019 has directed AEML to arrange alternate source to meet its power requirement in case Lender doesn't exercise their right of substituting VIPL within 6 months of the Order.
- 3.6. Also, in Case No. 325 of 2019 dated 30 March 2020, the Commission has directed AEML to rationalize its Power Procurement Plan with the view to ensure security of power supply considering its high dependency on Short Term Market and has opined that AEML should 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.
- 3.7. In view of above, to ensure reliable power supply at competitive rate to its consumers, the Petitioner has planned to procure present long term power through Competitive bidding route.
- 3.8. The Ministry of Power (MoP), vide its Notification F. No. 23/05/2020-R&R dated 22 July 2020 and its amendment dated 3 November 2020 & 5 February 2021, has issued Guidelines for "Tariff Based Competitive Bidding Process for Procurement of Round-The Clock Power from Grid Connected Renewable Energy Power Projects, complemented with firm power from any other source or storage " (Guidelines).
- 3.9. The main objective of this Guideline is to provide RTC power to the DISCOMs through RE sources (at least 51%) complemented with firm power from any other source or storage, to facilitate the scale up of renewable capacity addition and achieve economies of scale, to facilitate fulfilment of Renewable Purchase Obligation (RPO) requirement of the obligated entities.
- 3.10. Considering the above initiative and in order to fulfil the RPO and to ensure certainty of scheduling, AEML hereby proposes to procure 1000 MW Round-the-Clock (RTC) Power from Grid-Connected RE Power Projects, complemented with firm power from thermal

Power Project having domestic Coal linkage, under Tariff-based Competitive Bidding. The bidding documents so framed by AEML are based on the above specified guideline and amendments issued by MoP.

3.11. The salient features of the bidding document are as follows:

- a. Single Stage Bidding Process with e-reverse auction
- b. Long Term PPA for 25 Years from COD.
- c. Delivery Point: Maharashtra Periphery.
- d. Scheduled Delivery Date: on or before 30 June 2023 (to avail benefit of ISTS transmission charges and losses exemption on RE component of long term Power)
- e. Bidder to ensure actual availability of at least 85% and also at least 85% Availability during the Peak Hours on annual basis.
- f. Supply from RE Sources should be mandatory  $\geq 51$  % in a contract year.
- g. The Power availability would be on RTC basis.
- h. AEML will not have to undertake operations to integrate RE power into the grid since the responsibility of giving firm power at identified point will be with the Generator.
- i. The bidder will have to quote the proportion of energy from RE sources and thermal source that he wishes to supply and strictly adhere to it through the term of PPA.
- j. A tariff for RE, complemented with firm power from thermal Power project having domestic coal linkage will be quoted by the bidders at the delivery point. A quoted tariff shall comprises of four part Fixed component of RE Power, Fixed component of Thermal power and variable component of Thermal power (escalable for fuel) and variable component of Thermal power (escalable for transportation) . The weighted average tariff shall be arrived for evaluation as per methodology specified in RfS.
- k. The Fixed component of tariff for Thermal power shall be quoted for each year of the term of PPA. The variable components of the Thermal power escalable for fuel and transportation shall be quoted as on bid submission date.
- l. Financial Closure to be achieved within 12 months of signing of PPA.

- m. Ceiling Rate: Not Applicable (in view of Competitive Bidding)  
(The Commission in its Order in Case No 270 of 2018 has held that *in the competitive bidding mechanism ceiling rate does not require prior approval of the Commission. The rate aspect is dealt by the Commission during the Tariff adoption process.*)
- 3.12. Under the Guidelines, power shall be supplied on RTC basis therefore, AEML will have immunity from uncertainty and variability of renewable power. Moreover, as portion of power will be supplied from Thermal Power Project having domestic coal Linkage which can be ramped up/ ramped down as per the load requirement and also to take care of seasonal and weather variations.
- 3.13. Therefore, the RE power backed by firm power from Thermal Power Project having domestic coal Linkage under this Guidelines not only have all the benefits of base load power but will also help AEML meet its future RPO as at least 51% of power delivered is mandatorily to be sourced from renewable sources. Additionally, the overall cost of power sourced under the said Guidelines will be competitive for following reasons:
- a. As minimum 51% of total energy shall compulsorily be supplied from renewable sources, thus only fuel & transportation component of Thermal power tariff will be escalable to accommodate escalation of fuel prices & transportation charges of thermal component.
  - b. Renewable Energy Component procured by distribution companies for fulfillment of RPO are exempted from payment of ISTS charges and transmission losses for the entire life of PPA of 25 years if project is commissioned within the cut-off date for waiver of ISTS charges and losses.
- 3.14. The combination of Renewable Power with firm Power from Thermal Power Project having domestic coal linkage is beneficial for AEML to ensure certainty in scheduling of power along with competitive cost.
- 3.15. It is further proposed the Scheduled Delivery Date on or before 30 June 2023 to avail the exemption for payment of Transmission Charges and application of transmission losses on ISTS network as exemption is available for projects that will be commissioned not later than 30 June 2023. A provision in the PPA has been incorporated that in an event the commissioning is delayed beyond 30 June 2023 and if any transmission charges and losses are applicable on the RE component same shall be borne by the Seller

- 3.16. AEML has an option to procure the power in a staggered manner to match the load curve whereby AEML may procure 600 MW by June 2023 and postpone the procurement of balance 400 MW by three to four years. By doing so, AEML will save fixed cost for initial three years but will have to bear the ISTS transmission charges and losses on deferred portion for entire term of 25 years on RE portion of the energy.
- 3.17. Whereas Procurement of power from 30 June 2023 may lead to a temporary surplus in the initial two to three years but the overall cost for the period of 25 years will still be cheaper as AEML will not have to pay transmission charges and transmission losses for minimum 51% of the generation for next 25 years. AEML will save significantly on ISTS transmission Charges and ISTS transmission losses and the possible escalation in transmission charges if those were to also become applicable if ISTS waiver was not to be availed.
- 3.18. Proposed additional 400 MW is proposed to be procured along with replacement of 600 MW Power in lieu of VIPL, considering the future demand growth in AEML Licensee area, beyond June 2023.
- 3.19. The surplus energy in the initial few years can be channelized through Short Term competitive bidding or through Power Exchanges.
- 3.20. Further, approved cost of Adani Dahanu Thermal Power Station (ADTPS) for MYT control period FY21 to FY25 is ranging from Rs 4.63 per unit to Rs 4.79 per unit. Presence of ADTPS in portfolio of AEML Distribution is important as it is an embedded generation and is essential to meet critical Base Load in the event of islanding till such a time more robust transmission capacity is added in Mumbai system.
- 3.21. The Proposed 1000 MW procurement can be used to optimize the ADTPS cost in case the discovered tariff is lower considering the RE component. Therefore, this can be considered as alternate economic supply for overall power purchase cost reduction.
- 3.22. AEML has proposed to take certain deviations from the Guidelines for procurement of power. Following is the list of deviations for approval of the Commission:

Sr No	Particulars	As per Guidelines	As per AEML Bid	Rationale
1	Delivery Point	CTU Interconnection Point	For intra - state Projects, metering shall be at the HV side of pooling substation of Maharashtra STU	The waiver of inter-state transmission charges and losses on transmission of the electricity generated from wind, solar or

			<p>For inter - state Projects Maharashtra STU Periphery.</p> <p>In respect of thermal capacity, any change in Maharashtra ISTS charges and ISTS losses over that on bid date will be adjusted (reimbursed / recovered) by AEML as per actuals through monthly bill. To clarify further Bidder will quote tariff at delivery point considering applicable Maharashtra ISTS charges and ISTS losses as on bid date for thermal component. However in case of variation in applicable Maharashtra ISTS charges and ISTS losses w.r.t. Maharashtra ISTS charges and ISTS losses applicable on bid date shall be adjusted (reimburse / recover) by AEML based on actuals applicable Maharashtra ISTS charges and ISTS losses.</p>	<p>wind/solar hybrid is applicable for project commissioning by 30th June 2023.</p> <p>Thus, to reduce the risk of applicability of these charges on the procurer due to any delay in commissioning by developer, the delivery point has been considered as STU periphery.</p> <p>Further to enable higher competition, state projects connected to STU substation are also eligible to participate in the tender.</p>
2	Payment Security Fund	Payment Security Fund shall be suitable to support payment of at least 3 (three) months billing of all the Projects tied up with such fund;	Deleted	<p>Both Payment security fund and State Government Guarantee has been provided as a optional security mechanism in the standard bidding guideline.</p> <p>AEML is providing LC as a payment security which is sufficient to cover the payments. Payment security fund will only block the funds</p>

				and will add to working capital.
3	State Government Guarantee	In addition to the payment security as per clause 7.3.1(i) and 7.3.1 (ii) above, the Procurer may also choose to provide State Government Guarantee, in a legally enforceable form, ensuring that there is adequate security to the Generator, both in terms of energy charges and termination compensation if any.	Deleted	same as above
4	Type of Source for supply of firm Non RE Power	.... Firm Power from any other source shall refer to power from any Power generating system.. other than Renewable Power...	Thermal Power plants having domestic coal Linkage are eligible to participate in Bid, .	There is ample amount of Domestic Coal is available in India & also prices of Domestic coal are stable in comparison with the imported Coal . With Increase in share of RE generation in total energy mix there is likely that domestic coal surplus will further increase and hence likely chances of getting coal at Competitive prices. In view the same, AEML proposed that Non RE Source shall be Thermal Power Project having Domestic Coal linkage
5	Tariff Quotes for Non RE Component i.e. Thermal	Bidder to quote Fixed component of Non RE Power and variable Component for Non RE Power	Bidder to quote Fixed component of thermal power and variable Component for thermal Power Escalable for fuel	To avoid estimation of schedule date of Commissioning by Bidders, we have proposed in the RFs that



		<p>Escalable for fuel and Transportation. These are escalated as per CERC escalation indices for payment purpose &amp; discount factor.</p> <p>The variable Components of Non RE Power shall be quoted as on Schedule date of Commissioning.</p>	<p>and Escalable for Transportation. The Fixed component of tariff for Thermal power shall be quoted for each year of the term of PPA . Bidder to quote variable Components of thermal Power escalable for fuel and escalable for transportation as on Bid submission Date.</p>	<p>bidders will quote variable components of thermal power as on the Bid submission date.</p>
6	Evaluation of Bid	<p>The bid evaluation parameter shall be the weighted average levelized tariff. 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 components of the Non RE power shall be quoted as on scheduled date of commissioning. levelized tariff shall be arrived at using the</p>	<p>Bid shall be evaluated based on the quoted tariff by Bidder. The quoted tariff shall comprise of four part – Fixed component of RE power , Thermal power and Variable components of Thermal power escalable for fuel and escalable for transportation. The Fixed component of tariff for Thermal power shall be quoted for each year of the term of PPA. The variable component of the Thermal power escalable for fuel and escalable for transportation shall be quoted as on bid submission date. The weighted average tariff will be evaluated as below ;</p> <ol style="list-style-type: none"> <li>1. The fixed component of RE</li> <li>2. Fixed Component of Thermal Power will be levelized based on the discount factor of <b>8.84%</b> as mentioned in RfS.</li> <li>3. Variable components of thermal power escalable for fuel and escalable for</li> </ol>	<p>As fuel source is proposed to be limited to domestic coal therefore escalation will be same for all bidders hence we propose to evaluate the variable components on the quoted tariff only.</p>

		CERC escalation indices for the type of fuel quoted by Bidder and discount factor mentioned in the Bidding Document	transportation shall be considered as quoted by bidder. 4. Based on Quoted RE energy supply and Thermal energy supply , weighted average tariff of bidder will be calculated .	
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3.23. The Draft RfS and PPA i.e. Bidding documents are prepared based on the Guidelines prescribed by MoP & amendments thereof. AEML requests the Commission to approve the said draft RfS and PPA along with the deviation as mentioned above.

3.24. On completion of the bidding process followed by e-reverse auction, AEML shall again approach to the Commission for adoption of Tariff discovered through the Competitive bidding process under Section 63 of the Electricity Act, 2003.

**4. MEDA in its reply dated 4 September 2020 (Prior to amendment of Petition) has stated as under:**

4.1. The State has sufficient potential for RE. AEML should prefer RE Projects based in Maharashtra.

4.2. AEML should mention the metering provision Clause in their bidding process document for each RE source and Thermal Source.

**5. AEML in its rejoinder dated 8 October 2020 (Prior to amendment of Petition) has stated as under:**

5.1. As per the guideline, renewable developer is free to set up their plant anywhere in the country. Further, adding any condition or restricting participants only from Maharashtra will be against spirit of competitive bidding and same may also impact real discovery of competitive rates.

5.2. AEML has provided appropriate provisions related to metering in the proposed document which shall be sufficient to meet requirements of RPO compliance.

6. At the e-hearing through video conferencing held on 29 April 2021, the representative of the AEML reiterated their submissions as made in the Petition. The Commission sought clarification on the below listed issues from AEML:

- a. Whether the projects are to be co-located?
- b. Applicability of Regulations while scheduling RE power in the scenarios where power is sourced within the State and outside the State.
- c. What is the expected range of price per unit?
- d. How Fixed and Variable charge being handled/recovered in Tariff?
- e. Evaluation of domestic coal Vs imported coal based on per GCV basis.
- f. What are the Safeguards against any policy changes?
- g. What will be the landed cost of coal?

The representative of AEML stated that they have clarified in the bidding documents that projects need not be co-located. The Commission granted 7 days' time to AEML to file their responses to the above queries.

**7. On 11 May 2021, AEML submitted its responses to the queries of the Commission:**

Regarding applicability of Regulations while scheduling RE power in the scenarios where power is sourced within the State and outside the State:

7.1. The power supply by the successful bidder is allowed from Inter-State Source or through Intra-State source under the bidding process. Currently, there are Regulations in place for scheduling, energy accounting and credit of RE for both the sources. Even today, under existing Solar Thermal PPA, AEML is currently sourcing 40 MW Solar power supply from the plant located in Rajasthan i.e., Interstate Transaction. Similarly, ~ 122 MW of non-solar RE PPAs are in place from which AEML is purchasing RE power on InSTS Network. Therefore, AEML is fully aware of the process and has already factored in associated operational challenges, if any.

7.2. Further the Clause 7.2(i) of the Guideline issued by MoP also provides as below:

*“Deviation Settlement Mechanism (DSM): For deviations from schedule, the DSM (Deviation Settlement Mechanism) shall be applicable as per the prevailing regulations. For RE component of the total power supplied, DSM as per RE regulations shall be applicable, and for non RE component, the DSM as per regulations applicable to non RE power plants shall be applicable. The DSM charges at the generator ends shall be settled by the RTC power generator.”*

7.3. (A) Interstate RE Generator:

For Interstate RE Power following Regulations will be applicable for Open Access, Scheduling & Settlement

1. CERC (Indian Electricity Grid Code) Regulations 2010 as amended from time to time,
2. CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2010 as amended from time to time,
3. CERC (Deviation Settlement Mechanism and Related matters) Regulations 2014 as amended from time to time (more specifically second amendment dated 7 August 2015). Under CERC Regulations, Scheduling of RE generation will be undertaken by RE Generator and deviation from the schedule, if any, will be settled by Generator only through RLDC/RPC. AEML will get power as per schedule, deviation from schedule, if any, will be settled by RE Generator. No such risk is on account of AEML.

However, if RE Generator revises the schedule from the day ahead declared availability and if any counter balancing revision is not done in the Thermal schedule, then such variations will have to be accommodated by AEML through Buy/sale transactions through PX/RTM. AEML will be subjected to State DSM deviations if Buy/Sale transaction is not undertaken 16 revisions/day are allowed to RE generator.

7.4. (B) Intra State RE Generator:

Scheduling and Settlement of RE generation is done under MERC (Forecasting, Scheduling and Deviation Settlement for Solar and Wind Generation) Regulations, 2018 (RE DSM) as amended from time to time. Under this Regulations RE Generator will schedule the day ahead supply based on the forecasted generation. Generator can undertake 16 revisions in the forecast throughout the day. RE Generator will be subjected to RE DSM Regulation and will have to pay penalty to the pool for deviations from schedule. AEML will not be subjected to RE DSM charges, however as per the provisions of the RE DSM Regulations AEML gets the energy credit as per actual meter reading only. Therefore, any deviations of RE generator will have impact on energy balance of AEML. However, if RE generator revises schedule and does not undertake counter balancing revision in Thermal schedule then AEML will have to manage such schedule revision by undertaking Buy / Sale transaction on PX/RTM based on the nature of revision.

Regarding Expected per unit price range:

- 7.5. AEML is expecting per unit range between recently discovered tariff in concluded Tenders for Renewable and Thermal segment.
- 7.6. The procurement proposed by AEML under MoP Guidelines is going to be unique and first of its kind bidding in the country. There is no precedent of outcome of such bidding till date

in the country. AEML is also for the first time proposing procurement under present guidelines. Hence, it is very difficult to predict a price till the outcome of bid process. However, we expect that overall tariff is to be very competitive as compared to stand alone thermal tariffs as power will be complemented with renewable component.

- 7.7. Recently procurement of Aggregated Power of 2,500 MW for 3 years through PFC ltd as nodal agency and PTC India ltd as aggregator-Pilot Scheme- Medium Term.

<b>Bid</b>	<b>MW</b>	<b>Tariff Discovered (INR / kWh)</b>	<b>Date of E-RA</b>
Pilot Scheme 1	2500	4.24	06-Jul-18
Pilot Scheme 2 - A <i>[ultimately cancelled]</i>	2500	4.41	18-Apr-19
Pilot Scheme 2 - B <i>[power allocation pending]</i>	2500	3.26	07-Feb-20

The above tariffs were at plant bus however in the present bid AEML has asked for the prices at Maharashtra periphery i.e. inclusive of transmission charges and losses up to Maharashtra periphery.

Regarding Fixed Charge recovery in tariff

- 7.8. As per the guidelines, Bidders are required to quote four components of Tariff separately.
- a. RE tariff as single number applicable for entire term of PPA
  - b. Fixed Charge for Thermal Component of Power
  - c. Variable charges for thermal component of Power escalable for fuel price variations
  - d. Variable charges for thermal component of Power escalable for transportation cost variation
- 7.9. The Fixed charge for Thermal power is required to be quoted for each year of the term of PPA. The fixed charge of Thermal power shall be paid based on the monthly available capacity from Thermal sources at the rate of Thermal power fixed tariff quoted by the Bidder applicable for that Contract Year.
- 7.10. The variable component of Thermal power shall be paid for the energy supplied from thermal source and shall be paid at the rate of variable component of thermal power escalable for fuel, and variable component of thermal power escalable for transportation tariff applicable for that Contract Year after adjusting as per escalation index notified by CERC for payment purposes from time to time.
- 7.11. The Renewable energy supplied shall be paid at the rate of RE (fixed) tariff as quoted by the Bidder.

7.12. Further, for the Thermal Component of Power, considering the delivery point for supply of power at Maharashtra Periphery, it is proposed that any change in Maharashtra ISTS charges and ISTS losses over that on bid date will be adjusted (reimbursed / recovered) by AEML as per actuals through monthly bills. To clarify further, Bidder will quote tariff at delivery point considering applicable Maharashtra ISTS charges and ISTS losses as on bid date for thermal component. However, in case of variation in applicable Maharashtra ISTS charges and ISTS losses w.r.t. Maharashtra ISTS charges and ISTS losses applicable on bid date shall be adjusted (reimburse / recover from Bidder) by AEML based on actuals applicable Maharashtra ISTS charges and ISTS losses.

Regarding Evaluation of domestic coal Vs imported coal based on per GCV basis

7.13. Evaluation of Domestic Coal Vs Imported Coal on per CV basis is tabled Below:

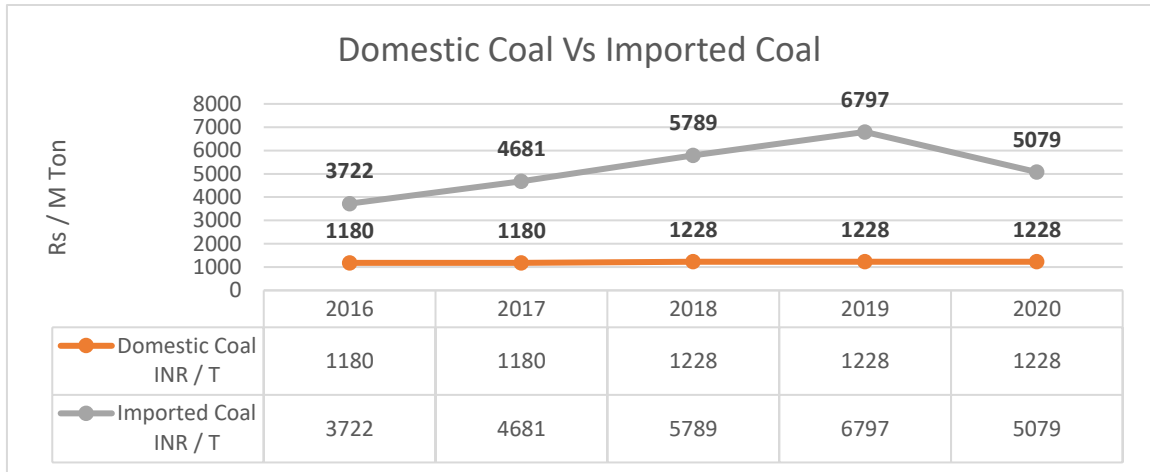
Year	Domestic Coal		Imported Coal	
	INR / T (Ref: Note 1)	Per CV Cost For 4600 GCV	INR / T (Ref: Note 2)	Per CV Cost For 6322 GCV
2016	1180	0.26	3722	0.59
2017	1180	0.26	4681	0.74
2018	1228	0.27	5789	0.92
2019	1228	0.27	6797	1.08
2020	1228	0.27	5079	0.80

Note 1: Domestic Coal Prices considered are for CIL G-10 Grade for WCL.

Note 2: Imported Coal Prices derived on the basis of average HBA for the Year and Average INR - USD Exchange Rate are tabled below-

Year	HBA USD / T (FOB)	Exchange Rate INR – USD	Converted Price in INR / T
2016	56.89	65.4	3722
2017	69.81	67.1	4681
2018	89.80	64.5	5789
2019	97.21	69.9	6797
2020	71.65	70.9	5079

The below graph represents the same:



Regarding Safeguards against frequent policy changes

7.14. Till date the Change in law events have occurred on following two accounts:

- a. Under New Coal Distribution Policy (NCDP), coal-based plants were assured of coal linkage hinterland plants at 90% of normative coal requirement and allocation to coastal plants was made at 70% of normative coal requirement. However, coal linkages were not awarded to all coal-based power plants there by resulting in to Change in Law claims.
- b. 90% ACQ was committed under NCDP which was changed to 65% thereby resulting in Change in Law Claims.

7.15. AEML in the present bid has covered both the above scenarios, as bids are called form the generators having existing coal linkage thereby eliminating the risk of non-allocation of coal. The second scenario was on account of reduction in committed quantity to 65%, 67% and 70% of ACQ against commitment of 90% in NCDP. In the current bid the subsisting commitment against ACQ will be subsumed in the bid thereby eliminating any Change in Law claim on this account.

7.16. This is pertinent to note that the criterion for allocation of linkage quantum for the capacities under NCDP regime i.e., at 90% and 70% of normative requirement, has been done away with and the MOC has instructed to allocate coal at 100% of normative requirement.

Regarding Escalation based fuel cost Vs landed fuel cost of coal.

7.17. As per the guideline issued by Ministry of Power (MoP), bidders are required to quote variable component of Thermal Power escalable for fuel and escalable for transportation cost

as separate component. Coal cost can be verified from the price notification of Coal India and Transportation cost can be mixed of road and rail transportation and hence proposed to be kept separate in line with the guideline.

- 7.18. The guidelines issued by MoP do not provide for landed cost concept. Therefore, adopting landed cost concept will be deviation from MoP guidelines. In case, the Commission advises us for seeking the landed cost in addition to escalable costs, then AEML will not have any objection and it shall abide by the directions of the Commission in this regard.
- 7.19. However, it is pertinent to note that evaluation and payment shall be as proposed in the bid documents in line with the guidelines.
- 7.20. If both the components of thermal capacity are combined i.e., Energy Charges and Transportation charges it will add additional risk to bidders since Energy charges and Transportation charges shall escalate at different rate and merging transportation charges in energy charges will add risk to the bidder and tariff will not be cost reflective.

### **Commission's Analysis and Rulings**

8. AEML has filed the present Petition seeking approval for procurement of 1000 MW of Power from grid connected Renewable Energy (RE) Power Projects, complemented with Power from Coal based Thermal Power Projects on Round the Clock (RTC) basis. The MoP has notified the bidding guidelines for the same vide Notification F. No. 23/05/2020-R&R dated 22 July 2020 and amendments dated 3 November 2020 & 5 February 2021. Further, AEML has sought approval to the proposed deviations in bidding documents from the SBG.
9. AEML has submitted that due to termination of PPA with VIPL, its share of short-term Power procurement has increased which is not sustainable in a longer run. Further, it has signed long term contract for 700 MW wind plus solar hybrid power which is expected to be available from FY 2021-22 and will meet peak power & part of load curve, at about 50 -55% CUF.
10. AEML has further submitted that with its growth forecast, it has observed that major portion of its proposed power gets absorbed in initial 2-3 year time. In order to ensure reliable power at competitive rates, fulfilment of RPO and to ensure certainty of scheduling, it has proposed to procure 1000 MW Round-the-Clock (RTC) Power from Grid-Connected RE Power Projects, complemented with firm power from thermal Power Project having domestic Coal linkage, under Tariff-based Competitive Bidding.
11. Clause no. 3.1.1 (b) of MoP Guidelines for '*Tariff Based Competitive Bidding Process for Procurement of Round-The Clock Power from Grid Connected Renewable Energy Power Projects, complemented with Power from Coal Based Thermal Power Projects*' dated 22 July



2020 states that procurer shall seek approval of the Appropriate Commission for deviations, if any, in the draft RfS, draft PPA and draft PSA (if applicable). Accordingly, AEML has approached the Commission for seeking approval for deviations in the standard bidding documents (RfS) with respect to the MoP Guidelines dated 22 July 2020.

12. Based on submission made in present proceeding, the Commission notes that following issues needs to be addressed in the present matter:

- a. Whether proposed power procurement process for 1000 MW is aligned with demand-supply projections of AEML?
- b. Whether deviation sought by AEML in present proceedings is to be allowed?

The Commission is addressing above issues in following paragraphs.

**13. Issue A: Whether proposed power procurement process for 1000 MW is aligned with demand-supply projections of AEML?**

13.1. The Commission notes that while proposing power procurement of 1000 MW, AEML has submitted demand-supply projections for 26 years. AEML has assumed following year-on-year load growth over 26 years:

<b>Period</b>	<b>FY 2020-21 to FY 2029-30</b>	<b>FY 2030-31 to FY 2034-35</b>	<b>FY 2035-36 to FY 2039-40</b>	<b>FY 2040-41 to FY 2045-46</b>
Number of Years	10 years	5 years	5 years	6 years
Load Growth Considered	5% per year	4% per year	3% per year	2% per year

As per AEML, its recorded peak demand of 1677 MW in FY 2019-20 would reach up to 4657 MW in the FY 2045-46 as per above assumption of demand projections. While arriving at supply gap based on above said load projections, AEML has considered existing contracts with own generating station at Dahanu to the extent of 500 MW (455 MW net of Auxiliary Power), ~162 MW from long term RE contracts and 700 MW wind plus solar hybrid power which is expected to be available from FY 2021-22. AEML has also projected Rooftop Solar PV project capacities and deducted the same from load growth before arriving at capacity which needs to be contracted through long term contract for reducing its dependency on short term contracts. AEML has also stated that it has option to procure the power in a staggered manner to match the load curve whereby it may procure 600 MW by June 2023 and postpone the procurement of balance 400 MW by three to four years. However, by doing so, AEML will save fixed cost for initial three years but will have to bear the ISTS transmission charges and losses on deferred portion for entire term of 25 years on RE portion of the energy. Therefore, AEML has proposed procurement of 1000 MW of RE power

supplemented by Thermal Power based on domestic coal. AEML has stated that surplus energy in the initial few years can be channelized through Short Term competitive bidding or through Power Exchanges. Further such power procurement can be used to optimize the Dahanu generation cost in case the discovered tariff is lower considering the RE component. Therefore, this can be considered as alternate economic supply for overall power purchase cost reduction.

- 13.2. In this regard, the Commission notes that in its recent Multi Year Tariff (MYT) Order dated 30 March 2020 which is applicable for Control Period of FY 2020-21 to FY 2024-25, it has made following observations on AEML's power procurement plan submitted in that Petition:

*“It is observed that the quantum of power purchase from short-term sources has been high in case of AEML even in the past, and ranges around 30-40% of the total power purchase quantum. For the next Control Period, the quantum of power purchase from short-term sources projected by AEML is in excess of 50% of the total energy requirement, and is projected to reduce to around 30-33% by the end of the next Control Period. This is a very high reliance on short-term power purchase, given the price volatility of such short-term power and the uncertainty attached to such short-term power. It is expected that a Distribution Licensee of the size of AEML supplying electricity to consumers in the financial capital of the country, would secure the power supply by tying-up power from long-term/medium-term sources at optimum rates for the bulk of its requirement and rely on short-term power for only around 10-12% of its power requirement. The Commission accordingly directs AEML to rationalise its Power Procurement plan with the view to ensure security of power supply at the most optimum rates, so that the consumers are not subjected to any risks of supply failure or spike in the power purchase rates.” [emphasis added]*

Thus, the Commission has directed AEML to rationalize its power procurement plan by tying up power from long-term/medium term contracts so as to reduce large dependency on short term contracts.

- 13.3. Accordingly, in present Petition, AEML has proposed procurement of 1000 MW on long-term basis based on demand-supply projections as enclosed in 'Annexure-A'. While scrutinizing said demand-supply projections, the Commission notes that for the period of FY 2020-21 to FY 2024-25, AEML has assumed higher annual growth rate of 5% as against 2% annual growth rate considered by the Commission in MYT Order. AEML has not explained or suitably justified such higher rate of demand projection. Comparison of projected energy requirement at G< >T periphery for the period of FY 2020-21 to FY 2024-25 is tabulated below:

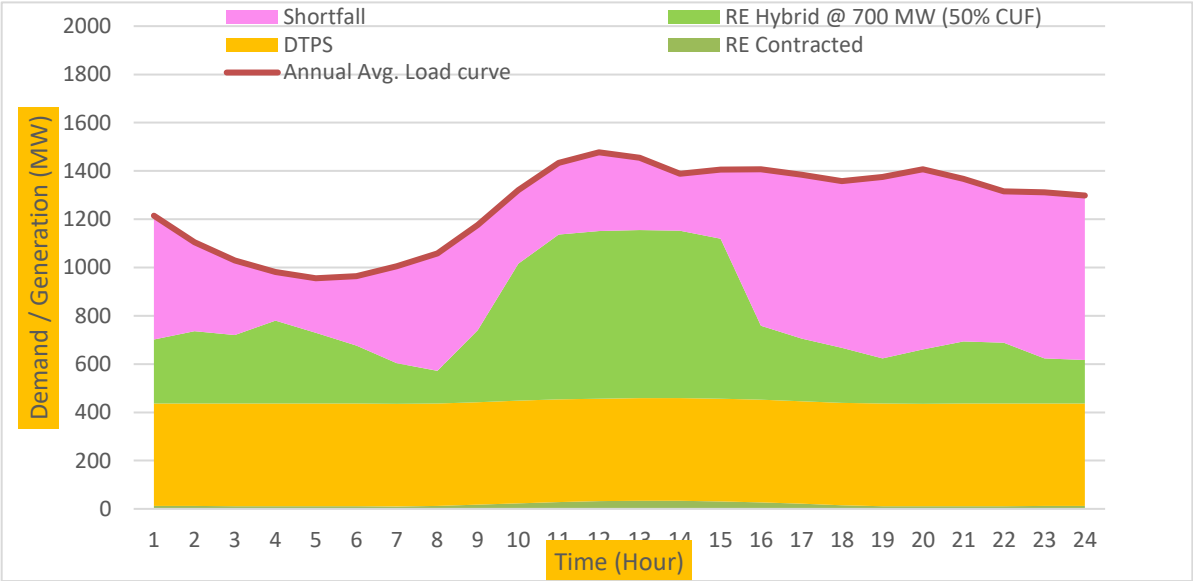
Energy Requirement at G <> T Periphery	UoM	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
As MERC MYT Order dated 30 March 2020 (A)	MU	9870	10082	10297	10515	10737
As proposed by AEML in this Petition (B)	MU	10139	10708	11321	11985	12703
Higher Projections w.r.to MYT Order (C=B-A)	MU	270	626	1024	1469	1966
	%	3%	6%	10%	14%	18%
Actual based on FAC submissions of AEML	MU	8305	Not Applicable			
Actual Vs MERC Projection	%	-16%				

As can be seen from above, as AEML has used higher annual growth rate (5% instead of 2% considered in MYT Order), difference between AEML's projection and approved numbers in MYT Order increased from 3% in FY 2020-21 to 18% in FY 2024-25. Further, on account of Covid-19 pandemic circumstances, actual energy requirement for FY 2020-21 (based on FAC submissions of AEML) is 16% lower than that was approved by the Commission in MYT Order. AEML in its present Petition while projecting sales growth needs to factor in such impact of Covid-19 circumstances which may impact the demand for few more years. Therefore, prima facie, the Commission is of the opinion that AEML's demand projections based on which it has arrived at power requirement of 1000 MW is on higher side, atleast in the MYT control period and hence needs to be revisited by them. Even if it is assumed that the power requirement/ projection of 1000 MW, as considered by AEML is correct, the same needs to be justified in detail over the entire contract period of 25 years.

- 13.4. The Commission also notes that, AEML itself has stated that 1000 MW power requirement would lead to surplus in initial four to five years. In view of above analysis of AEML's demand projection, the Commission is of the opinion that, such surplus could be more than that has been projected by AEML. Hence, it is important to have realistic projections of demand based on which realistic quantum for power procurement can be worked out. This exercise will be necessary to ascertain the financial impact of surplus power on the power purchase costs.
- 13.5. The Commission opines that AEML is correctly proceeding in the direction of replacing its short-term power dependency with longer duration contracts for ensuring reliable availability of the power for meeting its consumer demand. However, before taking final decision on procurement of 1000 MW, AEML must have carried out detailed and proper due diligence and its operational and financial impact (esp that of surplus power in the initial years). From the details submitted in the Petition, the Commission did not find such analysis undertaken by AEML on these aspects.

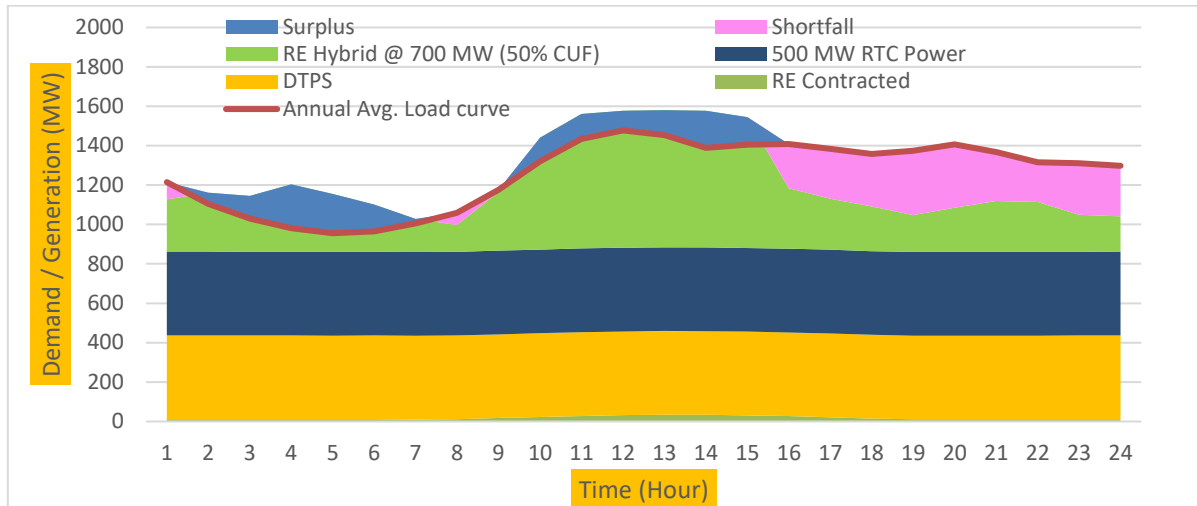
13.6. AEML while justifying contracting for surplus capacity has stated that benefit of exemption in Inter-State transmission charges and losses is available only till 30 June 2023 and such exemption if availed would be more beneficial than paying fixed cost burden for thermal capacity during initial years of having surplus capacity. In this regard, the Commission notes that such assumption of AEML is depending upon tariff rate which will be discovered through competitive bidding process. Therefore, the Commission during the hearing had directed to submit indicative rate which they are expecting through competitive bidding process. In reply, AEML stated that as this would be first of its kind bidding, it is difficult to estimate about tariff which can be discovered. As economics of contracting surplus capacity would be depending upon the rate which will be discovered through bidding process, AEML needs to contract such power in phased manner. To start with, AEML needs to bid for base requirement which will create less surplus as per load curve requirement. Needless to say, AEML must be expecting the tariffs from this procurement will lower the cost of power from the present levels. Power security/adequacy and the tariffs thereof need to be the two most important features of any power procurement plan.

13.7. For arriving at such base bidding capacity, the Commission has attempted to correct Load Curve submitted by AEML for FY 2024-25 in this Petition with demand projections approved in MYT Order (without considering impact of Covid-19 circumstances-thus the Demand is considered on higher side). Corrected Load Curve is shown below:



Thus, 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. If additional procurement of 500 MW on RTC basis is considered, then above Load Curve will be updated as follows (The Commission estimated Demand Projection needs to be studied and confirmed

by AEML by using the standard data and the standard tools used for accurate Demand Projection):



As can be seen from above Load Curve, 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 (complementing the daily load curves of other Distribution Licences), if it is economical. It is also important to note that while contracting power on Long term basis (25 years), contracting for higher capacity may be a lost future opportunity of contracting fresh power at cheaper rate which may become available due to technological/financial developments. Thus, to the extent possible, the exercise of risk balancing needs to be carried out for such long term commitments, by assuming and considering all the future possibilities.

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.

**14. Issue B: Whether deviation sought by AEML in present proceedings is to be allowed?**

14.1. AEML has sought following deviations from the MoP's Guidelines:

- A. Delivery Point as Maharashtra STU Periphery instead of CTU Interconnection Point
- B. Provision for Payment Security Fund and State Government Guarantee to be deleted.
- C. Type of Source for supply of firm Non RE Power restricted to domestic coal.
- D. Evaluation of Bid with respect to the Escalation Factors.
- E. Variable Components of Non RE Power to be quoted as on Bid Submission date instead of Schedule date of Commissioning.

14.2. Before dealing with the deviations sought by AEML, the Commission would like to emphasize that as per Section 63 of the Electricity Act, 2003, the Government of India is empowered to notify bidding guidelines for procurement of power through competitive bidding process. This is with the intention to have uniformity in bidding conditions across the country. Once such guidelines are notified, all stakeholders need to comply with these guidelines. Considering practical difficulties which may arise during implementation, such guidelines also empower the appropriate Commission to allow deviation sought from the bidding guidelines. While allowing such deviation, one needs to ensure that basic premise of bidding guideline remain unaltered. If we allow the deviation which are contradicting / radically deviating from bidding guidelines then it will undermine very basis of having uniform bidding guideline under Section 63 of the Electricity Act, 2003. With this background, the Commission is dealing with the deviation sought by AEML in instant Petition.

**14.3. a) Delivery Point as Maharashtra STU Periphery instead of CTU Interconnection Point:**

- i. As per the SBG, the Delivery Point shall be the CTU Interconnection Point. AEML has sought deviation to this parameter by specifying that for the Intra-State projects, the metering shall be at the HV side of the pooling substation of Maharashtra STU and for Inter-State projects, it shall be at Maharashtra STU Periphery.

- ii. AEML has highlighted that the waiver for the Inter-State Transmission charges and Losses from the wind, solar and wind-solar hybrid projects is applicable till 30 June 2023. Any delay in commissioning from this date shall attract the charges for Inter-State Transmission and losses which shall be borne by the project developer and reduces its risk. Further, to enable higher competition, State projects connected to STU substations shall also be eligible to participate in the bidding process.
- iii. The Commission notes that the deviation sought by AEML will result in better participation in the bidding process and further, will reduce AEML's risk and hence that of the end consumer, in case there is any delay in commissioning by the RE project developer beyond 30 June 2023. Accordingly, the Commission is inclined towards this deviation sought by AEML and allows the same.
- iv. The Commission also notes that MoP vide their notification dated 21 June 2021 has extended the concession of waiver of transmission charges for projects commissioned before June 2025. Relevant part of said notification is reproduced below:

*“2.0 I am directed to convey the following decisions with respect to the waiver of such Inter-State Transmission system (ISTS) charges:*

- a. *Extension of the waiver of Inter-State Transmission system (ISTS) charges on transmission of electricity generated from solar and wind sources for projects to be commissioned up to 30<sup>th</sup> June 2025.*

.....

*3.0 It is also clarified that waiver is allowed for inter-state transmission charges only and not losses.”*

14.4. **b) Provision for Payment Security Fund and State Government Guarantee to be deleted.**

- i. AEML has proposed to delete the Clause pertaining to the Payment Security Fund, which provides security of payment for at least 3 months of billing to the project developer. Further, it has proposed to delete the Clause for State Government Guarantee, as reproduced below:

***“7.3.1 Scenario 1: Direct Procurement by Procurer from Generator:***

*The Procurer shall provide payment security to the Generator through:*

- (i). ***Revolving Letter of Credit (LC) of an amount not less than 1 (one) months' average billing for the Project under consideration;***

**OR**

*(ii). **Payment Security Fund**, which shall be suitable to support payment for at least 3 (three) months' billing of all the Projects tied up with such fund;*

*(iii). In addition to payment security as per clauses 7.3.1(i) and 7.3.1(ii) above, the Procurer may also choose to provide **State Government Guarantee**, in a legally enforceable form, ensuring that there is adequate security to the Generator, both in terms of payment of energy charges and termination compensation if any."*

- ii. AEML has submitted that both Payment security fund and State Government Guarantee has been provided as an optional security mechanism in the SBG and it is providing Letter of Credit (LC) as a payment security which is sufficient to cover the payments. Further, the Payment security fund will block the funds and increase the working capital.
- iii. The Commission notes that similar deviation was sought by Tata Power Company Limited - Distribution (TPC-D) seeking approval for procurement of 150 MW solar power through competitive bidding mechanism under Case No. 136 of 2019. The Commission in its Order dated 2 August 2019 accorded its approval to TPC-D. The relevant excerpts from the said Order are as below:

*"22. Deleting Clause 5.3.1(b) Payment Security Fund: TPC-D has proposed to delete sub-clause 'b' of clause 5.3.1 of Bidding Guidelines which is reproduced below:*

***"5.3.1. Scenario 1: Direct Procurement by Procurer from Solar Power Generator:***

*The Procurer shall provide payment security to the Solar Power Generator through:*

*a) **Revolving Letter of Credit (LC)** of an amount not less than 1 (one) month's average billing from the Project under consideration;*

*AND,*

*b) **Payment Security Fund**, which shall be suitable to support payment for at least 3 (three) months' billing of all the Projects tied up with such fund;*

*c) In addition to a) & b) above, the Procurer may also choose to provide State Government Guarantee, in a legally enforceable form, ensuring that there is adequate security to the Solar Power Generator, both in terms of payment of energy charges and termination compensation if any."*

*In support of its proposal, TPC-D stated that it has a good payment record to the banks and its creditors and has already provided Letter of Credit in the Draft PPA as a payment security mechanism.*

*23. In this regard, the Commission is of the view that the MoP has prepared the bidding guidelines keeping various scenarios in view. A firm Payment Security Mechanism helps*



*in building trust and create confidence among the bidders and its Financial Institutions. The Revolving Letter of Credit ensures safeguarding the developer of project under specific PPA against any default in payment of energy supplied. Whereas, Payment Security Fund, is not limited to project under this PPA, but include all such PPAs entered by the buyer. Hence, buyer needs to maintain such fund which is equivalent to three month's billing of all such PPA which can be used for payment of energy bill or termination compensation, if any. However, there is no clarity as to how this fund would be financed and who would be bearing its cost. **Considering the payment track record of Tata Power and provisioning of letter of credit as payment security mechanism, Commission holds that Clause 5.3.1 is sufficiently complied even if no separate payment security fund is created. Therefore, the Commission accepts the proposal of TPC-D to delete clause relating to Payment Security Fund.**” [Emphasis added]*

- iv. In the instant Petition also, AEML has submitted that it will be providing the LC and considering its payment track record, the Commission is aligned with the proposal of AEML to delete the Clauses relating to Payment Security Fund and the State Government Guarantee.

14.5. **c) Type of Source for supply of firm Non RE Power restricted to domestic coal.**

- i. AEML has submitted that for Non-RE component, it has proposed to restrict the Thermal Power projects having domestic coal linkages only. Hence, only such projects will be eligible to participate in the bid.
- ii. AEML has provided the rationale that there is ample quantity of Domestic Coal available in India & also prices of Domestic coal are stable in comparison with the imported Coal. Further, it has submitted that with increasing share of RE generation in total energy mix there is likely that domestic coal surplus will further increase and hence likely chances of getting coal at Competitive prices. Hence, it has proposed to restrict the thermal projects having domestic coal linkages as eligible bidders.
- iii. Further, the Commission notes that in response to its queries raised during the e-hearing, AEML in its response dated 11 May 2021 has highlighted that the Cost per GCV of domestic coal is lower than the imported coal. Also, it has demonstrated that variability in the prices of Imported coal is higher than the Domestic coal.
- iv. The Commission notes that MoP has issued second Amendment dated 3 November 2020 to the Guidelines for ‘Tariff Based Competitive Bidding Process for Procurement of Round-The Clock Power from Grid Connected Renewable Energy Power Projects, complemented with Power from Coal Based Thermal Power Projects’. The MoP has amended the provision

of complimenting firm power from coal based thermal projects to any other Power (Non-RE Firm Power) or Storage:

*2.2 The Para at point no 1.1.5 “The developments in renewable energy sector and the necessity to address the issues of intermittency, limited hours of supply and low capacity utilization of transmission infrastructure presents a case for “bundling”, wherein coal based thermal power is bundled with renewable energy, and provided round-the clock to the distribution company (DISCOM). In other words, thermal power can be utilized to balance renewable energy and provide round the clock (RTC) power to the DISCOM thereby obviating the need for DISCOMs to balance power.”*

**May be read as under:**

*“The developments in renewable energy sector and the necessity to address the issues of intermittency, limited hours of supply and low capacity utilization of transmission infrastructure presents a case for “bundling”, wherein firm power from any other source or storage is bundled with renewable energy, and provided round-the-clock to the distribution company (DISCOM). **In other words, firm power from thermal/ hydro or other sources or storage can be utilized to balance renewable energy and provide round the clock (RTC) power to the DISCOM thereby obviating the need for DISCOMs to balance power.***

.....

*“2.4 The Para at point no 1.2.1(a) “To provide Round-The-Clock (RTC) power to the DISCOMs from renewable energy sources complemented/balanced with power from coal based thermal power;”*

**May be read as under**

*“To provide Round-The-Clock (RTC) power to the DISCOMs from renewable energy sources **complemented/balanced with firm power from any other source;**”*

Further, the MoP vide its amendment dated 3 November 2020 has revised the Title of the guidelines as **“Tariff Based Competitive Bidding Process for Procurement of Round-The Clock Power from Grid Connected Renewable Energy Power Projects, complemented with Power from any other source or storage.”**

- v. Further, the Commission notes that in the SBG, as notified on 22 July 2020, there was a provision for the procuring agency to specify the type of coal, whether domestic or imported, in the RfS. This provision was later removed by way of amendment dated 3 November 2020:

*2.6 The Para at point no 2.2 (c) “**Thermal Power**’: (i) The term ‘Thermal Power’, wherever used in these Guidelines, shall refer to power from coal based Thermal Power Generating Systems. Such generating systems shall include thermal power plants which*

*are already, partly or fully, commissioned before the issuance of bids or are under construction at the time of issuance of bids, but have spare generation capacity that can be made available for long-term supply of RTC Power under these Guidelines.*

*(ii) Thermal Power plants based on both domestic and imported coal can participate, however, whether the fuel is domestic coal or imported coal, needs to be clearly stipulated beforehand in the (Request for Selection) RfS document.*

*(iii) The ‘\_spare capacity’, referred in clause 2.1.2(c)(i) above, is that capacity of a thermal power generating system that is unencumbered from any power supply commitments or power purchase agreements and is available for augmenting the proposed RE power under these Guidelines.*

**May be read as under**

*‘Firm Power from any other source’:*

*(i) The term ‘Firm Power from any other source’, wherever used in these Guidelines, shall refer to power from any Power Generating Systems other than Renewable Power. Such generating systems shall include power plants which are already, partly or fully, commissioned before the issuance of bids or are under construction at the time of issuance of bids, but have spare generation capacity that can be made available for long-term supply of RTC Power under these Guidelines.*

*(ii) The ‘spare capacity’, referred in clause 2.1.2(c)(i) above, is that capacity of a power generating system that is unencumbered from any power supply commitments or power purchase agreements and is available for augmenting the proposed RE power under these Guidelines.”*

- vi. In view of above, the Commission opines that restricting non-RE source only to domestic coal based thermal station will make competitive bidding process restrictive and will be against the basic objective of procuring power through transparent competitive bidding mechanism. Therefore, the Commission is not aligned with the deviation sought by AEML to restrict the supply of firm Non-RE power from projects based on domestic coal linkages only. Hence, the Commission directs AEML to revise its Bidding documents by including provisions for Firm Power from any other sources which shall be technology agnostic. If AEML’s assessment of domestic coal-based power plant is correct then such plant would still emerge as lowest bidder in the competitive bidding process.

**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.
- 14.7. **e) Variable Components of Non RE Power to be quoted as on Bid Submission date instead of Schedule date of Commissioning.**
- i. AEML has submitted that as per the SBG, the variable Components of Non RE Power shall be quoted as on Schedule date of Commissioning. To avoid estimation of scheduled date of Commissioning by Bidders, it has proposed in the RfS that bidders will quote variable components of thermal power as on the Bid submission date and thereafter will be escalated as per escalation index published by the CERC.
  - ii. The Commission notes that as per competitive bidding process for conventional sources of energy, rate for variable component is to be submitted on bid date and thereafter it is escalated as per Escalation Index published by CERC. Whereas in bidding process for non-conventional sources of energy, as there is no variable component, fixed tariff rate normally sought on date of commissioning. In present matter, as both type of sources are to be involved, in the opinion of the Commission, it is appropriate to quote variable rate of non RE power on bid submission date and thereafter escalate it as per CERC Index. This will also reduce the risk of the prospective bidders. Therefore, the Commission is inclined towards the deviation sought by AEML and allows the same.
15. In addition to above, while scrutinizing bidding documents, the Commission observes that generator will be eligible for compensation to the extent of reduced take off by distribution licensee. Such compensation in respect of RE source is linked to fixed tariff quoted for RE source and in case of non-RE source it is linked to fixed component of non-RE tariff. However, in case power from non-RE source is not scheduled due to Merit Order Operation, it is not eligible for such compensation. Due to such condition in bidding document, bidder may quote low variable charges so as to ensuring dispatch under MoD principle and load balance cost into the fixed charges. To avoid such situation, in the opinion of the Commission, bid document needs to include percentage ceiling on fixed tariff contribution in total tariff of non-RE source. The Commission notes that in competitive bidding process prescribed for thermal sources, 60%

limit is prescribed for fixed component of tariff in total tariff. AEML shall include such limit in its bidding document.

16. In view of above, the Commission rules that AEML shall modify the Bidding document as per Commission's ruling in earlier paragraphs. Thereafter, AEML shall submit the modified Bidding documents to the Office of the Commission for information and in parallel, shall initiate the bidding process with the deviations approved in the instant Petition. AEML may approach the Commission for any further deviation, if required.
17. The Commission also notes that as per Competitive Bidding Guidelines no ceiling rate needs to be prescribed in bidding process. However, considering no rate has been discovered yet for such type of bidding process, the Commission had enquired with AEML to submit estimated tariff rate which they expect to be discovered through bidding process. However, AEML has submitted that it is difficult to estimate the same. The Commission is aware of the similar tender of SECI, where there was a possibility of availability of discovered tariff for reference purpose. However, the last date for this tender has been further extended. The Commission notes that proposed power procurement is for replacing short term power procurement. In MYT Order dated 30 March 2020, the Commission has considered Rs. 3.50/kWh as short-term power procurement for the Control Period of FY 2020-21 to FY 2014-25. Any rate discovered below that would reduce the power purchase cost of AEML. Hence, discovered rate post bidding process needs to be analysed and justified in that perspective. In case discovered rate is higher than Rs. 3.50/kWh, AEML may be required to explore feasibility of power procurement through other cheaper sources before going ahead with such discovered rate.
18. As explained in earlier part of this Order, demand-supply projections as worked out by AEML either need to be revisited or need to be justified. Hence, though the Commission in-principle approves the long term power procurement petition, based on its analysis, the Commission directs AEML to procure the power in phased manner by initiating bidding process for 500 MW in first phase and subject to conditions stipulated in earlier part of this Order.
19. Alternatively, as mentioned in para 13.9 above, AEML can carry out a detailed analysis based on the observations of the Commission in paras 13.1 to 13.8 and resubmit a fresh petition justifying the requirement of 1000 MW alongwith the financial sensitivity analysis. In this case and subject to reasonability of tariff and justification of Demand projection, AEML can consider the tender of 1000 MW with a Green shoe option (500 MW+500MW) as was opted in the long term power procurement contract of 700 MW which had a Green Shoe option (350 MW+350 MW).

20. AEML has to undertake detailed study of its demand-supply projections on realistic parameters including possible impact of COVID-19 circumstances and then arrive at quantum of power to be procured by exercising their option under para 18 or para 19 of the order.
21. It is important to note that MoP vide its recent notification dated 21 June 2021 has extended exemption for inter-state transmission charges till 30 June 2025, this provides sufficient time for AEML to undertake detailed study of its demand-supply projections before it can initiate bidding process.
22. Hence, the following Order:


**ORDER**

1. **Case No. 140 of 2020 is Partly allowed.**
2. **Adani Electricity Mumbai Ltd is allowed 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 as per para 18 or file a fresh petition as contemplated in para 19 .**
3. **Adani Electricity Mumbai Ltd. to modify the Bidding Documents as per the dispensation provided in the above paras 13, 14, 15 and 18.**
4. **The Renewable Power procured by Adani Electricity Mumbai Ltd. from this project shall be counted towards its Renewable Purchase Obligation Targets for the respective periods.**

Sd/-  
(Mukesh Khullar)  
Member

Sd/-  
(I.M. Bohari)  
Member

Sd/-  
(Sanjay Kumar)  
Chairperson

  
(Abhijit Deshpande)  
Secretary



