



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2023-24/ 0577

Date: 2 November, 2023

To,
The Chief Executive Officer,
Adani Electricity Mumbai Limited,
Devidas Lane, Off SVP Road,
Near Devidas Telephone Exchange
Borivali (W), Mumbai – 400 092

Subject: Prior approval of Fuel Adjustment Charges (FAC) submissions of AEML-D for the month of August 2022.

- Reference:**
1. AEML-D FAC submission for the month of August 2022 vide email dated 19 November, 2022.
 2. The data gaps were communicated vide emails dated 23 December, 2022 and 5 January, 2023.
 3. AEML-D replied vide emails dated 27 December, 2022 and 17 January, 2023.

Sir,

Upon vetting the FAC calculations for the month of August, 2022 as mentioned in the above reference, the Commission has accorded approval for charging FAC amount of **Rs. 151.83 Crore**. As FY 2022-23 is already over and Provisional Truing-up of FY 2022-23 has also been done by the Commission in the recent MTR Order dated 31 March, 2023, the revised power purchase cost resulting in FAC is already adjusted in the said MTR Order. Accordingly, the FAC chargeable to consumers is as shown in the table below:

Month	FAC Amount (Rs. Crore)
August 2022	0

*FAC already allowed to be recovered as approved in FAC approval dated 01.07.2022 for the period from December 2021 to April 2022 for recovery in five months period between July 2022 to November 2022.



Yours faithfully,

Prufulla
(Dr. Prafulla Varhade)
Director (Elect. Engg.), MERC

Encl: Annexure A: Detailed Vetting Report for the period of August 2022.

PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF AUGUST 2022

Subject: Prior approval of Fuel Adjustment Charges (FAC) submissions of AEML-D for the month August 2022.

Reference:

1. AEML-D FAC submission for the month of August 2022 vide email dated 19 November, 2022.
2. Data gaps communicated vide emails dated 23 December, 2022 and 5 January, 2023.
3. AEML-D replies vide emails dated 27 December, 2022 and 17 January, 2023.

1. FAC submission by AEML-D:

1.1 AEML-D has made FAC submissions for the month of August 2022 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by AEML-D, the Commission has accorded prior approval to AEML-D for the FAC amount of Rs. 151.83 Crore however, the approved FAC amount is adjusted at the time of Provisional Truing-up of FY 2022-23 in the MTR Order dated 31 March, 2023.

2. Background

2.1 On 30 March, 2020 the Commission has issued Tariff Order in respect of AEML-D (Case No. 325 of 2019) for approval of Aggregate Revenue Requirement and Multi Year Tariff for FY 2020-21 to FY 2024-25. Revised Tariff has been made applicable from 1 April, 2020.

2.2 Vide its letter dated 20 April, 2020, the Commission communicated the excel formats for filing of FAC submissions to all Distribution Licensees including SEZs. The Commission also directed all Distribution Licensees to submit FAC computations, including details pertaining to variation in fuel cost of generators for the approval of the Commission. On 19 May, 2021, the Commission has also issued guidelines for considering consumer sales in FAC computation from April, 2021 onwards based on uniform methodology.

2.3 As per Prior Approval of FAC Guidelines dated 20 April, 2020, the Commission directed Distribution Licensee to seek prior approval for monthly FAC computations. Accordingly, vide its email dated 19 November, 2022, AEML-D has filed FAC submissions for the month of August 2022 for prior approval of the Commission. The Commission has scrutinized the submissions provided by AEML-D and has also verified the power purchase bills and other fuel related invoices provided along with its submissions.



3. Energy Sales of the Licensee

3.1 The net energy sales within licence area as submitted by AEML-D in the FAC submission and as approved by the Commission are as shown in the Table 1 below:

Table 1: Energy Sales – Approved and Actual

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales (August 2022) (MU)
	(I)	(II=I/12)	(III)
LT Category			
BPL	0.01	0.00	0.00
LT -I: Residential	4,778.68	398.22	368.05
LT II: Commercial	2,690.58	224.22	204.28
LT III(A): LT Industrial up to 20 kW TOD Option	190.52	15.88	26.71
LT III(B): LT Industrial above 20 kW	378.08	31.51	34.46
LT-V: LT- Advertisements and Hoardings	2.87	0.24	-
LT VI: LT -Street Lights	48.70	4.06	-
LT-VII: LT -Temporary Supply	12.18	1.02	-
LT VIII: LT - Crematorium & Burial Grounds	1.61	0.13	-
LT IX: LT -Public Service (A)	39.92	3.33	2.43
LT IX: LT -Public Service (B)	248.53	20.71	14.97
LT X (A): LT - Agriculture Pumpsets	0.14	0.01	0.01
LT X (B): LT - Agriculture Others	0.48	0.04	0.03
LT IV: Public Water Works	12.77	1.06	-
LT IX: LT – EVCS	-	-	0.05
HT Category			
HT 1 (Industrial)	411.70	34.31	25.02
HT 2 (Commercial.)	249.75	20.81	33.01
HT 3 (Group Housing Soc.)	29.37	2.45	1.07
HT 4 (Temporary Supply)	30.13	2.51	-
HT – Railways	31.17	2.60	2.12
HT - Public Services (A)	5.96	0.50	0.52
HT - Public Services (B)	95.61	7.97	21.22
HT - Public Water Works	8.13	0.68	-
Total	9,266.90	772.24	733.94

*- In Case of AEML-D, the sales is approved on annual basis. Monthly approved sales is derived based on approved annual sales for comparison purpose.

3.2 It can be observed from above Table 1 that actual sales during August 2022 is 733.94 MU which is 4.96% lower than approved energy sales of 772.24 MU per month for the FY 2022-23. The sale considered is after netting off the GCN credit for Open Access



consumption. AEML-D has considered the energy sales for FAC purposes for August 2022 as follows:

- Energy sales data for HT consumers (AMR) & LT consumers (load above 20 kW) where meters are read remotely or where monthly reading are downloaded is considered for nth month (i.e., for August 2022).
- For cycle consumers (LT cycle billing), consumption data provided is for meter reading from 1 July to 31 August, 2022. These energy sales will pertain to the period which will comprise on an average half of July and half of August.

3.3 The monthly and cumulative sales for major consumer categories are shown below in the Table 2 below:

Table 2: Monthly and Cumulative Sales for major Consumer Categories

Year\ Sales (MU)	Residential	Commercial	Industrial	Others	Total (FY 2022-23)	Total (FY 2021-22)
Monthly Approved	400.67	245.03	81.69	44.85	772.24	754.08
Actual – April, 2022	423.12	263.43	80.55	29.16	796.26	697.44
Actual – May, 2022	465.58	272.12	99.69	27.87	865.26	702.61
Actual – June, 2022	464.27	275.16	97.60	60.71	897.75	662.55
Actual – July, 2022	393.62	249.31	66.05	44.07	753.04	656.52
Actual – August, 2022	369.12	237.29	86.19	41.34	733.94	634.94
Approved - Cumulative till August 2022	2,003.36	1,225.14	408.46	224.25	3,861.21	3,770.38
Actual - Cumulative till August 2022	2,115.71	1,297.32	430.08	203.15	4,046.25	3,354.06

4. Power Purchase Details

4.1 The following are the list of sources from which AEML-D procures power to meet its demand:

- Purchase from Adani Dahanu Thermal Power Station (ADTPS)
- Renewable energy procurement (RPS) including Solar and Non-solar
- Bilateral Contracts and Imbalance pool

Apart from above, there are incidental purchases from Open Access and Rooftop.

4.2 The Commission in its MYT Order dated 30 March, 2020 in Case No. 325 of 2019 had approved the Power Purchase for FY 2022-23 from three major sources i.e. Adani Dahanu Thermal Power Station, Renewable sources and Short-term sources.

4.3 Summary of power purchase of AEML-D is as shown in Table 3 below:



Table 3: Summary of Power Purchase for August 2022

Sr. No.	Particular	Compliance																								
1	Purchase from Approved Sources	Yes. AEML-D has procured power from ADTPS, Solar and Non-solar Sources and Bilateral in the month of August 2022, which are approved sources of power purchase except for the RE Power source of Reliance Innoventures. The EPA with Reliance Innoventures was scheduled to expire on 31 March, 2022 and hence the Commission had not approved any power purchase from this source for FY 2022-23 in the MYT Order. However, AEML-D has negotiated with the Generator and extended the EPA under Clause No. 4.02 of the EPA for further period of 6 months at an agreed rate of Rs. 2.62/kWh.																								
2	Merit Order Dispatch	Yes. AEML-D had scheduled power as per MoD.																								
3	Fuel Utilization Plan	Yes. Since there is only one thermal generating station of AEML-G and there is shortage of indigenous coal, hence there is no scope for improvement in optimal fuel utilization.																								
4	DSM Pool	AEML-D has injected 11.62 MU into the imbalance pool as per DSM mechanism.																								
5	Sale of Surplus Power	AEML has sold 0.13 MU of surplus power during the month of August 2022.																								
6	Power Purchase	Actual Power Purchase is 794.94 MU as against approved 858.11 MU. The lower actual sales as compared to the approved sales for the month have led to lower power purchase during the month.																								
7	Source wise Power Purchase	<table border="1"> <thead> <tr> <th>Source Name</th> <th>Approved (MU)</th> <th>Actual (MU)</th> <th>Proportion of each Source in Actual Purchase</th> </tr> </thead> <tbody> <tr> <td>ADTPS</td> <td>311.08</td> <td>252.14</td> <td>31.72%</td> </tr> <tr> <td>RE Sources</td> <td>269.14</td> <td>216.47</td> <td>27.23%</td> </tr> <tr> <td>Exchange & banking transaction</td> <td>277.88</td> <td>337.70</td> <td>42.48%</td> </tr> <tr> <td>Imbalance Pool & Other</td> <td>-</td> <td>-11.37</td> <td>-1.43%</td> </tr> <tr> <td>Total</td> <td>858.11</td> <td>794.94</td> <td>100.00%</td> </tr> </tbody> </table> <p><i>*The power purchase quantum/cost approved in MYT Order on yearly basis, however monthly approved numbers are derived from comparison purpose.</i></p>	Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in Actual Purchase	ADTPS	311.08	252.14	31.72%	RE Sources	269.14	216.47	27.23%	Exchange & banking transaction	277.88	337.70	42.48%	Imbalance Pool & Other	-	-11.37	-1.43%	Total	858.11	794.94	100.00%
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8	Power Purchase under Section 62 of Electricity Act, 2003	<p>AEML-D is purchasing power from only one source i.e., ADTPS under Section 62 of EA, 2003.</p> <p>As part of verification of fixed cost claimed by AEML-D, the same has been verified from the AEML-G MYT Order in Case No. 325 of 2019.</p> <p>As part of verification of energy charges claimed by AEML-D, verification of operational parameters, fuel cost, GCV etc. vis-à-vis the MYT Order is carried out.</p>																								
9	RE Purchase	Monthly power purchase invoices are submitted by AEML-D. Power																								



Sr. No.	Particular	Compliance
		Purchase rates are verified from the PPA signed by AEML-D with each source of power. Monthly power purchase quantum and rate are verified from the invoices, and it is ensured that same has been considered in the FAC calculation.
10	Short Term Power Purchase	Short-term power purchase invoices of August 2022 are submitted by AEML-D. All the power purchase quantum and rate are verified from the invoices, and it is ensured that same has been considered in the FAC calculation.

4.4 **AEML-D has purchased 794.94 MUs of power as against approved 858.11 MUs from the sources approved by the Commission.** The sales of AEML-D in the month of August 2022 are lower than the approved sales, and this has led to lower power purchase as compared to the approved power purchase quantum.

5. Power Purchase Cost

5.1 The Commission has scrutinised the detailed bills/invoices submitted for power purchase during the month of August 2022, in order to verify the claim of AEML-D regarding Average Power Purchase Cost (APPC). The Commission has verified the actual as well as approved Net Purchase (MUs), Variable Cost (Rs./kWh) and Power Purchase Cost considered in FAC computation from the invoices and applicable MYT Order respectively.

5.2 As submitted by AEML-D, the **Power Purchase cost incurred in August 2022 is Rs. 471.31 Crore** which is significantly higher than the **approved Power Purchase cost of Rs. 343.44 Crore** by the Commission for the month of August 2022. **This is on account of the higher cost of power purchase from ADTPS, bilateral sources and short term RE purchases.** The approved and actual Quantum of power purchase (MU), Power Purchase Cost (Rs. Crore) and Average Power Purchase Cost (Rs./kWh) for the month of August 2022 is shown in Table 5 below:

Table 4: Approved and Actual APPC and Power Purchase Quantum & Cost

Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs./kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs./kWh)	Total Cost (Rs. Crore)	APPC (Rs./kWh)
ADTPS	Approved	311.08	28.16	0.91	125.06	4.02	153.22	4.93
	Actual	252.14	29.36	1.16	114.64	4.55	144.00	5.71
Solar and Non-Solar Purchase	Approved	269.14	-	-	92.97	3.45	92.97	3.45
	Actual	216.47	-	-	76.42	3.53	76.42	3.53
Bilateral Purchase	Approved	277.88	-	-	97.26	3.50	97.26	3.50
	Actual	337.70	-	-	253.85	7.52	253.85	7.52
Pool/ DSM	Approved	-	-	-	-	-	-	-
	Actual	(11.62)	-	-	(1.59)	1.37	(1.59)	1.37
OA/RTS	Approved	-	-	-	-	-	-	-
	Actual	0.38	-	-	0.10	2.60	0.10	2.60

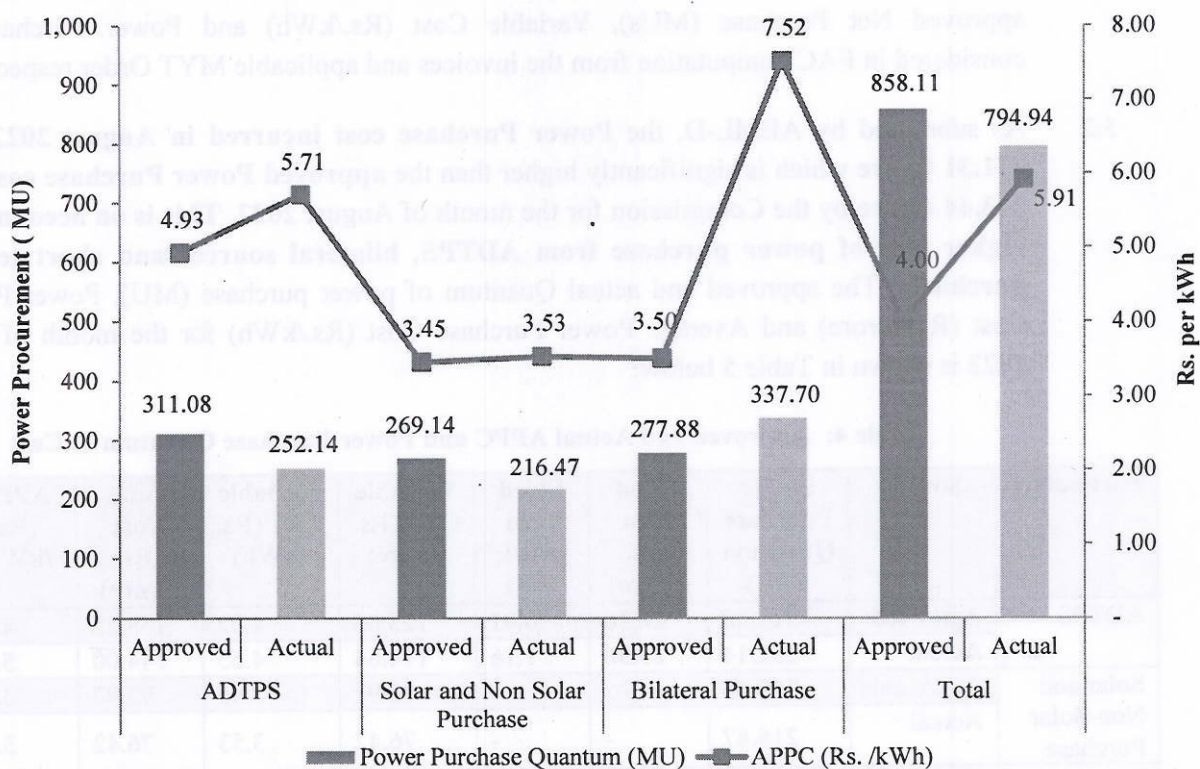


Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs./kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs./kWh)	Total Cost (Rs. Crore)	APPC (Rs./kWh)
Sale of Power	Approved	-	-	-	-	-	-	-
	Actual	(0.13)	-	-	(0.12)	8.98	(0.12)	8.98
Other Charges	Approved	-	-	-	-	-	-	-
	Actual	-	-	-	(2.68)	-	(2.68)	-
Total	Approved	858.11	28.16	0.33	315.28	3.67	343.44	4.00
	Actual	794.94	29.36	0.37	440.63	5.54	469.99	5.91

*- In case of AEML-D, there is no monthly approval for purchases. The monthly approved power purchase is arrived based on annual approved power purchase for comparison purpose.

5.3 The Figure 1 below shows the variation in Approved & Actual Power Purchased Quantum and Approved & Actual APPC for all the power purchase sources of AEML-D

Figure 1: Approved & Actual Power Purchase and APPC for August 2022



5.4 The Commission has noted that AEML-D has followed Merit Order Dispatch for scheduling of power. As solar and non-solar sources have must run status, they have been scheduled first and all the other sources are scheduled according to SLDC instructions.

ADTPS

5.5 AEML-D has a PPA with ADTPS (own generation). The Commission in Case No. 325 of 2019 has approved monthly energy quantum of 311.08 MU from ADTPS at the rate of Rs.

- 4.93/kWh. AEML-D has purchased 252.14 MU at the rate of Rs. 5.71/kWh (including reversal of incentive) for the month of August 2022. . The Commission has also worked out the rate for power purchase from AEML-G as Rs. 5.71/kWh for the month of August 2022.
- 5.6 **Fixed Cost:** The Fixed cost approved for FY 2022-23 in Case No. 325 of 2019 (AEML-D) is Rs. 337.97 Crore whereas the Fixed cost approved for FY 2022-23 in Case No. 298 of 2019 (AEML-G) is Rs. 337.11 Crore. The actual payment of Fixed Cost for the month of August 2022 is to be done according to the entitlement under Case No. 298 of 2019 i.e., Rs. 337.11 Crore, as the payment is to be done according to Generator's Tariff Order.
- 5.7 **The actual PLF of ADTPS in August 2022 was 75.06% as compared to approved PLF of 94.38%.** ADTPS was available for generation during the month, the average Plant Availability Factor for the month (PAFM) for both Units of AEML-G was 88.75%. The actual PAFM for both units of AEML-G in August 2022 was 88.03% during peak hours and 88.90% during off peak hours. The cumulative availability for June 2022, July 2022 and August 2022 was 81.04% during peak hours and 81.34% during off peak hours. The capacity charge for peak hours works out to Rs. 5.83 Crore and the capacity charge for off peak hours works out to Rs. 23.54 Crore, totalling Rs. 29.36 Crore for the month of August 2022. The capacity charges recoverable in August 2022 is more than the monthly capacity charge approved in the MYT Order because of partial recovery of under recovered amount of fixed cost pertaining to July 2022 in the month of August 2022.
- 5.8 **Due to lower generation as compared to approved generation, there is an increase of Rs. 0.26/kWh in the Fixed cost and accordingly the actual Fixed Cost per unit is Rs. 1.165/kWh as compared to the approved Fixed Cost of Rs. 0.91/kWh.**
- 5.9 **Energy Charges:** AEML-G has considered the normative operational parameters such as PLF, Availability, Auxiliary Energy Consumption (without FGD), Additional Auxiliary Energy Consumption for FGD, Station Heat Rate and Secondary fuel Oil Consumption as approved by the Commission in Case No. 298 of 2019 for the month of August 2022.
- 5.10 AEML-D has submitted documents to verify the quantity of coal purchased and total cost including breakup of all the cost such as washing charges, Coal handling charges, transportation charges and liaising charges incurred for Domestic Coal and Imported Coal, as applicable, for the month of August 2022.
- 5.11 **Washed Coal:** AEML-D has submitted that it has not received washed coal in August 2022, except for 77.00 MT which was the missing wagon for May 2022 and received in August 2022. AEML-G has not consumed any washed coal in August 2022. Since the cost of this coal was already accounted in May 2022, AEML-G has not accounted the cost in August 2022. AEML-D has also submitted the breakup and supporting documents for "Other Charges" of Rs. 29,48,401 /-.



- 5.12 The Commission has examined the invoices and the supporting excel working provided by AEML-D and has found it to be appropriate. The working of the washed coal fuel cost considered for August 2022 is as shown in the Table 6 below:

Table 5: Working of Washed Coal Rate for August 2022

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1 st August)	0.04	0.00	4,613.60
Addition during month	77.00	-	-
Other Charges		0.29	
Total	77.04	0.29	38,272.56*
Consumption			
Actual	0.00	0.00	-
Other Charges			
Total	0.00	0.00	-
<i>*This number is higher as AEML-G has not consumed any washed coal in August 2022. Since the cost of this coal was already accounted in May 2022, AEML-G has not accounted the cost in August 2022.</i>			

- 5.13 The overall cost approved towards fuel expenses (Washed coal) is nil for the month of August 2022.
- 5.14 **Raw Coal:** AEML-D has submitted detailed computation and methodology for booking the coal consumption cost. AEML-D has calculated the total coal consumption cost on the basis of Weighted Average Price Method by adding the purchases during the month in the opening inventory stock. The closing inventory is then obtained by deducting the coal consumed from the total of opening inventory and purchases during the respective month. AEML-D has purchased 1,72,694.67 MT Raw Coal (at plant boundary) from SECL and has consumed 1,76,018.57 MT of raw coal in August 2022. As per weighment of coal at ADTPS, the raw coal received is 1,72,694.67 MT and the weighment of coal dispatched by SECL was 1,72,787.51 MT. The difference is reported as the transit loss which is 92.84 MT which is 0.053% of the total coal dispatched during the month of August 2022.
- 5.15 The ITC on GST paid on railway freight and coal purchase charges for August 2022 totalling Rs. (2,51,674)/- has been booked on provisional basis in August 2022. The ITC on GST paid on coal purchase charges for July 2022 is Rs. (82,359)/-, which has been considered in August 2022. The difference between provisional ITC booked in July 2022 against railway freight and the actual ITC on GST paid on railway freight in July 2022 is Rs. (14,074)/-, which is booked in August 2022.
- 5.16 The working of the raw coal fuel cost considered for August 2022 is as shown in the Table 6 below:



Table 6: Working of Raw Coal Rate for August 2022

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1 st August)	53,050.36	25.16	4,742.79
Addition during month	172,694.67	83.54	4,837.65
Total	225,745.03	108.70	4,815.36
Consumption			
Actual	176,018.57	84.76	4,815.36
Other Charges		-	-
Total	176,018.57	84.76	4,815.36

- 5.17 The overall cost approved towards raw coal expenses is Rs. 84.76 Crore for the month of August 2022.
- 5.18 With regards to the raw coal, the weighted average landed cost for the month of July 2022 is Rs. 4,815.36 /MT. AEML-D has consumed 1,76,018.57 MT of raw coal during the month of August 2022.
- 5.19 AEML-D has submitted that in July 2022, AEML-G has purchased raw coal from SECL only. AEML-D has considered the 'As billed' GCV of raw coal as 3,791 kCal/kg, while the 'As Received GCV' of same coal as per M/s IGI certificate (third party appointed by AEML-G for GCV measurement at receiving end) is 3,421 kCal/kg. for August 2022. AEML-D has disputed the GCV results as declared by CIMFR. As per clause 50.6 of MYT Regulations, 2019, actual loss in GCV of coal between "as billed by Supplier" and "as received at generating station" is allowed subject to maximum loss of 300 kcal/kg. The GCV loss calculated by AEML- D (difference between 'As Billed' GCV and 'As Received' GCV) for raw coal for the month of August 2022 is 370 kcal/kg. Hence, GCV loss is outside the limit of 300 kcal/kg and 'As received" GCV of 3,491 kCal/kg for calculation is considered (i.e. maximum of the 'As received' GCV or 'As billed' GCV minus 300 kCal/kg).
- 5.20 AEML-D has been considering the "As received" GCV of the opening stock of the raw coal and the "As Received" GCV of the raw coal received during the month for working out the weighted average "As received" GCV of the coal for the month. The same was used to work out the stacking loss during the month. The Commission has also been approving the computation of GCV based on the same methodology. However, the Commission has adopted a different approach in the MTR Order for AEML-G in Case No. 220 of 2022.
- 5.21 The Commission in MTR Order in Case no. 229 of 2022 for AEML-G, has stated the following:

"4.10.17 Accordingly, the Commission has recalculated GCV (As Received Basis) on the coal procured during the month / year and the weighted average GCV so computed is considered for computation of stacking loss against the GCV (As



Fired). The impact of opening / closing stock has not been considered while computing GCV (As Received Basis), the cyclical usage of the coal will nullify the impact in the going concern in future month / year.”

- 5.22 Accordingly, for August 2022 the Commission has considered “As Received” GCV of the coal received during the month and has not considered the impact of Opening stock for computing the weighted average “As Received” GCV for a particular type of coal. Also, if a particular type of coal is not purchased in the month of reference but is consumed in that month from an older stock, then in such case “As Received” GCV of that coal purchased in the most recent month would be considered. Also, the Commission would be following same approach while approving FAC for AEML in ensuing months as well. AEML-G shall follow the above approach in accordance with the directions issued in MTR Order dated 31 March 2022 in Case No. 229 of 2022 while making the future FAC submission.
- 5.23 Hence, the Commission has approved “As Received” GCV as nil for washed coal, 3,491 kCal/Kg for raw coal and 4,133 kCal/kg for Imported coal. The “As fired” GCV of raw coal is 3,333 kCal/kg. The same has been used to work out the stacking loss of 158 kCal/kg for raw coal.
- 5.24 **Imported Coal:** AEML-G has procured 79,385.99 MT of imported coal from Pan Asia Treadlink Pte. Ltd (PAN). PAN has procured the imported coal at Dahej port and thereafter the coal has been transported to AEML-G through Railways. Hence AEML-G has incurred railway freight for the imported coal in addition to the cost of coal in the month of August 2022. AEML-D has consumed 12,485.33 MT of imported coal in August 2022. ITC on GST paid on railway freight in July 2022 works out to Rs. (24,138)/- on provisional basis which has been considered by AEML-D as adjustments under respective head. Further, difference of ITC on GST paid in July 2022 on provisional basis and on actual basis works out to Rs. (22,004)/- which has been considered as adjustment under respective heads. Further, AEML-G had procured two vessels of imported coal in March 2022 and the invoice of stevedoring agency for the services provided in March 2022, amounting to Rs. 2,62,367/- has been received in August 2022. Hence the same has been considered as an adjustment in August 2022. Further, draft survey charges of Rs. 11,800/- has been paid to Ms/ IGI in August 2022 and the same has been considered as an adjustment in August 2022. Additionally, Rs. 750/- (notary charges) has been claimed in August 2022.
- 5.25 AEML-D also submitted that considering the unavailability of Dahanu port between May to September AEML-G had procured imported coal through Dahej Port. Procurement of coal from Dahej Port to AEML also involves transportation cost to be paid to Railways.
- 5.26 The Commission had noted the submissions of AEML-D in the matter of procurement of the imported coal and considers the cost variation for recovery through the FAC mechanism. However, AEML-D was directed to ensure that appropriate and timely steps are taken to optimise the fuel sourcing so as to ensure that the undue burden of higher cost of power procurement does not adversely impact the consumers.



- 5.27 The Commission has examined the invoices and the supporting excel working provided by AEML-D and has found it to be appropriate. The working of the imported coal fuel cost considered for August 2022 is as shown in the Table 7 below:

Table 7: Working of Imported Coal Rate for August 2022

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1 st August)	-	-	-
Addition during month	79,385.99	145.06	18,273.01
Total	79,385.99	145.06	18,273.01
Consumption			
Actual	12,485.33	22.81	18,273.01
Other Charges		0.005	-
Total	12,485.33	22.82	18,276.98

- 5.28 The overall cost approved towards imported coal expenses is Rs. 22.82 Crore for the month of August 2022.
- 5.29 **With regards to the imported coal, the weighted average landed cost for the month of July 2022 is Rs. 18,276.98 /MT.** AEML-D has consumed 12,485.33 MT of imported coal during the month of August 2022.
- 5.30 The transit loss claimed by AEML-D for the month of August 2022 is 0.88%. As per weighment of coal at ADTPS, the imported coal received is 79,385.99 MT and as per weighment of coal despatched was 80,093.45 MT. The difference is reported as the transit loss which is 707.46 MT which is 0.88% of the total coal despatched during the month of August 2022.
- 5.31 As elaborated in para 5.21, the Commission has approved “As Received” GCV as 4133 kCal/kg for Imported coal for the month of August 2022. In this month the “As fired” GCV of imported coal is 3,875 kCal/kg. The same has been used to work out the stacking loss of 258 kCal/kg for imported coal.
- 5.32 **LDO:** AEML-D has not procured any LDO during August 2022 and it has consumed 146.88 KL of Light Diesel Oil in the month of August 2022.
- 5.33 The Commission has examined the invoices and the supporting excel working provided by AEML-D and has found it to be appropriate. The working of the LDO fuel cost considered for August 2022 is as shown in the Table 8 below:

Table 8: Working of LDO Rate for August 2022

Particular	Quantity (KL)	Cost (Rs. Crore)	Price (Rs./KL)
------------	---------------	------------------	----------------



Particular	Quantity (KL)	Cost (Rs. Crore)	Price (Rs./KL)
Inventory			
Opening (as on 1 st August)	414.39	2.73	65,817.85
Addition during month	-	-	-
Total	414.39	2.73	65,817.85
Consumption			
Actual	146.88	0.97	65,817.85
Other Charges		-	-
Total	146.88	0.97	65,817.85

5.34 The overall cost approved towards LDO expenses for the month of August 2022 is Rs. 0.97 Crore. **With regards to the LDO, the weighted average landed cost for the month of August 2022 is Rs. 65,817.85 /KL.**

5.35 The “As received” and “As fired” GCV of LDO considered by AEML-D is 10,817 kCal/kg. Considering the difference between the “As received” GCV and the ‘As Fired’ GCV, the stacking loss for LDO works out to nil.

5.36 As per MYT Regulations, 2019 for calculation of Energy Charge Rate, the Commission has notified the maximum stacking loss allowed in Clause 50.7 as reproduced below:

“Any variation in Price and Gross Calorific Value of coal/lignite or gas or liquid fuel as billed by supplier less actual stacking loss subject to the maximum stacking loss of 85 kcal/kg or 120 kcal/kg, as the case may be, vis-a-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal/lignite or gas or liquid fuel in stock received and weighted average landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be for a power Station:”

5.37 In line with MYT Regulations, 2019 and MYT Order in Case No. 298 of 2019, the Commission has considered stacking loss of 120 kcal/kg (minimum of actual weighted average loss considering washed coal, raw coal and imported coal of 164.62 kcal/kg or 120 kcal/kg as per Regulation) for calculation of energy charge rate.

5.38 Considering the approved rates for Washed Coal, raw coal and LDO, the fuel cost, GCV and normative operational parameters, the revised energy charges work out to Rs. 4.547/kWh which is higher than the approved variable cost of Rs. 3.986/kWh as per the MYT Order for AEML-G (Case No. 298 of 2019).

5.39 **Incentive:** As per Regulation 46.3 of MYT Regulations, 2019, the target PLF for earning incentive is 85%. Since the cumulative PLF for June 2022 and July 2022, both for peak and off-peak hours, was less than 85%, AEML-G has not claimed any PLF incentive in August 2022.

5.40 Variation in power purchase expenses from ADTPS on account of change in quantum and per unit rate is as shown in Table 9 below:

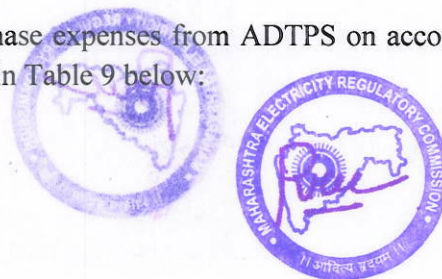


Table 9: Variation in Power Purchase expenses from ADTPS for August 2022

Source	Approved Quantum (MU)	Approved rate (Rs./kWh)	Actual quantum (MU)	Actual rate (Rs./kWh)	Variation due to quantum (Rs. Crore)	Variation due to rate (Rs. Crore)	Total variation (Rs. Crore)
ADTPS	311.08	4.93	252.14	5.71	(29.03)	19.82	(9.22)

- 5.41 Based on the above, APPC for ADTPS works out to Rs. 5.71/kWh as against approved Rs. 4.93/kWh. There is an increase of Rs. 0.79/kWh in APPC for the month of August 2022. Fixed cost variation is contributing to increase of Rs. 0.16/kWh and variable cost variation is contributing to Rs. 0.63/kWh increase. The increase in variable cost is due to higher price of imported coal which was procured in August 2022. AEML-G had to resort to procurement of imported coal due to continued shortage of availability of domestic coal from SECL.
- 5.42 **Solar Purchase:** AEML-D has an Energy Purchase Agreement (EPA) with Dhursar Solar Power Private Limited (DSPPL) for solar power. The Commission has approved power purchase at the rate of Rs. 10.30/kWh from DSPPL. AEML-D has purchased 3.42 MUs at the same rate of Rs. 10.30/kWh as approved in the MYT Order. The Commission has verified the bills/invoices submitted and found them to be correct.
- 5.43 **Wind Solar Hybrid:** AEML also has PPA with Adani Hybrid Energy Jaisalmer Four Limited for 700 MW for Hybrid power. The Commission has approved 94.93% of renewable power purchase quantum (255.50 MU) at the rate of Rs. 3.24/kWh from wind solar hybrid for FY 2022-23. AEML-D has purchased 179.77MU from wind solar hybrid source (project partially commissioned with pure solar capacity of 116.96 MW (Solar) and with Hybrid capacity of 563.58 MW), for month of August 2022. The Commission in the submission for the month of July 2022 had raised as query with regards to the status of commissioning of the project and the schedule for commissioning of the remaining capacity including the reasons for delay in commissioning. In response, AEML-D had submitted that AEML had made a detailed submission of the recent status of the Hybrid Plant to the Commission on 27 September 2022 as part of additional submission in Case No. 4 of 2022 which may be referred to. Further, as mentioned in the additional submission, time extension in SCOD from time to time is in line with the various Office Memorandum (OM) issued by MNRE; considering the stay imposed by the High Court of Rajasthan on the project land; difficulties faced by developer and delay in operationalization of LTOA. AEML-T had further submitted that as on 2 October 2022, the Hybrid capacity commissioned stands at 700 MW against the awarded capacity of 700 MW of Hybrid project. The Commission has noted the submissions of AEML-D in this regard.
- 5.44 **Non-Solar Purchase:** AEML-D also has EPAs with five non-solar sources namely Reliance Innoventures, AAA Sons Enterprise, Vector Green Energy Private Limited, Tembhu Power Private Limited and Reliance Clean Power Private Limited. The Commission has approved power purchase from non-solar sources. The actual APPC and approved APPC from all the sources is as shown in the Table 10 below:



Table 10: Approved and Actual APPC from Non-Solar Sources

Source	Approved (Rs/kWh)	Actual (Rs./kWh)
Reliance Innoventures	-	2.62
AAA Sons Enterprise	5.00	-
Vector Green Energy Private Limited	5.07	5.07
Tembhu Power Private Limited	4.26	-
Clean Power Private Limited	5.81	5.81

- 5.45 No power has been procured from AAA Sons Enterprises in August 2022 as the PPA has expired in April 2022. The Commission in the MYT Order in Case No. 325 of 2019 had approved generation equivalent to 8 days in the FY 2022-23.
- 5.46 The Commission has approved power purchase rate for Vector Green Energy Limited, Tembhu Power Private Limited and Reliance Clean Power Private Limited in the MYT Order in Case No. 325 of 2019 and AEML-D has procured power from Vector Green Energy Limited, Tembhu Power Private Limited and Reliance Clean Power Private Limited sources at the same rate during August 2022. No power has been purchased from Tembhu Power Private Limited (small hydro plant affected due to flooding happened (Krishna river) in July 2021 and which was recommissioned on 31 May, 2022)
- 5.47 As regards the power purchase from Reliance Innoventures Ltd., AEML-D submitted that the EPA with Reliance Innoventures Ltd. expired on 31 March 2022. However, AEML-D has negotiated with the Generator and extended the PPA for further period of 6 months at an agreed rate which has been linked with Competitive Day Ahead Market (DAM) of IEX subject to ceiling rate of Rs 2.62 per kWh. The tariff for procurement will therefore be monthly average RTC market clearing price of IEX or Rs. 2.62 per kWh, whichever is lower.
- 5.48 AEML-D has also purchased short term RE power based on IEX Day Ahead Market (DAM) tariff minus discount of Rs 0.04/kWh. AEML-D submitted that power procured through exchange linked contracts is at a rate lower than the rate discovered in IEX DAM tariff for corresponding time block. Through such contract, trading margin of Rs 0.02/kWh of IEX is also saved.
- 5.49 The Commission in the past has approved such purchase of RE power through exchange linked contracts. During the approval of FAC charges for January 2022, the Commission had observed that AEML-D had changed the tariff linkage of the exchange linked RE contracts from IEX GDAM to IEX DAM. AEML-D had not clarified the reason for the change in the contractual arrangement for procuring short term RE power through market linked contracts. However, the Commission had observed that the average rate of Short Term RE power procurement for the month of January 2022 is Rs. 4.27/kWh as against Rs. 4.34/kWh observed in December 2021. Further, from the data available on the IEX website, it has been observed that the rates in the G-DAM segment were higher than that observed in DAM for most of the period in the month of January 2022. This would be beneficial to the



consumers and accordingly, the Commission had approved the procurement of short term RE power through market linked contracts. However, the Commission had directed that AEML-D should ensure that the changes in contract terms should not adversely impact the consumers. However, these rates are linked to the power markets and will vary according to the market trends. As regards the comparison between the rates in the GDAM and DAM segments in the month of August 2022, it is observed that the average DAM rates were lower than GDAM on most of the days and higher on remaining days. The market in August 2022 was operating at relatively higher rates than previous months with the maximum weighted average market clearing prices (GDAM) reaching Rs. 8.16/kWh. Accordingly, the Commission approves the power purchase of short term RE (market linked contracts) for the month of August 2022. However, AEML-D needs to track the market movements and ensure that the terms of the contract are beneficial for the consumers.

- 5.50 Further, AEML-D has also procured short term RE power (5.99 MU) through IEX Green Day Ahead Market (GDAM) at an average rate of Rs. 4.21/kWh. Further, 4.27 MU RE power purchased at an average rate of Rs. 7.24/kWh from AEL during April, May and June 2022 has also been considered in the present month. The invoices were shared by the Trader for this period in the month of August 2022 and hence the same has been considered in the month of August 2022. Considering the same, the average rate of power purchase from short term RE sources is Rs. 5.47/kWh.
- 5.51 As the approval by the Commission is on yearly energy quantum, this variation is being accepted provided cumulative power procured for majority of the sources is within the approved energy quantum.
- 5.52 Variation in power purchase expenses from RE sources on account of change in quantum and per unit rate is as shown in Table 11 below:

Table 11: Variation in Power Purchase expenses from Renewable Energy Sources for August 2022

Source	Contract ed capacity (MW)	Approve d Quantum (MU)	Approved rate (Rs./ kWh)	Actual quantu m (MU)	Actual rate (Rs./ kWh)	Variation due to quantum (Rs. Crore)	Variation due to rate (Rs. Crore)	Total variati on (Rs. Crore)
DSPPL (Solar)	40 MW	5.52	10.30	3.42	10.30	(2.16)	-	(2.16)
Adani Hybrid Energy Jaisalmer Four Limited – Wind Solar Hybrid (AHEJFL)	700 MW	255.50	3.24	179.77	3.24	(24.54)	0.00	(24.54)
Non- Solar								
Reliance Innoventure	45#	-	-	13.26	2.62	-	3.47	3.47
AAA Sons Enterprise	3.38@	0.01	5.00	-	-	(0.01)	-	(0.01)
Vector Green Energy Pvt Ltd	6.00	0.88	5.07	1.45	5.07	0.29	0.00	0.29
Tembhu Power Pvt. Ltd.	4.50	0.99	4.26	-	-	(0.42)	-	-
Reliance Clean Power Ltd.	45.00	6.25	5.81	8.31	5.81	1.20	(0.00)	1.20
Short Term RE		-	-	10.26	5.47	-	5.61	5.61



Source	Contract ed capacity (MW)	Approve d Quantum (MU)	Approved rate (Rs./ kWh)	Actual quantum (MU)	Actual rate (Rs./ kWh)	Variation due to quantum (Rs. Crore)	Variation due to rate (Rs. Crore)	Total variati on (Rs. Crore)
Total RE Sources	843.88	269.14	3.45	216.47	3.53	(25.63)	9.09	(16.54)

The PPA with Reliance Innoventures expired on 31 March, 2022, however, AEML-D has negotiated with the Generator and extended the PPA initially upto 30 September 2022 and later upto 31 March, 2023 at an agreed rate of Rs. 2.62/kWh.

@ The PPA with AAA Sons Enterprises has expired in April 2022. The Commission in the MYT Order in Case No. 325 of 2019 had approved generation equivalent to 8 days in the FY 2022-23.

5.53 **APPC for renewable sources for the month August 2022 works out to Rs. 3.53 /kWh as against approved level of Rs. 3.45/kWh. The increase is on account of lower power purchase from wind solar hybrid source which is the cheapest source as the Commission has approved 94.93% of total quantum from wind solar hybrid at the rate of 3.24/kWh. The purchase from short term RE sources is also at a rate higher than that approved for wind solar hybrid source.**

5.54 **Bilateral Purchase:** AEML-D has undertaken bilateral purchase of power from power exchange (PXIL, IEX and HPX), through exchange price linked bilateral contracts and inter Discom trade with BEST as per the guiding principles provided in MERC (Deviation Settlement Mechanism and related matters) Regulations, 2019. **AEML-D has purchased 337.70 MU from these sources which is higher than the monthly approved quantum of 277.88 MU.** The average rate of purchase is Rs. 5.81/kWh which is significantly higher than the approved rate of Rs. 3.50/ kWh. It is observed that the power prices in the short-term market are higher in the month of August 2022 as compared to the prices in the month of July 2022 (Rs. 4.73/kWh), which is also seen in the average price of power purchase from bilateral contracts seen in July 2022 (Rs. 5.59/kWh). However, the rate observed in August 2022 is lower as compared to the prices observed during March 2022 to June 2022 which is also reflected in the average price of power purchase from bilateral contracts in March 2022 (Rs. 9.27/kWh), April 2022 (Rs. 11.10 kWh), May 2022 (Rs. 9.24/kWh) and June 2022 (Rs. 7.12/kWh). The trend of the average rates discovered on IEX (at regional periphery) are shown below for reference:

Table 12: Power Prices in short term market (Rs./kWh)

Month	Mar-22	Apr-22	May-22	June-22	July-22	Aug-22
RTC	8.17	9.55	5.88	6.56	4.73	4.98
Evening (17-23 Hrs)	10.70	10.56	7.39	8.15	6.72	7.20
Day (10-17 Hrs)	6.11	7.75	4.63	4.73	3.20	3.43
Night (0-6, 23-34 Hrs)	7.83	10.90	7.10	8.19	4.84	4.94
Morning (6-10 Hrs)	8.55	8.85	3.63	4.57	4.22	4.44

5.55 Due to limited long-term tie-up, AEML-D relies significantly on the short-term purchase. AEML-D has purchased 337.70 MUs through bilateral purchase (PXIL, IEX, HPX, exchange linked contracts and Inter Discom Trade) which is 42.48% of its total power



purchase for August 2022. The summary of the power procured from the various short-term sources is reproduced in the table below:

Table 13: Summary of power procured from short term sources

Sr. No.	Source	Net Purchase (MU)	Power Purchase Cost (Rs. Crore)	Average Power Purchase Cost (Rs./kWh)
Bilateral Sources				
1	IEX	117.81	60.43	5.13
2	PXIL	29.53	20.01	6.78
3	HPX	113.39	69.42	6.12
4	STPP (including inter discom purchase)	76.97	46.01	5.98
5	Other charges (viz, PXIL fee, SLDC charges, scheduling & rescheduling charges)	-	0.33	-
	TOTAL	337.70	196.20	5.81

- 5.56 AEML-D has submitted the bill/invoices regarding the purchase of power from exchange and the Commission has verified the energy quantum and power purchase cost and found it to be appropriate considering. AEML-D has also submitted the sample LOAs for day ahead exchange linked contract. Accordingly, the Commission approves the aforesaid bilateral purchase with APPC of Rs. 5.81/kWh.
- 5.57 AEML-D has to pay fees of Rs. 7,500 per month to MSLDC towards IEX standing clearance in advance, for next month. The said amount is as per the amount approved by the Commission in SLDC Order in Case No. 291 of 2019 and the same is considered as part of Bilateral purchase cost in FAC for August 2022 towards fees paid for September 2022. Further, AEML-D has also paid Rs. 88,500 towards annual fees for PXIL and the same is claimed in FAC for August 2022. Further, AEML-D has also paid Rs. 31,90,500 towards Scheduling & Rescheduling charges for November 2021 and December 2021 and the same is claimed in FAC for August 2022. The Commission has noted the submissions.
- 5.58 AEML-D had made banking transaction for which power was availed in the months of February, March, and April 2022. This was approved by the Commission for consideration in the FAC approval. The power is to be returned from July 2022 onwards. For the month of August 2022 for the power returned, the banking return cost of Rs. 57.65 crore has been considered. For this purpose, corridor has been booked for the month of September 2022 for which charges have been paid in August 2022. The same is proposed to be considered as part of Bilateral purchase cost, in FAC for August 2022. Accordingly, the consolidated cost of power purchase from bilateral sources is Rs. 7.52/kWh.
- 5.59 As regards bilateral purchases, it is observed that AEML has been purchasing short term power on a regular basis from power exchange or exchange linked bilateral contracts. Considering the variation in prices on exchange, AEML should explore the option of tying



up partial quantum for slightly longer duration contracts after assessing the market conditions through competitive bidding to avoid variation in short term prices on a daily/monthly basis. Such longer period may be up till 100% availability of hybrid contracted power, as the availability of cheaper source of Hybrid power will take some time.

- 5.60 Variation in power purchase expenses from Bilateral on account of change in quantum and per unit rate is as shown in Table 14 below:

Table 14: Variation in Power Purchase expenses from Bilateral for August 2022

Source	Approved Quantum (MU)	Approved rate (Rs./kWh)	Actual quantum (MU)	Actual rate (Rs./kWh)	Variation due to quantum (Rs. Crore)	Variation due to rate (Rs. Crore)	Total variation (Rs. Crore)
Bilateral Purchase	277.88	3.50	337.70	7.52	20.93	135.66	156.60

- 5.61 **DSM Pool:** AEML-D has submitted that for the month of August 2022, it has injected 11.62 MU under the DSM mechanism and has incurred cost of Rs. (1.59) Crore. The details have been validated from the SLDC data.

- 5.62 **Power Procurement from Open Access and Roof Top Solar Consumers:** As per MERC (Distribution Open Access) (First Amendment) Regulations, 2019:

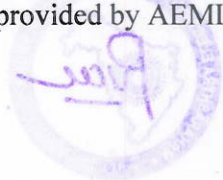
"20.5. The unutilised banked energy at the end of the month, limited to 10% of the actual total generation by such Renewable Energy generator in such month, shall be considered as deemed purchase by the Distribution Licensee at a rate equivalent to that stipulated under yearly Generic RE Tariff Order applicable for respective technology..."

...Provided further that provision relating to Banking of the Principal Regulations shall continue to apply for existing Open Access Agreements or contracts as on date of notification of the first amendment of the Principal Regulations, till the expiry of the approved period for such OA transactions, beyond which provision relating to Banking under Regulation 20 of the first amendment of the Principal Regulations shall apply."

Further, as per MERC (Net Metering for Roof-top Solar Photo Voltaic Systems) Regulations, 2015:

"10.3. The unadjusted net credited Units of electricity as at the end of each financial year shall be purchased by the Distribution Licensee at its Average Cost of Power Purchase as approved by the Commission for that year, within the first month of the following year:"

- 5.63 The surplus energy of RE Open Access consumers (Firm and Non-firm) purchased by AEML-D as per the aforementioned regulations is 0.38 MU at a cost of Rs. 0.10 Crore and is considered in the FAC for the month of August 2022. AEML-D has submitted the details of the power procured as a part of the submission which has been verified based on consumer wise detail provided by AEML-D.



- 5.64 **Sale of Power:** AEML has sold 0.13 MUs under bilateral sale and received Rs. 0.12 Crore for the month of August 2022.
- 5.65 **Other Charges:** AEML-D has considered rebate pertaining to payments made towards power purchase from contracted generators of Renewable energy, traders from short term power purchase, payment made for InSTS charges, SLDC charges etc. in the month of August 2022. The Commission has scrutinized the details and has approved Rs. 2.68 Crore as rebate to be considered as part of Power purchase cost for the month of August 2022. There is no standby previous year adjustment for the month of August 2022.
- 5.66 Summarised reasons for the rate variation for various sources are given in Table 15 below:

Table 15: Reasons for the rate variation for various sources for August 2022

Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
1	ADTPS	4.93	5.71	<ul style="list-style-type: none"> The fixed charges are higher by Rs. 0.16 /kWh due to lower generation as compared to the approved generation. The variable cost variation has increased by Rs. 0.63/kWh due to higher price of imported coal procured in August 2022. The imported coal was procured due to shortage of availability of domestic coal from SECL.
2	RE Sources	3.45	3.53	<ul style="list-style-type: none"> The main reason for cost increase is the lower purchase of power from wind solar hybrid source which is the cheapest source approved by the Commission in the MYT Order and it contributes to around 94.93% of total approved renewable quantum. The rate of purchase is Rs. 3.24/kWh which is lower than the other sources. Rest of the RE power is purchased at approved rate. Purchase of RE from short term sources like IEX GDAM at an average power purchase rate of Rs. 4.21/kWh which is higher than the hybrid power source and inclusion of RE power purchased at an average rate of Rs. 7.24/kWh from AEL during April, May and June 2022. The EPA with Reliance Innoventure which expired on 31 March, 2022 was extended for a period of 6 months at a negotiated price linked with Competitive Day Ahead Market (DAM) of IEX subject to ceiling rate of Rs 2.62 /kWh. This has helped in



Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
				slightly reducing the average rate of power purchase from RE sources in August 2022.
3	Power Exchange / Banking power	3.50	7.52	<ul style="list-style-type: none"> Market discovered rate; Short term power purchase from Power Exchange (IEX, PXIL and HPX), through day ahead exchange linked bilateral contracts and inter discom trade is done at an average rate of Rs. 5.81/kWh. Additionally cost of power returned in August 2022 under the banking arrangement and the open access charges related to banking have been considered. Units purchased have not been considered and hence this has led to a consolidated average rate of Rs. 7.52/kWh for power purchased through bilateral sources.
	Total	4.00	5.91	Variation due to above reasons

5.67 Considering the above, the Commission allows the actual average power purchase cost of Rs. 5.91/kWh for the month of August 2022 as shown in Table 15 above as compared to approved average power purchase cost of Rs. 4.00/kWh.

6. FAC on account of fuel and power purchase cost (F)

6.1 The Commission has worked out the average power purchase costs for the month of August 2022 as shown in Table 15 above. The same has been compared with the average power purchase cost approved by the Commission in MYT Order dated 30 March, 2020 to arrive at the differential per unit rate at which Z_{FAC} is to be passed on to the consumers.

6.2 It is noted that AEML-D has incurred the per unit Power Purchase cost higher than the Approved per unit Power Purchase Cost hence the Z_{FAC} worked out by the Commission on account of difference in power purchase cost for the month of August 2022 is positive as shown in the Table 16 below.

Table 16: FAC on account of Power Purchase Cost

Sr. No.	Particulars	Units	August 2022
1	Average power purchase cost approved by the Commission	Rs./ kWh	4.00
2	Actual average power purchase cost	Rs. /kWh	5.91
3	Change in average power purchase cost (= 2-1)	Rs./ kWh	1.91
4	Net Power Purchase	MU	794.94
5	Change in power purchase cost (=3 x 4/10)	Rs. Crore	151.83

7. Adjustment for over recovery/under recovery (B)



- 7.1 The adjustment for over recovery/under recovery has to be done for the (n-4) month as per provisions of MYT Regulations, 2019.
- 7.2 AEML-D has stated that it has recovered FAC of Rs. 71.32 crore and Rs. 71.76 Crore in the months of July 2022 and August 2022 respectively. However, the adjustments for over/under recovery will be computed once the recovery for the five-month billing period is completed and the actual recovery is ascertained. Accordingly, AEML-D has not considered any adjustment for over recovery /under recovery of the earlier approved FAC. In this context, the Commission notes that in accordance with the MYT Regulations, 2019, the approved FAC has to be allowed to be recovered as an adjustment in its Tariff on a monthly basis. Further, deferred recovery of the shortfall in FAC amount has financial implications on the consumers in terms of the additional carrying cost. The other distribution licensees have considered the adjustment towards under recovery and over recovery on monthly basis as per MYT Regulations, 2019 which has been accepted by the Commission. Hence, the Commission does not consider it appropriate to accept the stand taken by AEML-D. However, it is also a fact that the provisional truing up for FY 2022-23 has already been undertaken by the Commission in the MTR proceedings and hence the revised power purchase cost resulting in FAC is already adjusted in the said MTR Order. Under these circumstances, any adjustment in relation to under recovery / over recovery of FAC amount for the previous months will not have any impact on FAC which is any way adjusted in the MTR Order. Accordingly, the Commission has not considered any adjustment towards over recovery /under recovery towards FAC approved in previous months.

8. **Carrying Cost for over recovery/under recovery (C)**

As no adjustment for over recovery/under recovery has been considered as mentioned in para, 7.12 above, there is no carrying cost on account of such adjustment.

9. **Disallowance due to excess Distribution Loss**

- 9.1 Regulation 10.8 of MYT Regulations, 2019 provides for FAC amount to be reduced in case the actual distribution loss for the month exceeds the approved distribution loss. The relevant extract is reproduced as follows.

“10.8 The total Z_{FAC} recoverable as per the formula specified above shall be recovered from the actual sales in terms of “Rupees per kilowatt-hour”:

Provided that, in case of unmetered consumers, the Z_{FAC} shall be recoverable based on estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

Provided further that, where the actual annual sliding distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of Z_{FAC} corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total Z_{FAC} recoverable”



9.2 The following Table 17 provides the comparison of approved and actual distribution loss and disallowance due to excess distribution loss, if any:

Table 17: Disallowance of FAC due to excess Distribution Loss

Sr. No.	Particulars	Units	Approved in Tariff Order	Actual for August 2022	Cumulative up to August 2022	Annual Sliding Distribution Loss up to August 2022
1	Net Energy input at Distribution Voltages	MU	830.82	790.39	4,307.90	9,240.11
2	Energy sales at Distribution voltages	MU	772.24	733.94	4,046.25	8,654.51
3	Distribution Loss (1 - 2)	MU	58.58	56.45	261.64	585.59
4	Distribution Loss as % (3/1)	%	7.05%	7.14%	6.07%	6.34%
5	Excess Distribution Loss = [Annual Sliding Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	-	-	-
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	-	-	-	-

9.3 As seen from the above Table 17, distribution loss for the month of August 2022 is 7.14% which is higher than the MYT approved distribution loss of 7.05%. However, the cumulative distribution loss up-to August 2022 is 6.07% which is lower than the distribution losses approved in the MYT Order. AEML-D submitted that the distribution losses are being reported considering the difference between the input and sales attributable to AEML-D's own consumers. Further, the sales being reported for LT cycle billing is as per bill posting date, whereas the input will be pertaining to the concerned month itself and thus there will be variation in losses on account of the differing period of purchase and sales.

9.4 Further, the Annual Sliding Distribution Loss up to August 2022 is 6.34% which is lower than the approved distribution loss of 7.05% as approved in MYT Order.

9.5 As part of the analysis, monthly as well as cumulative distribution losses trend is also examined with reference to approved by the Commission and similar period of last financial year as shown in Table 18 below:

Table 18: Monthly and Cumulative Distribution Loss trend of AEML-D

Period	FY 2022-23	FY 2021-22
Approved	7.05%	7.30%
Actual – April	12.47%	7.46%
Actual – May	11.48%	7.93%
Actual – June	-4.83%	1.48%
Actual - July	2.70%	9.45%
Actual - August	7.14%	10.88%
Actual - Cumulative till August	6.07%	7.52%



9.6 As seen from the above Table 17, disallowance of FAC due to excess distribution loss for the month of August 2022 is nil, though the standalone FAC for the month of August 2022 is positive, the annual sliding distribution loss is lower than approved distribution loss by the Commission.

10. Summary of Allowable ZFAC

10.1 The summary of the FAC amount as approved by the Commission for the month of August 2022 as shown in the Table 19 below.

Table 19: Summary of Allowable Z_{FAC} for August 2022

Sr. No.	Particulars	Units	As Claimed August 2022	As Approved August 2022
1	Calculation of Z_{FAC}			
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	153.15	151.83
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	-	-
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	-	-
1.4	Z_{FAC} = F+C+B	Rs. Crore	153.15	151.83
2	Calculation of FAC Charge			
2.1	Energy Sales within the License Area	MU	733.94	733.94
2.2	Excess Distribution Loss	MU	-	-
2.3	Z _{FAC} per kWh	Rs./kWh	2.09	2.07
3	Recovery of FAC			
3.1	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.3)/10]	Rs. Crore	-	-
3.2	Allowable FAC	Rs. Crore	153.15	151.83
4	Utilization of FAC Fund			
4.1	Opening Balance of FAC Fund	Rs. Crore	623.34	-
4.2	Carrying Cost on FAC	Rs. Crore	4.69	-
4.3	Z _{FAC} for the month (Sr. No. 3.2)	Rs. Crore	153.15	151.83
4.4	Cumulative refund of FAC upto April, 2021	Rs. Crore	-	-
4.5	Holding Cost on Cumulative refund of FAC	Rs. Crore	-	-
4.6	Closing Balance of FAC Fund	Rs. Crore	781.18	-
4.7	Z _{FAC} leviable/refundable to consumer	Rs. Crore	-	-
5	Total FAC based on category wise and slab wise allowed to be recovered in future billing months	Rs. Crore	-	-
6	Carried forward FAC for recovery during future period (4.7-5)	Rs. Crore	-	-

10.2 The Commission notes that AEML-D has considered the opening FAC Fund and added the standalone monthly FAC amount to the said fund to arrive at the closing fund. The Commission in its FAC approval for July 2022 has allowed FAC recovery at ceiling rate up



to March 2023 and held that any unrecovered FAC at the end of March 23 will get subsumed in the provisional true-up of FY 2022-23 and any gap arising thereof will be allowed to be recovered in tariff of FY 2023-24. The Commission, thereafter, has issued MTR Order on 31 March, 2023 and approved the revised power purchase cost in the Provisional Truing-up of FY 2022-23 and accordingly determined tariff for FY 2023-24 and FY 2024-25. Thus, the Commission is approving the monthly FAC for standalone month along with any under recovery / over recovery as per provisions of MYT Regulations, 2019 and has not considered any adjustment towards FAC fund as the said amount is subsumed and already adjusted in provisional truing-up of FY 2022-23.

11. Recovery from Consumers:

11.1 Regulation 10.9 of MERC MYT Regulations, 2019 provides for methodology of recovery of FAC charge from each category of consumers. The relevant extract is reproduced as below.

“10.9 The ZFAC per kWh for a particular Tariff category/sub-category/consumption slab shall be computed as per the following formula: —

$$Z_{FAC \text{ Cat}} (\text{Rs/kWh}) = [Z_{FAC} / (\text{Metered sales} + \text{Unmetered consumption estimates} + \text{Excess distribution losses})] * k * 10,$$

Where:

Z_{FAC Cat} = Z_{FAC} component for a particular Tariff category/sub-category/consumption slab in ‘Rupees per kWh’ terms;

k = Average Billing Rate / ACOS;

Average Billing Rate = Average Billing Rate for a particular Tariff category/sub-category/consumption slab under consideration in ‘Rupees per kWh’ as approved by the Commission in the Tariff Order:

Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

ACOS = Average Cost of Supply in ‘Rupees per kWh’ as approved for recovery by the Commission in the Tariff Order:

Provided that the monthly Z_{FAC} shall not exceed 20% of the variable component of Tariff or such other ceiling as may be stipulated by the Commission from time to time:

Provided further that any under-recovery in the Z_{FAC} on account of such ceiling shall be carried forward and shall be recovered by the Distribution Licensee over such future period as may be directed by the Commission....”

11.2 Accordingly, the Commission allows the FAC amount of Rs. 151.83 Crore for the month of August 2022. As FY 2022-23 is already over and Provisional Truing-up of FY 2022-23 has also been done by the Commission in the recent MTR Order dated 31 March, 2023,



the revised power purchase cost resulting in FAC is already adjusted in the said MTR Order.

11.3 In a view of above, the per unit ZFAC for the month of August, 2022 to be levied on consumers is Nil.



The revised power purchase cost resulting in EAC is already adjusted in the said MTR Order.

It is a view of above, the per unit EAC for the month of August, 2023 to be revised as mentioned in MTR.

