



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2021-22/031

Date: 2 February, 2022

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 October 2021.

Reference: 1. AEML-D FAC submission for the month of October 2021 vide email dated 24 November, 2021.

Sir,

Upon vetting the FAC calculations for the month of October, 2021 as mentioned in the above reference, the Commission has accorded approval for charging FAC of **Rs. 240.35 Crore** to its consumers. However, the said amount is being adjusted from the FAC Fund and accordingly the FAC chargeable to consumers is as shown in the table below:


Month	FAC Amount (Rs. Crore)
October, 2021	0

The Commission allows the accumulation of FAC amount of **Rs. (2.72) Crore** which shall form part of FAC Fund and shall be carried forward to next FAC billing cycle with holding cost as per the Order dated 30 March, 2020 in Case No. 325 of 2019. Further, as directed in the said Order, AEML-D shall maintain the monthly account of FAC Fund and upload it on its website to maintain transparency of FAC Fund and also for information of all the stakeholders.

AEML-D is directed to file their future FAC submissions taking into consideration data gaps raised in previous months to ensure timely prior approval.



Yours faithfully,


(Prafulla Varhade)
Director (EE), MERC

Encl: Annexure A: Detailed Vetting Report for the period of October, 2021.

Page 1 of 27

PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF OCTOBER 2021

Subject: Prior approval of Fuel Adjustment Charges (FAC) submissions of AEML-D for the month October 2021.

Reference: 1. AEML-D FAC submission for the month of October 2021 vide email dated 24 November, 2021.

1. FAC submission by AEML-D:

1.1 AEML-D has made FAC submissions for the month of October 2021 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by AEML-D, the Commission has accorded prior approval for the FAC amount to be charged in the billing month of December 2021.

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 24 November, 2021, AEML-D has filed FAC submissions for the month of October 2021 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



Approval of FAC Charges for the month of October, 2021

- 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 (October, 2021) (MU)
	(I)	(II=I/12)	(III)
LT Category			
BPL	0.01	0.001	0.004
LT -I Residential	4,644.19	387.02	380.68
LT II Commercial	2,661.44	221.79	196.45
LT III(A)- LT Industrial up to 20 kW TOD Option	186.97	15.58	28.57
LT III(B) - LT Industrial above 20 kW	383.85	31.99	32.92
LT-V : LT- Advertisements and Hoardings	2.95	0.25	-
LT VI: LT -Street Lights	50.47	4.21	-
LT-VII : LT -Temporary Supply	12.22	1.02	-
LT VIII: LT - Crematorium & Burial Grounds	1.50	0.13	-
LT X: LT -Public Service (A)	35.09	2.92	2.07
LT X: LT -Public Service (B)	206.62	17.22	13.08
LT X (A) : LT - Agriculture Pumpsets	0.11	0.01	0.01
LT X (B) : LT - Agriculture Others	0.38	0.03	0.02
LTIV - Public Water Works	12.77	1.06	-
LT IX : LT – EVCS	-	-	0.02
HT Category			
HT 1 (Industrial)	375.11	31.26	20.54
HT 2 (Commercial.)	276.26	23.02	34.72
HT 3 (Group Housing Soc.)	32.24	2.69	2.11
HT 4 (Temporary Supply)	24.13	2.01	-
HT – Railways	31.04	2.59	1.89
HT - Public Services (A)	6.21	0.52	0.57
HT - Public Services (B)	97.20	8.10	8.73
HT - Public Water Works	8.13	0.68	-
Total	9,048.92	754.08	722.39

*- 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 October 2021 is 722.39 MU which is 4.20% lower than approved energy sales of 754.08 MU per month for the FY 2021-22.** AEML-D has considered the energy sales for FAC purposes for October 2021 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 October 2021).
 - For cycle consumers (LT cycle billing), consumption data provided is for meter reading from 1st October to 31st October.
- 3.3 The total sale of 722.39 MU for the month of October 2021 which is still lower than the usual consumption of the month of October. For instance, in October 2019, the energy sales were 744.85 MU. October, 2020 is not comparable as it was exception month due to COVID 19.
- 3.4 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 2021-22)	Total (FY 2020-21)
Monthly Approved	390	245	79	41	754	736
Actual – April, 2021	406	193	75	24	697	629
Actual – May, 2021	433	164	81	24	703	481
Actual – June, 2021	408	162	70	23	663	586
Actual – July, 2021	377	185	71	23	657	669
Actual – August, 2021	356	188	65	25	635	538
Actual – September, 2021	351	207	86	24	668	586
Actual – October, 2021	383	231	82	26	722	624
Approved - Cumulative till October, 2021	2728	1714	552	285	5279	5153
Actual - Cumulative till October, 2021	2715	1329	530	170	4745	4114

4. Power Purchase Details

- 4.1 The following are the list of sources from which AEML-D procures power to meet its demand:
- a) Purchase from Adani Dahanu Thermal Power Station (ADTPS)
 - b) Renewable energy procurement (RPS) including Solar and Non-solar
 - c) 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 2021-22 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:



Approval of FAC Charges for the month of October, 2021

Table 3: Summary of Power Purchase for October, 2021

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 October 2021, which are approved sources of power purchase.																								
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	Pool Imbalance	AEML-D has net drawn 4.22 MU (drawn 10.23 MU during 1 st to 10 th October and injected 6.02 MU during 11 th to 31 st October) from the imbalance pool to meet its power purchase requirement.																								
5	Sale of Surplus Power	AEML has sold 0.41 MU at the rate of Rs. 4.79/kWh during October 2021.																								
6	Power Purchase	Actual Power Purchase is 823.91 MU as against approved 840.18 MU due to lower sales.																								
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>279.94</td> <td>33.98%</td> </tr> <tr> <td>RE Sources</td> <td>278.86</td> <td>36.11</td> <td>4.38%</td> </tr> <tr> <td>Exchange</td> <td>250.24</td> <td>503.27</td> <td>61.08%</td> </tr> <tr> <td>Others</td> <td>-</td> <td>4.59</td> <td>0.56%</td> </tr> <tr> <td>Total</td> <td>840.18</td> <td>823.91</td> <td>100.00%</td> </tr> </tbody> </table>	Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in Actual Purchase	ADTPS	311.08	279.94	33.98%	RE Sources	278.86	36.11	4.38%	Exchange	250.24	503.27	61.08%	Others	-	4.59	0.56%	Total	840.18	823.91	100.00%
Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in Actual Purchase																							
ADTPS	311.08	279.94	33.98%																							
RE Sources	278.86	36.11	4.38%																							
Exchange	250.24	503.27	61.08%																							
Others	-	4.59	0.56%																							
Total	840.18	823.91	100.00%																							
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 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 October, 2021 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 power of 823.91 MUs as against approved 840.18 MUs from the sources approved by the Commission.**
- 4.5 **Power Procurement from ADTPS:** 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. AEML-D has purchased 279.94 MU for the month of October 2021.**
- 4.6 **Power Procurement from Solar and Non-Solar:** AEML-D has an Energy Purchase Agreement (EPA) with Dhursar Solar Power Private Limited (DSPPL). AEML-D also has an EPA 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. AEML-D has also purchased 25.41 MU short term RE power based on IEX Green Term Ahead Market (GTAM). The Actual energy quantum purchased and approved by the Commission in Case No. 325 of 2019 is as shown in the Table 4 below:

Table 4: Approved and Actual Energy Quantum from Solar and Non-Solar Sources

Source	Contracted Capacity (MW)	Approved (MU)	Actual (MU)
Solar			
DSPPL	40	5.52	4.70
Wind Solar Hybrid	700	255.50	-
Non-Solar			
Reliance Innoventures	45	6.57	1.55
AAA Sons Enterprise	3.38	0.52	0.17
Vector Green Energy Private Limited	18	2.63	1.28
Vector Green Energy Private Limited	6	0.88	0.50
Tembhu Power Private Limited	4.5	0.99	-
Reliance Power Limited	45	6.26	2.49
Short Term RE			25.41
Total		278.86	36.11

- 4.7 AEML-D has procured 0.82 MU lower than the approved from DSPPL, 255.50 MU not available from wind solar hybrid, 5.02 MU lower than the approved from Reliance Innoventures, 0.35 MU lower than approved from AAA Sons Enterprise, 1.73 MU lower than the approved from Vector Green Energy Private Limited, 0.99 MU lower than the approved from Tembhu Power Private Limited and 3.77 MU lower than approved from Reliance Clean Power Private Limited. Further, 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. Also, AEML-D has purchased 25.41 MU short term RE power based on IEX Green Term Ahead Market.



Approval of FAC Charges for the month of October, 2021

- 4.8 **Power Procurement from Exchange:** AEML-D has purchased power from IEX based on day ahead planning on daily basis. **AEML-D has purchased 503.27 MU from this source which is higher than the monthly approved quantum of 250.24 MU.** The purchase of power is through Power Exchange.
- 4.9 **Power Procurement from Imbalance Pool:** AEML-D has purchased 4.22 MU (drawn 10.23 MU during 1st to 10th October and injected 6.02 MU during 11th to 31st October) from the imbalance pool for the month of October 2021.
- 4.10 **Power Procurement from Open Access and Roof Top Solar Consumers:** AEML-D has purchased 0.79 MU from the Open Access and Roof top Solar Consumers for the month of October 2021.
- 4.11 **Sale of Power:** AEML has made bilateral sale of 0.41 MU and has received Rs. 0.20 crore at the rate of Rs. 4.79/kWh for the month of October, 2021.
- 4.12 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.

5. **Power Purchase Cost**

- 5.1 The Commission has scrutinised the detailed bills/invoices submitted for power purchase during the month of October 2021, 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 October 2021 is Rs. 572.68 Crore** which is higher than the approved Power Purchase cost of Rs. 334.06 Crore by the Commission for the month of October 2021. **This is on account of the variation in power purchase rates due to fuel price variations, lower purchase from Solar and Non-Solar sources and higher Bilateral Purchase cost which is linked to exchange rates and non-availability of long-term contracted purchase from Wind-Solar Hybrid source. The Commission has examined the submissions made by AEML-D and worked out the actual Power Purchase Cost of Rs. 570.11 Crore with APPC of Rs. 6.92 per Unit.** The actual purchase for same month in FY 2020-21 i.e. October 2020 was 766.82 MU and power purchase cost was Rs. 270.13 Crore with APPC of Rs. 3.52/Unit. 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 October 2021 is shown in
- 5.3 Table 5 below:



Table 5: Approved and Actual APPC and Power Purchase Quantum & Cost

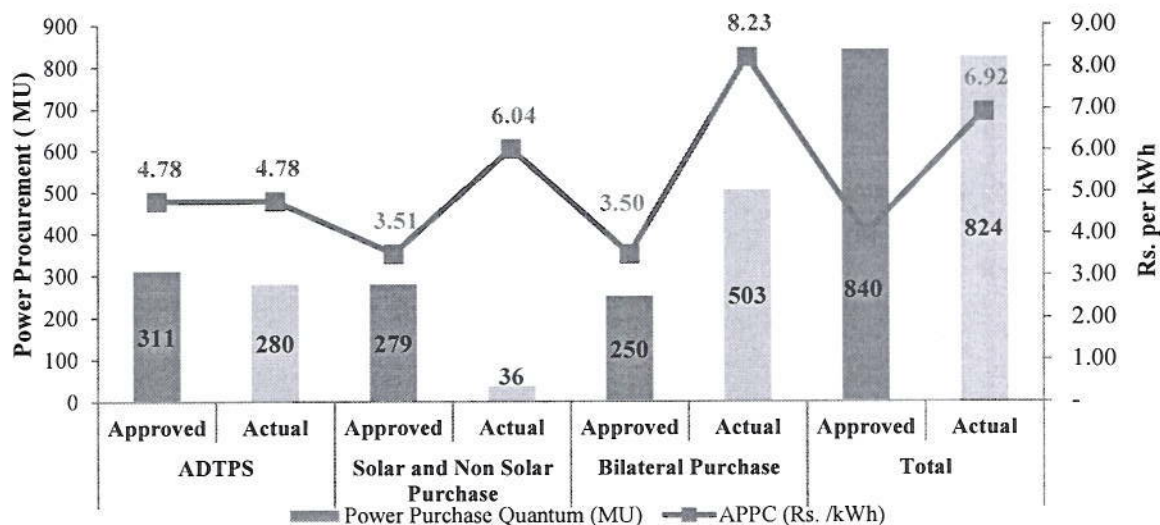
Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs./kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs./kWh)	Total Cost (Rs. Crore)	APPC (Rs./kWh)
ADTPS	Approved	311.08	27.24	0.88	121.42	3.90	148.66	4.78
	Actual	279.94	31.31	1.12	102.49	3.66	133.80	4.78
Solar and Non Solar Purchase	Approved	278.86	-	-	97.82	3.51	97.82	3.51
	Actual	36.11	-	-	21.80	6.04	21.80	6.04
Bilateral Purchase	Approved	250.24	-	-	87.59	3.50	87.59	3.50
	Actual	503.27	-	-	414.37	8.23	414.37	8.23
Pool/FBS M	Approved	-	-	-	-	-	-	-
	Actual	4.22	-	-	1.19	2.81	1.19	2.81
OA/RTS	Approved	-	-	-	-	-	-	-
	Actual	0.79	-	-	0.22	2.80	0.22	2.80
Sale of Power	Approved	-	-	-	-	-	-	-
	Actual	(0.41)	-	-	(0.20)	4.79	(0.20)	4.79
Other Charges	Approved	-	-	-	-	-	-	-
	Actual	-	-	-	(1.06)	-	(1.06)	-
Total	Approved	840.18	27.24	0.32	306.82	3.65	334.06	3.98
	Actual	823.91	31.31	0.38	538.80	6.54	570.11	6.92

*- 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.

5.4 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

Approval of FAC Charges for the month of October, 2021



ADTSP

- 5.5 The Commission in Case No. 325 of 2019 has approved an energy quantum from ADTSP at the rate of Rs. 4.78/kWh. AEML-D has purchased at the rate of Rs. 4.87/kWh for the month of October 2021. The Commission has also worked out the rate for purchase from AEML-D as Rs. 4.78/kWh for the month of October 2021.
- 5.6 **Fixed Cost:** The Fixed cost approved for FY 2021-22 in Case No. 325 of 2019 (AEML-D) is Rs. 326.87 Crore whereas the Fixed cost approved for FY 2021-22 in Case No. 298 of 2019 (AEML-G) is Rs. 326.03 Crore. The actual payment of Fixed Cost for the month of October 2021 is to be done according to the entitlement under Case No. 298 of 2019 i.e. Rs. 326.03 Crore, as the payment is to be done according to Generators Tariff Order.
- 5.7 **The actual PLF of ADTSP in October 2021 was 83.34% as compared to approved PLF of 94.38%.** ADTSP was available for generation, the Plant Availability Factor for the month (PAFM) for both Units of AEML-G was 94.89% during peak hours and 98.45% during off peak hours. Since cumulative PAFM for the period June 2021 to October 2021 (i.e. low demand season) is more than Normative Plant Availability Factor (NPAF) of 85% (i.e. target for low demand season), the capacity charge for peak hours works out to Rs. 6.08 Crore and the capacity charge for off peak hours works out to Rs. 25.23 Crore, totalling Rs. 31.31 Crore for the month of October 2021. AEML-G submitted that the monthly fixed cost in October 2021 is more than the fixed cost recovery in June 2021 and July 2021 because a portion of under-recovered fixed cost of June 2021 and July 2021 is getting recovered in October 2021.
- 5.8 **Due to lower generation, per unit impact on Fixed Cost has increased by Rs. 0.24 /kWh and accordingly the Fixed Cost per unit has increased from approved FC rate of Rs. 0.88 /kWh to actual FC rate of Rs. 1.12/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 October 2021.
- 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 liaisoning charges incurred for Domestic Coal and Imported Coal for the month of October 2021.
- 5.11 **Washed 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 submitted supporting documents for purchase of 2,08,598.51 MT Coal from SECL in the month of October 2021. AEML-D has also submitted the breakup and supporting documents for “Other Charges” of Rs. 0.35 Crore. AEML-D has submitted that in the month of October 2021, Rs. 6,04,789/-, Rs 5,35,074/- and Rs. 2,48,086/- have been included as an adjustment under freight charges for raw coal, freight charges for washed coal and for coal loading charges respectively, on account of diesel escalation for September 2021. Further, Rs (410)/- & (2,36,054)/- has been included as an adjustment under washed coal analysis charges at ADTPS end & Raw coal analysis charges at mines end.
- 5.12 As per the washery contract, penalty at the rate of 25% of washing charges is applicable on washery on monthly basis, in case the ash content in coal exceeds 36% in more than three rakes in the month. The penalty applicable on washery for September 2021 (as the number of rakes with ash content in Sep 2021 was more than three) was Rs. (16,25,623)/- i.e. (Rs. 13,77,647/- plus 18% GST), which has been added as an adjustment under washing charges. Further, as per the washery contract, Penalty at the rate of 50% of washing charges is applicable on washery on quarterly basis in case weighted average ash is more than 35% but less than 36% and total moisture is more than 13% for Q2 of the year. Therefore, Rs. (3,11,80,241)/- i.e. (Rs. 2,64,23,933/- plus 18% GST) of washery penalty has been considered under washing charges.
- 5.13 From May 2021 onwards SECL has started supplying coal of size 250 mm to ADTPS, apart from coal of size 100 mm. As per the washery contract, the additional washing charges for washing of coal of size more than 100 mm shall be reimbursed by AEML-G to the washery. The additional washing charges for washing coal of size 250 mm in October 2021 was Rs. 39,57,294/- (Rs. 3,353,639/- plus 18% GST), which has been considered under washing charges.
- 5.14 The input tax credit (ITC) due to sale of coal rejects works out to Rs. (20,72,618)/-, which has been included as an adjustment under SECL coal purchase cost.



Approval of FAC Charges for the month of October, 2021

- 5.15 The ITC on GST paid for October 2021 (on Railway freight, liaisoning charges, coal analysis charges) is Rs. (2,99,899). The ITC on GST paid for September 2021 on SECL coal charges is Rs. (1,36,327). Further, there are adjustments in ITC on GST paid for Railway freight, liaisoning charges, coal analysis charges for September 2021, totaling to Rs. (1,23,889)/-, which are for October 2021. In addition, there are adjustments in ITC on GST paid for liaisoning charges, coal analysis charges for August 2021, totaling to Rs. (1,186)/-, which are considered for October 2021. AEML-D has submitted monthly GST returns – Form GSTR 3B for October 2021 in the submission. The bifurcation of the ITC availed during the month (ITC on IGST paid for coal / coal related purchases during the month on proportionate basis, ITC on IGST paid on other than coal / coal related purchases during the month on proportionate basis and ITC on IGST on account of sale of coal rejects) for October 2021 are also provided in its submission. The reconciliation of ITC as per Form GSTR 3B and as per FAC filings are also provided in the submission.
- 5.16 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 October 2021 is as shown in the Table 6 below:

Table 6: Working of Washed Coal Rate for October, 2021

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st October)	10,298.27	5.56	5,394.53
Addition during month	1,47,445.40	75.79	5,140.29
Total	1,57,743.67	81.35	5,156.89
Consumption			
Actual	1,26,364.37	65.16	5,156.89
Other Charges		0.35	
Total	1,26,364.37	65.51	5,184.55

- 5.17 The overall cost approved towards fuel expenses is Rs. 65.51 Crore for the month of October 2021.
- 5.18 **With regards to the washed coal, the landed cost for the month of October 2021 is Rs. 5,184.55/MT as compared to MYT approved Rs. 5,689.76 /MT, which is 8.88% lower than the approved MYT rate.**
- 5.19 AEML-D has considered 'As billed' GCV of 4,105 kcal/kg for washed coal and 'As received' GCV of 4,082 kcal/kg for October 2021.
- 5.20 AEML-D has submitted third party sampling report from Inspectorate Griffith India Pvt Ltd (IGI) for GCV of the washed coal. The GCV of washed coal used for Energy Charge calculation matches with the GCV 'As received' submitted by AEML-G. In MYT Order



in Case No. 298 of 2019, the Commission has directed to consider the GCV “as received” or “as billed”, whichever is higher. The relevant paragraph is produced below:

“5.4.29 Based on the above analysis and the fact that AEML-G uses washed coal, it is evident that the GCV of coal is being improved due to washing. Thus, the relaxation of transit loss of 300 kcal/kg allowed as per the MYT Regulations, 2019 between GCV ‘as billed’ by supplier and GCV ‘as received’ at generating station” is not applicable in AEML-G’s case. Further, AEML-G itself has submitted that loss in calorific value is much less than 300 kcal/kg.

5.4.30 Considering the washery process undertaken by the AEML-G and having a yield loss of 15%, the burden of which is pass on to the consumers, the Commission is not inclined to provide any actual loss in calorific value of coal between ‘as billed’ and ‘as received’. However, in future, the Higher of GCV at Mine end or ADTPS (washed coal) will be considered for computation of energy charges, whereby GCV will be considered on ARB basis post moisture correction based on the formula as provided by MoP and World council.

5.4.31 However, while calculating the energy charges for the 4th MYT Control Period AEML-G has submitted GCV ‘as billed’ as 3,990 kcal/kg and GCV ‘as received’ as 3,912 kcal/kg. However, based on the data provided by AEML-G specified in Table 80 and as per the rationale provided in Para 5.4.29 of this Order, the Commission approves the GCV ‘as billed’ of 3,990 kcal/kg for computation of energy charges for the 4th MYT Control Period.

5.4.32 However, the Commission shall take a final call on GCV at the time of true-up based on the results of third-party analysis and prudence check by the Commission.”

- 5.21 The transit loss claimed by AEML-D for the month of October 2021 is 1.40%. AEML-D has submitted that raw coal was lifted from SECL during October 2021 and has raised dispute pertaining to grade slippage to the results declared by CIMFR in the month of October 2021. The coal received at ADTPS in October 2021 is the mix of coal dispatched from the washery from the already existing stock at the washery and Raw Coal purchased and washed at washery. Transit loss of washed coal is calculated as the difference between net weight of coal in rakes sent by Indian Railways from washery end and the net weight of coal received at ADTPS railway siding. The net weight of coal sent by Railways is ascertained from Railway Receipts (RR). The net weight of coal at ADTPS railway siding is ascertained by weighment of coal at the time of its unloading through wagon tippler. The difference is reported as the transit loss which is **2093.59 MT which is 1.40%** of the total coal received during the month of October 2021.
- 5.22 AEML-G has submitted that it has been calculating the stacking loss as the difference between As Received GCV (GCV of coal received during the month) and As Fired GCV (GCV of coal consumed during the month). However, there was no one to one correlation between the two, as coal consumed during the month was either from the opening stock or from the coal received during the month or both. Hence the stacking loss of coal being worked out was not representative. In order to correct that anomaly, AEML-G, in the month of August 2021, had proposed a different method of calculation of stacking loss



Approval of FAC Charges for the month of October, 2021

wherein the As Received GCV is calculated as the weighted average GCV of opening stock and GCV of stock received during the month (if any). AEML-G has calculated the As Received GCV for October 2021 also using this method.

- 5.23 AEML-D has submitted GCV of opening stock of washed coal in October 2021 was 3722 kCal/kg and the GCV of washed coal received in October 2021 was 4082 kCal/kg. Hence the weighted average GCV of 4058 kCal/kg has been considered as the As Received GCV of washed coal in October 2021. The Commission has considered opening stock of washed coal as 3728 kCal/kg and the GCV of washed coal billed in October 2021 as 4105 kCal/kg. Hence the Commission has worked out weighted average GCV of 4080 kCal/kg as the As Received GCV of washed coal in October 2021. Accordingly, the stacking loss for washed coal work out to 182 kCal/kg.
- 5.24 **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-G has received 49333.29 MT of raw coal and has consumed 73568.13 MT of raw coal in the month of October 2021.
- 5.25 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 October 2021 is as shown in the Table 7 below:

Table 7: Working of Raw Coal Rate for October, 2021

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./ MT)
Inventory			
Opening (as on 1st October)	27,258.50	13.11	4,810.97
Addition during month	49,333.29	23.88	4,840.18
Total	76,591.79	36.99	4,829.78
Consumption			
Actual	73568.13	35.53	4,829.78
Total	73568.13	35.53	4,829.78

- 5.26 The overall cost approved towards fuel expenses is Rs. 35.53 Crore for the month of October 2021.
- 5.27 **With regards to the raw coal, the landed cost for the month of October 2021 is Rs. 4,829.78/MT.**
- 5.28 AEML-D has considered 'As billed' GCV of 3,767 kcal/kg for raw coal and 'As received' GCV of 3,220 kcal/kg for October 2021. The GCV loss (difference between As Billed GCV and As Received GCV) for raw coal for the month of October 2021 is 547 Kcal/Kg. As per MYT Regulations, 2019, actual loss in calorific value of coal between "as billed



by supplier” and “as received at generating station” is allowed subject to the maximum loss in calorific value of 300 kcal/kg.

- 5.29 The transit loss claimed by AEML-D for the month of October 2021 is 1.57 %. AEML-D has submitted that raw coal was lifted from SECL during October 2021 and has raised dispute pertaining to grade slippage to the results declared by CIMFR in the month of October 2021. The coal received at ADTPS in October 2021 is the mix of coal dispatched from the washery from the already existing stock at the washery and Raw Coal purchased and washed at washery. The transit loss is **786.15 MT which is 1.57%** of the total coal received during the month of October 2021.
- 5.30 As mentioned above, AEML-D has submitted the GCV of opening stock of raw coal in October 2021 was 3137 kCal/kg and the GCV of raw coal received in October 21 was 3220 kCal/kg. Hence the weighted average GCV of 3190 kCal/kg has been considered as the As Received GCV of raw coal in October 2021. Considering this method, the stacking loss for raw coal work out to 112 kCal/kg. The weighted average stacking loss for October 2021 works out to 142 kCal/kg, which is above the allowable limit of 120 kCal/kg as per MYT Regulations, 2019. The Commission has reworked out 3402 kCal/kg the weighted average GCV for raw coal by considering 3283 kCal/kg as opening stock of raw coal and 3467 kCal/kg as the GCV of raw coal received. Accordingly, the stacking loss for raw coal work out to 251 kCal/kg. The weighted average stacking loss for October 2021 works out to 324 kCal/kg, which is above the allowable limit of 120 kCal/kg as per MYT Regulations, 2019.
- 5.31 **Imported Coal: AEML-G had invited bids through International Competitive Bidding in two stages.** Based on evaluation of the lowest evaluated base CIF price per tonne, M/S Taurus Commodities General Trading LLC was selected as the vendor. AEML-G has neither purchased nor consumed any imported coal in October 2021.
- 5.32 **LDO:** AEML-D has neither purchased nor consumed Light Diesel Oil for the month of October 2021.
- 5.33 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.”*
- 5.34 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



Approval of FAC Charges for the month of October, 2021

average stacking loss considering washed coal, raw coal and imported coal of 234 kcal/kg or 120 kcal/kg as per Regulation) for calculation of energy charge rate.

- 5.35 AEML-G has submitted that it has been calculating the stacking loss as the difference between As Received GCV (GCV of coal received during the month) and As Fired GCV (GCV of coal consumed during the month). However, there was no one to one correlation between the two, as coal consumed during the month was either from the opening stock or from the coal received during the month or both. Hence the stacking loss of coal being worked out was not representative. In order to correct that anomaly, AEML-G, in the month of October 2021, has calculated the As Received GCV as the weighted average GCV of opening stock and GCV of stock received during the month (if any). This method of calculating stacking loss is more representative and correct, as coal is consumed both from stock and receipt and therefore considering As received GCV of only coal received in the month would be incorrect.
- 5.36 Considering the approved rates for Washed Coal and Imported Coal fuel cost, GCV and normative operational parameters, the revised energy charges works out to Rs. 3.661/kWh which is lower than the approved variable cost of Rs. 3.90/kWh.
- 5.37 **Incentive:** As per Regulation 46.3 of MYT Regulations, 2019, the target PLF for earning incentive is 85%. Since the cumulative PLF for June 2021, July 2021, August 2021, September 2021 and October 2021 both for peak and off-peak hours were less than 85%, AEML-G has not claimed any incentive for October 2021.
- 5.38 Variation in power purchase expenses from ADTPS on account of change in quantum and per unit rate is as shown in Table 8 below:

Table 8: Variation in Power Purchase expenses from ADTPS for October, 2021

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	4.78	279.94	4.78	(14.88)	0.02	(14.86)

- 5.39 Based on the above, **APPC for ADTPS works out to Rs. 4.78/kWh as against approved Rs. 4.78/kWh. There is Rs. 0.001/kWh increase in APPC for month of October 2021. Fixed cost variation is contributing to Rs. 0.243/kWh increase and variable cost variation is contributing to Rs. 0.242/kWh decrease.**
- 5.40 **Solar Purchase:** The Commission has approved power purchase at the rate of Rs. 10.30/kWh from DSPPL. **AEML-D has purchased 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.



- 5.41 **Wind Solar Hybrid:** The Commission has approved 92% of renewable power purchase quantum at the rate of Rs. 3.24/kWh from wind solar hybrid for FY 2021-22. **AEML-D has not purchased from wind solar hybrid source for month of October 2021.**
- 5.42 **Non-Solar Purchase:** 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 9 below:

Table 9: Approved and Actual APPC from Non-Solar Sources

Source	Approved (Rs/kWh)	Actual (Rs./kWh)
Reliance Innoventures	5.00	5.30
AAA Sons Enterprise	5.00	5.30
Vector Green Energy Private Limited	5.00	5.30
Vector Green Energy Private Limited	5.07	5.07
Tembhu Power Private Limited	4.26	-
Clean Power Private Limited	5.81	5.81

- 5.43 The Commission has approved power purchase rate at Rs.5.00/kWh for Reliance Innoventures, AAA Sons Enterprise and Vector Green Energy Limited based on the PPA signed by AEML-D with the sources. AEML-D in its MYT Petition had projected the rate of Rs. 5.30 per Unit for these purchases with escalation as per EPA. The Commission in MYT Order of Case No. 325 of 2019 has not considered the annual escalation as specified in PPA on these sources and approved the base rate of FY 2019-20 for 4th Control Period. Therefore, considering the annual escalation as specified in PPA, per unit rate works out to Rs. 5.30/kWh for October 2021. This rate is being considered as approved rate for calculation of FAC as the payments done to the generator is based on PPA.
- 5.44 The Commission has also approved power purchase rate for Vector Green Energy Limited, Tembhu Power Private Limited and Reliance Clean Power Private Limited and AEML-D has procured power from Vector Green Energy Limited and Reliance Clean Power Private Limited sources at the same rate during October 2021.
- 5.45 The Commission has scrutinized the bills/invoice submitted for RE sources and found that AAA Sons Enterprise invoices are not available. AEML-D has submitted that invoices are yet to be raised by AAA Sons and hence rate is considered based on the agreement. It is observed that historically AAA Sons has been delaying the raising of bill and as a result provisional numbers are being used. **The Commission notes that this delay is not observed with any other sources. Hence AEML-D shall take up matter of delay in raising invoices with AAA Sons Enterprise and such invoices should be raised as per timelines provided in the PPA**
- 5.46 AEML-D has submitted that the bills for the months of December 2020 to October 2021 of AAA Sons are not yet received. Thus, the quantum of energy supplied from AAA Sons is proposed to be considered as per the provisional quantum considered in the financial



Approval of FAC Charges for the month of October, 2021

books. Accordingly, the cost of power purchase is worked out provisionally as per the PPA rate.

- 5.47 Further, Vector Green Energy Pvt Ltd (VGEPL) has not provided the invoice for the month of October 2021, due to non-issuance of GCN by MSEDCL. However, VGEPL has provided via e-mail the tentative generation figure for the month of October 2021. The said e-mail is provided in the submission. AEML has considered the said quantum and basis the approved rate as per PPA, the power purchase cost has been considered.
- 5.48 AEML-D has also purchased short term RE power based on IEX Green Term Ahead Market (GTAM) DAC tariff minus discount of Rs 0.04/u. AEML-D submits that power procured through exchange linked contracts is at a rate lower than the rate discovered in IEX GTAM DAC tariff for time block. Through such contract, trading margin of Rs 0.02/u of IEX is also saved. AEML-D has purchased 25.81 MU at the rate of 5.38 /kWh. AEML-D has requested the Commission to consider such sourcing of RE power towards meeting its RPO obligation. AEML-D has also submitted the invoices for power procured from these sources and sample LOAs for day ahead exchange linked contract.
- 5.49 Variation in power purchase expenses from RE sources on account of change in quantum and per unit rate is as shown in Table 10 below:

Table 10: Variation in Power Purchase expenses from RE Sources for October, 2021

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)
DSPPL	5.52	10.30	4.70	10.30	(0.84)	0.0004	(0.84)
Wind Solar Hybrid	255.50	3.24	-	-	(82.78)	-	(82.78)
Reliance Innoventure	6.57	5.00	1.55	5.30	(2.51)	0.05	(2.46)
AAA Sons Enterprise	0.52	5.00	0.17	5.30	(0.17)	0.01	(0.17)
Vector Green Energy Pvt Ltd	2.63	5.00	1.28	5.30	(0.67)	0.04	(0.63)
Vector Green Energy Pvt Ltd	0.88	5.07	0.50	5.07	(0.19)	(0.0001)	(0.19)
Tembhu Power Pvt. Ltd.	0.99	4.26	-	-	(0.42)	-	(0.42)
Reliance Power Ltd.	6.26	5.81	2.49	5.81	(2.19)	0.0001	(2.19)
Short Term RE			25.41	5.38	-	13.66	13.66



Total RE Sources	278.86	3.51	36.11	6.04	(85.16)	9.13	(76.03)
------------------	--------	------	-------	------	---------	------	---------

- 5.50 **APPC for renewable sources for the month October 2021 works out to Rs. 6.04/kWh as against approved level of Rs. 3.51/kWh. The increase is on account of absence of purchase from wind solar hybrid source which is the cheapest source as the Commission has approved 92% of total quantum from wind solar hybrid at the rate of 3.24/kWh. Also, the escalations provided in EPA to the approved cost which is not reflected in the present approved rates and also lower purchase from Non-Solar sources.**
- 5.51 **Bilateral Purchase:** AEML-D has purchased power from IEX and IEX linked bilateral contracts at the average rate of Rs. 8.23/ kWh which is more than the approved rate of Rs. 3.50/ kWh. It is observed that the power prices in the short term market has increased in the month of August 2021 to October 2021 after a decrease from the month of May to July 2021 and is evident from the rates discovered on IEX (at regional periphery) which are shown herein below:

Table 11: Power Prices in short term market

Month	Apr-21	May- 21	June - 21	Jul -21	Aug-21	Sept- 21	Oct - 21
RTC	3.70	2.83	3.06	2.95	5.06	4.40	8.01
Evening (17-23 Hrs)	4.26	3.23	3.85	3.81	7.87	7.07	11.09
Day (10-17 Hrs)	3.09	2.47	2.36	2.29	3.44	3.19	5.86
Night (0-6, 23-34 Hrs)	3.96	3.04	3.44	3.12	4.63	3.83	8.10
Morning (6-10 Hrs)	3.47	2.47	2.45	2.50	4.46	3.49	7.00

- 5.52 Due to limited long term tie-up, AEML-D relies significantly on the short term purchase. AEML-D has purchased 503.27 MUs through bilateral purchase which is 59.69% of its total power purchase for October 2021. 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. 8.23/Unit. AEML-D has also considered the STOA fees paid to SLDC towards IEX standing clearance as Rs. 7,500 per application.
- 5.53 Further, in the month of October, AEML has made bilateral sale of 0.41 MU and has received Rs. 0.20 crore. The necessary document towards the sale is also provided in the submission.
- 5.54 The Commission approves the charges as part of bilateral purchase for the month of October 2021.



Approval of FAC Charges for the month of October, 2021

- 5.55 Variation in power purchase expenses from Bilateral on account of change in quantum and per unit rate is as shown in Table 12 below:

Table 12: Variation in Power Purchase expenses from Bilateral for October, 2021

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	250.24	3.50	503.27	8.23	88.56	238.23	326.79

- 5.56 **FBSM/ Imbalance Pool:** The Commission observes that **AEML-D submitted that it has purchased 23.46 MU** from the Imbalance Pool. AEML has considered cost of Rs. 2.93 Crore at rate of Rs. 2.86 / kWh for purchase made of 10.93 MU during 1st October to 10th October. For remaining period, AEML-D has considered DSM receivable as per SLDC DSM Invoice of Rs. 1.74 Crore.

- 5.57 AEML-D has drawn 23.46 MU from the imbalance pool for the month of October 2021. The said drawl from the pool may be on account of either increase in demand of consumers than estimated by the Licensee or due to lower generation than scheduled by the generator. In both the scenarios, power has been drawn by the Licensee and supplied to its consumers. The said power supplied to the consumers is already billed as per Tariff approved by the Commission. The Energy Charge approved also includes the element of power purchase. It is therefore pertinent that such cost of such power drawn from the pool is considered while computing FAC.

- 5.58 Due to historical issues of delay in computing imbalance pool quantum and cost of power, for which appropriate orders are already passed by the Commission, the imbalance pool quantum and cost is required to be considered on provisional basis to avoid any adverse impact in future. If the said cost and quantum is not considered, it will not only result in recovering the cost from the consumers as billing has already been done, but also increase the overall power purchase cost for the particular month having positive impact on FAC and burdening the consumers. Also, as and when the final bills are issued by MSLDC, the power purchase cost of the imbalance pool quantum will be levied in future months, thereby burdening the consumers in future in that month when such cost will be levied. Accordingly, to balance the overall interest of consumers and licensee, the Commission has considered imbalance pool quantum as submitted by the AEML-D at provisional rate of Rs. 2.86/kWh as considered in the MYT Order. This provisional consideration of cost for FAC computation will get adjusted during truing-up of the respective year.

- 5.59 For the purpose of imbalance pool, the month of October has been segregated into two parts. The 1st part being from 1st Oct to 10th Oct and the 2nd part being from 11th Oct to



31st Oct. This has been warranted on account of the commencement of the commercial arrangement of MERC (Deviation Settlement Mechanism and related matters) Regulations, 2019.

- 5.60 The energy balance considered by AEML for the purpose of arriving at the imbalance pool quantum, is worked out as follows and is in variance with the working by SLDC. In accordance with the approvals of the Commission, the imbalance pool rate has been provisionally considered at Rs. 2.86/kWh for the imbalance pool quantum pertaining to the period from 1st October to 10th October (10.23 MU). Subsequently, for the period from 11th Oct to 31st Oct, the deviation charges billed by SLDC have been considered taking into account the weekly bills issued by SLDC under the DSM Regulations, 2019. The weekly bills issued by SLDC is provided as part of submission.
- 5.61 In the DSM regime, wherein SLDC is accounting for changeover consumers and RE power on scheduled basis, AEML has considered the changeover consumers on actual basis and RE power on purchase basis for the purpose of energy balance. Whereas, under the DSM regime, the actual bill (cost) as raised by SLDC is being considered. Because of the same, there might be situations wherein there might be decrement to the pool, but amount might be receivable and there might be increment to the pool, but amount might be payable. All of this would be settled when SLDC issues the bill on actual basis and the same would be reflected at the time of truing-up exercise for a financial year.
- 5.62 For 1st to 10th Oct, the Commission has considered purchase of 10.23 MU from the pool and the same has been considered at provisional rate of Rs. 2.86 / kWh as considered in the MYT Order. DSM was implemented from 11 October, 2021. Accordingly, the deviation quantum (-6.01 MU) and cost (- Rs. 1.74 Crore) has been considered as per provisional weekly invoice raised by MSLDC for the period 11 October, 2021 to 31 October, 2021. In view of the same, the Commission has considered total deviation quantum of 4.22 MU (over drawl) for Rs. 1.19 Crore. Further, it is observed that AEML-G has not considered DSM and ADSM charges for calculation of energy charges as well as fixed charges. Also, AEML-D has considered only DSM charges and not considered ADSM charges for calculation of power purchase cost for imbalance pool.
- 5.63 Thus, for the entire month, the imbalance pool quantum has been considered as per the energy balance provided above and the cost has been considered as follows:

Particular	1 st to 10 th Oct		11 th to 31 st Oct		Total	
	MU	(Rs. Crore)	MU	(Rs. Crore)	MU	(Rs. Crore)
AEML Submission	10.23	2.93	13.23	(1.74)	23.46	1.19
Considered by the Commission	10.23	2.93	(6.01)	(1.74)	4.22	1.19

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



Approval of FAC Charges for the month of October, 2021

"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:"

- 5.65 The surplus energy of RE Open Access consumers (Non-firm) purchased by AEML-D as per the aforementioned regulations is 0.79 MU at a cost of Rs. 0.22 Crore and is considered in the FAC for the month of October 2021. 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 Licence.
- 5.66 **Other Charges:** AEML-D has claimed rebate pertaining to payments made to 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 October 2021. The Commission has scrutinized the bills and has approved Rs. (1.06) Crore as rebate to be considered as part of Power purchase cost for the month of October 2021.
- 5.67 Summarised reasons for the rate variation for various sources are given in Table 13 below:

Table 13: Reasons for the rate variation for various sources for October, 2021

Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
1	ADTPS	4.7786	4.7793	Fixed charges are higher by Rs. 0.243/ kWh due to lower generation and energy charges are lower by Rs. 0.242/ kWh.
2	RE Sources	3.51	6.04	There is no purchase from wind solar hybrid source which is the cheapest source as the Commission. In MYT Order, the Commission has approved 92% of total renewable quantum from wind solar hybrid source at the rate of 3.24/kWh. Rest of the RE power is purchased at approved rate. Also, due non-consideration of escalation in EPA the approved rate is lesser than actual



Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
				rate and lower purchase from Non-Solar sources.
3	Power Exchange	3.50	8.23	Market discovered rate; Short term power purchase from Power Exchange and through day ahead exchange linked contracts.
	Total	3.98	6.92	Variation due to above reasons

5.68 Considering the above, the Commission allows the actual average power purchase cost of Rs. 6.92/kWh for the month of October 2021 as shown in Table 13 above as compared to approved average power purchase cost of Rs. 3.98/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 October 2021 as shown in Table 13 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 October 2021 is positive as shown in the Table 14 below.

Table 14: FAC on account of Power Purchase Cost

Sr. No.	Particulars	Units	October 2021
1	Average power purchase cost approved by the Commission	Rs./kWh	3.98
2	Actual average power purchase cost	Rs./kWh	6.92
3	Change in average power purchase cost (= 2-1)	Rs./kWh	2.94
4	Net Power Purchase	MU	823.91
5	Change in power purchase cost (=3 x 4/10)	Rs. Crore	242.52

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. As the prior approval of FAC has started from April 2020 and no FAC recovery is till now, there would not be any adjustment for over recovery/ under recovery.

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

- 8.1 As there is no adjustment for over recovery/under recovery as mentioned in para, 7.1 above, there is no carrying cost on account of such adjustment. However, the Commission



Approval of FAC Charges for the month of October, 2021

has determined a positive FAC of Rs. 57.36 Crore for September 2021 which is recovered from the FAC fund and the total carrying cost on FAC Fund of Rs. 1.89 Crore for September 2021. Thus, the opening balance for FAC fund for October 2021 is Rs. (241.59) Crore. The Commission has taken into consideration the submission made by AEML-D towards holding cost of Rs. 1.48 Crore to be contributed to the FAC Pool.

- 8.2 AEML-D has computed the holding cost considering the MCLR + 150 basis points. This turns out to be 8.50% for October 2021 and holding cost worked out is Rs. 1.48 Crore.
- 8.3 The Commission has considered MCLR rate of October month plus 150 basis points which works out to 8.50%. Accordingly, the Commission has calculated holding cost of Rs. 1.48 Crore to be recovered from the FAC Fund.

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 15 provides the comparison of approved and actual distribution loss and disallowance due to excess distribution loss, if any:

Table 15: Disallowance of FAC due to excess Distribution Loss

Sr. No.	Particulars	Units	Approved in Tariff Order	Actual for October, 2021	Cumulative up to October, 2021	Annual Sliding Distribution Loss up to October, 2021
1	Net Energy input at Distribution Voltages	MU	813.46	816.40	5,150.75	8,047.90
2	Energy sales at Distribution voltages	MU	754.08	722.39	4,744.84	7,727.55
3	Distribution Loss (1 - 2)	MU	59.39	94.01	405.91	680.35



Sr. No.	Particulars	Units	Approved in Tariff Order	Actual for October, 2021	Cumulative up to October, 2021	Annual Sliding Distribution Loss up to October, 2021
4	Distribution Loss as % (3/1)	%	7.30%	11.52%	7.88%	8.09%
5	Excess Distribution Loss = [Annual Sliding Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	-	-	6.46
6	Disallowance of FAC due to excess Annual Sliding Distribution Loss	Rs. Crore	-	-	-	2.17

- 9.3 As seen from the above Table 15, distribution loss for the month of October 2021 is 11.52% which is higher than the MYT approved distribution loss of 7.30%. The Annual Sliding Distribution Loss up to October, 2021 is 8.09% which is higher than approved distribution loss of 7.30% as approved in MYT Order. AEML-D submitted that in the present times, the difference in the periods of energy purchase and energy sold also plays a role – energy purchase being that of the calendar month, while energy sold is considered based on bill posting dates as described earlier. AEML-D further submitted that the sales considered for LT cycle billing is as per meter reading date and thus there will be variation in losses on account of the differing period of purchase and sales.
- 9.4 AEML-D has major contribution from Residential sales and seasonal variation in consumption directly impacts distribution losses due to difference in sales consideration and power purchase. This anomaly can be resolved to an extent if the submission is made considering the billing cycle methodology being followed by AEML-D.
- 9.5 AEML-D has further submitted that consumption mix is also playing a role in influencing distribution losses – consumption mix being unfavourably impacted as a result of slowdown in consumption of industrial and commercial activity, which is impacting the proportion of energy flows on HT and LT network, thereby influencing losses.
- 9.6 AEML-D submitted that this year does not represent business as usual performance for Distribution Licensees as the pandemic has and continue to severely influence various facets of electricity business. AEML-D has requested the Commission for regulatory intervention to recognize these factors as force majeure and appreciate the various financial losses, including the loss of possible efficiency gains on distribution losses.



Approval of FAC Charges for the month of October, 2021

- 9.7 AEML-D submitted that the lowering of consumption in October 2021 is a result of several variables such as lower activity in commercial and industrial premises due to low volume of business.
- 9.8 As part of the analysis, monthly as well as cumulative distribution losses trend is examined with reference to approved by the Commission and similar period of last financial year as shown in Table 16 below:

Table 16: Monthly and Cumulative Distribution Loss trend of AEML-D

Year	FY 2021-22	FY 2020-21
Approved	7.30%	7.55%
Actual – April	7.46%	4.90%
Actual – May	7.93%	34.41%
Actual – June	1.48%	-1.78%
Actual – July	9.45%	-11.22%
Actual – August	10.88%	6.74%
Actual - September	5.53%	9.78%
Actual – October	11.52%	15.94%
Actual - Cumulative till October	7.88%	9.42%

- 9.9 As seen from the above Table 15, **disallowance of FAC due to excess distribution loss for the month of October 2021 is Rs. 2.17 Crore since the standalone FAC for the month of October 2021 is positive and annual sliding distribution losses are higher than approved cumulative losses 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 October 2021 as shown in the Table 17 below.

Table 17: Summary of Allowable Z_{FAC} for October, 2021

Sr. No.	Particulars	Units	As Claimed October 2021	As Approved October 2021
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	237.44*	242.52
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	237.44	242.52
2	Calculation of FAC Charge			
2.1	Energy Sales within the License Area	MU	722.39	722.39



Sr. No.	Particulars	Units	As Claimed October 2021	As Approved October 2021
2.2	Excess Distribution Loss	MU	-	6.46
2.3	Z _{FAC} per kWh	Rs./kWh	3.29	3.36
3	Recovery of FAC			
3.1	FAC disallowed corresponding to excess Distribution Loss [((2.1+2.2) x 2.3)/10]	Rs. Crore	-	2.17
3.2	Allowable FAC	Rs. Crore	237.44	240.35
4	Utilization of FAC Fund			
4.1	Opening Balance of FAC Fund	Rs. Crore	(239.19)	(241.59)
4.2	Holding Cost on FAC Fund	Rs. Crore	(1.47)	(1.48)
4.3	Z _{FAC} for the month (Sr. No. 3.2)	Rs. Crore	237.44	240.35
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	(3.22)	(2.72)
4.7	Z _{FAC} leviable/refundable to consumer	Rs. Crore	(3.22)	(2.72)
5	Total FAC based on category wise and slab wise allowed to be recovered	Rs. Crore	-	-
6	Carried forward FAC for recovery during future period (3.1-3.2-4)	Rs. Crore	(3.22)	(2.72)

*AEML has considered actual pool purchase for October, 2021 whereas the Commission has considered actual pool purchase for 1st to 10th October and as per DSM invoice raised by MSLDC for 11th to 31st October, 2021. Hence, there is difference in FAC claimed and FAC approved.

10.2 It can be seen from the above Table 17 that opening FAC fund for month of October 2021 is Rs. (241.59) Crore and standalone FAC for the month of October 2021 approved by the Commission is Rs. 240.35 Crore. The Commission has also approved a holding cost of Rs. (1.48) Crore for the FAC fund accrued during the month of April 2020 to September 2021. The overall FAC amount for the month till October 2021 is Rs. (2.72) Crore. As the FAC is positive, the said amount will be recovered from FAC Fund and the burden will not be passed to consumers.

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 Z_{FAC} per kWh for a particular Tariff category/sub-category/consumption slab shall be computed as per the following formula: —

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

Where:



Approval of FAC Charges for the month of October, 2021

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

$k = \text{Average Billing Rate} / \text{ACOS}$;

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 The Commission allows the FAC amount of Rs. 240.35 Crore for the month of October, 2021.
- 11.3 The Commission in its FAC approval for the month of September, 2021 has directed AEML-D to carry forward the approved FAC amount of Rs. (241.59) Crore to be accumulated as FAC Fund to be carried forward to the next billing cycle with holding cost.
- 11.4 Accordingly, considering the approved opening balance FAC Fund of Rs. (241.59) Crore, standalone FAC amount of Rs. 240.35 Crore for the month of October, 2021, holding cost of Rs. (1.48) Crore, the total amount of Rs. (2.72) Crore is accumulated in the FAC Fund.
- 11.5 The Commission in its FAC approval for the month of March 2021 has decided to accumulate the FAC fund arising out of negative monthly FAC up to March 2023 along with the holding cost. The Commission will continuously monitor the situation as it unfolds along with its impact on power prices and pass appropriate directions in future regarding utilisation of FAC fund.
- 11.6 Accordingly, the Commission allows the AEML-D to carry forward the accumulated FAC fund of Rs. 2.72 Crore to the next billing cycle with holding cost.
- 11.7 **In view of the above, per unit Z_{FAC} for the month of October 2021 to be levied on consumer of AEML-D in the billing month of December 2021 is Nil.**

