



महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2021-22/E-Letter

Date: 27 October, 2021

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 FAC submissions of AEML-D for the month of July 2021.

Reference: AEML-D FAC for the month of July 2021 vide email dated 25 August, 2021.

Sir,

Upon vetting the FAC calculations for the month of July, 2021 as mentioned in the above reference, the Commission has accorded approval for charging FAC of **Rs. (6.78) Crore** to its consumers as shown in the table below:

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

The Commission allows the accumulation of FAC amount of **Rs. (382.21) 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)

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



PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF JULY 2021

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

Reference: 1. AEML-D FAC submission for the month of July 2021 vide email dated 25 August 2021.

1. FAC submission by AEML-D:

1.1 AEML-D has made FAC submissions for the month of July 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 September 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 25 August, 2021, AEML-D has filed FAC submissions for the month of July 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

- 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 (July, 2021) (MU)
	(I)	(II=I/12)	(III)
LT Category			
BPL	0.01	0.001	0.0003
LT -I Residential	4,644.19	387.02	374.45
LT II Commercial	2,661.44	221.79	156.76
LT III(A) - LT Industrial up to 20 kW TOD Option	186.97	15.58	23.52
LT III(B) - LT Industrial above 20 kW	383.85	31.99	29.56
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	2.13
LT X: LT -Public Service (B)	206.62	17.22	12.41
LT X (A) : LT - Agriculture Pumpsets	0.11	0.01	0.01
LT X (B) : LT - Agriculture Others	0.38	0.03	0.01
LTIV - Public Water Works	12.77	1.06	-
LT IX : LT – EVCS	-	-	0.02
HT Category			
HT 1 (Industrial)	375.11	31.26	17.88
HT 2 (Commercial.)	276.26	23.02	28.23
HT 3 (Group Housing Soc.)	32.24	2.69	2.91
HT 4 (Temporary Supply)	24.13	2.01	-
HT – Railways	31.04	2.59	1.66
HT - Public Services (A)	6.21	0.52	0.54
HT - Public Services (B)	97.20	8.10	6.43
HT - Public Water Works	8.13	0.68	-
Total	9,048.92	754.08	656.52

*- 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 July 2021 is 656.52 MU which is 12.94% 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 July 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 July 2021).
- For cycle consumers (LT cycle billing), consumption data provided is for meter reading from 1st July to 31st July.

3.3 The total sale of 656.52 MU for the month of July 2021 which is still lower than the usual consumption of the month of July. For instance, in July 2019, the energy sales were 739 MU. July, 2020 is not comparable as it was exception month due to COVID 19. This lowering of consumption is a result of lower activity in commercial premises due to low volume of business.

3.4 In normal scenario, there is not much variation in the actual sales vis-à-vis approval sale and if there is any variation, then Distribution Licensee provides justification regarding the same. Due to Covid-19 pandemic situation lower activity in commercial premises due to low volume of business resulted in a variation between the monthly approved and actual sales of FY 2021-22. 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
Approved - Cumulative till July, 2021	1559	979	315	163	3016	2945
Actual - Cumulative till July, 2021	1624	704	297	94	2719	2366

3.5 Few observations on the sales for July, 2021 are:

- Sale to commercial category is low as compared to approved level due to shut down of commercial establishments during Covid 19 pandemic.

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 Standby and Open Access & 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:

Table 3: Summary of Power Purchase for July, 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 July 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 procured 19.57 MU from the imbalance pool to meet its power purchase requirement.																								
5	Sale of Surplus Power	There was no sale of surplus of power during July 2021.																								
6	Power Purchase	Actual Power Purchase is 747.02 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>188.32</td> <td>25.21%</td> </tr> <tr> <td>RE Sources</td> <td>278.86</td> <td>40.31</td> <td>5.40%</td> </tr> <tr> <td>Exchange</td> <td>250.24</td> <td>491.49</td> <td>65.79%</td> </tr> <tr> <td>Others</td> <td>-</td> <td>26.90</td> <td>3.60%</td> </tr> <tr> <td>Total</td> <td>840.18</td> <td>747.02</td> <td>100.00%</td> </tr> </tbody> </table>	Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in Actual Purchase	ADTPS	311.08	188.32	25.21%	RE Sources	278.86	40.31	5.40%	Exchange	250.24	491.49	65.79%	Others	-	26.90	3.60%	Total	840.18	747.02	100.00%
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Total	840.18	747.02	100.00%																							
8	Power Purchase under Section 62 of Electricity Act, 2003	AEML-D is purchasing power from only one source i.e. ADTPS under Section 62 of EA, 2003.																								



Sr. No.	Particular	Compliance
		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. 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.
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 July, 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 747.02 MUs as against approved 840.18 MUs from the sources approved by the Commission.** The lower Power purchase is due to lower Sales of AEML-D in the month of July 2021.
- 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 188.32 MU for the month of July 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. 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	4.08
Wind Solar Hybrid	700	255.50	-
Non-Solar			
Reliance Innoventures	45	6.57	13.74
AAA Sons Enterprise	3.38	0.52	0.46



Approval of FAC Charges for the month of July, 2021

Source	Contracted Capacity (MW)	Approved (MU)	Actual (MU)
Vector Green Energy Private Limited	18	2.63	6.65
Vector Green Energy Private Limited	6	0.88	2.20
Tembhu Power Private Limited	4.5	0.99	-
Reliance Power Limited	45	6.26	13.18
Total		278.86	40.31

- 4.7 AEML-D has procured 1.43 MU lower than the approved from DSPPL, 255.50 MU lower than the approved from wind solar hybrid, 7.17 MU higher than the approved from Reliance Innoventures, 0.06 MU lower than approved from AAA Sons Enterprise, 5.34 MU higher than the approved from Vector Green Energy Private Limited, 0.99 MU lower than the approved from Tembhu Power Private Limited and 6.92 MU higher 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.
- 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 491.49 MU from all these sources 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 procured 19.57 MU from the imbalance pool for the month of July 2021.
- 4.10 **Power Procurement from Open Access and Roof Top Solar Consumers:** AEML-D has purchased 0.89 MU from the Open Access and Roof top Solar Consumers for the month of July 2021.
- 4.11 **Power Procurement from Standby Sources:** AEML-D has purchased 6.43 MU from MSEDCL as stand-by in the event of outage or non-availability or constrained availability of any of their contracted/ scheduled generation for the month of July 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



Approval of FAC Charges for the month of July, 2021

5.1 The Commission has scrutinised the detailed bills/invoices submitted for power purchase during the month of July 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 July 2021 is Rs. 290.24 Crore** which is lower than **the approved Power Purchase cost of Rs. 334.06 Crore** by the Commission for the month of July 2021. **This is on account of the lower power purchase, variation in power purchase rates due to fuel prices variation, significant quantum of cheaper bilateral purchase and lower purchase from Solar and Non-Solar sources. The Commission has examined the submissions made by AEML-D and worked out the actual Power Purchase Cost of Rs. 290.24 Crore with APPC of Rs. 3.89 per Unit.** The actual purchase for same month in FY 2020-21 i.e. July 2020 was 624.63 MU and power purchase cost was Rs. 228.94 Crore with APPC of Rs. 3.67/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 July 2021 is shown in

5.3 Table 5 below:

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

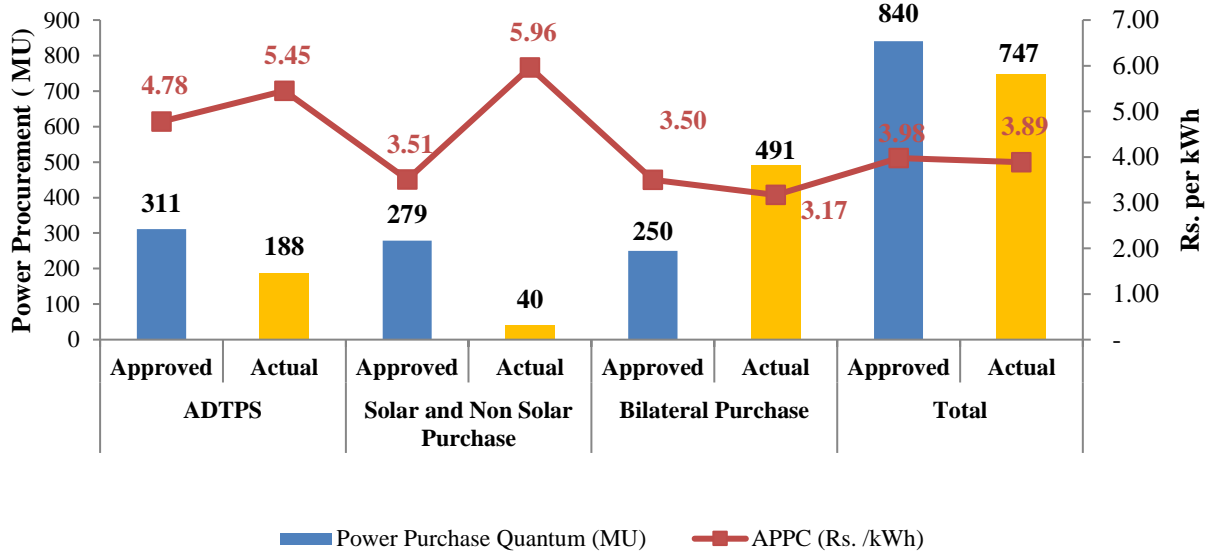
Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs. / kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs. /kWh)	Total Cost (Rs. Crore)	APPC (Rs. /kWh)
ADTPS	Approved	311.08	27.24	0.88	121.42	3.90	148.66	4.78
	Actual	188.32	24.91	1.32	77.72	4.13	102.63	5.45
Solar and Non Solar Purchase	Approved	278.86	-	-	97.82	3.51	97.82	3.51
	Actual	40.31	-	-	24.03	5.96	24.03	5.96
Bilateral Purchase	Approved	250.24	-	-	87.59	3.50	87.59	3.50
	Actual	491.49	-	-	155.74	3.17	155.74	3.17
Pool/ FBSM	Approved	-	-	-	-	-	-	-
	Actual	19.57	-	-	5.60	2.86	5.60	2.86
OA/RTS	Approved	-	-	-	-	-	-	-
	Actual	0.89	-	-	0.24	2.64	0.24	2.64
Standby Charges	Approved	-	-	-	-	-	-	-
	Actual	6.43	-	-	2.57	4.00	2.57	4.00
Other Charges	Approved	-	-	-	-	-	-	-
	Actual	-	-	-	(0.56)	-	(0.56)	-
Total	Approved	840.18	27.24	0.32	306.82	3.65	334.06	3.98
	Actual	747.02	24.91	0.33	265.33	3.55	290.24	3.89



*- 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



ADTPS

5.5 The Commission in Case No. 325 of 2019 has approved an energy quantum from ADTPS at the rate of Rs. 4.78/kWh. AEML-D has purchased at the rate of Rs. 5.45/kWh for the month of July 2021. The Commission has also worked out the rate for purchase from AEML-D as Rs. 5.45/kWh for the month of July 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 July 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 ADTPS in July 2021 was 56.06% as compared to approved PLF of 94.38%.** ADTPS was available for generation, the Plant Availability Factor for the month (PAFM) for both Units of AEML-G was considered to be 77.89%. Since cumulative PAFM for the period April 2021 to July 2021 is less than Normative Plant Availability Factor (NPAF) of 85% (i.e. target for low demand season), AEML-G has calculated the capacity charges for peak hours of the month and for off peak hours of the



Approval of FAC Charges for the month of July, 2021 month payable for July 2021 as per Regulation 50.2 of the MYT Regulations, 2019. The capacity charges for peak hours works out to Rs. 5.03 Crore and the capacity charges for off peak hours work out to Rs. 19.88 Crore, totalling Rs. 24.91 Crore for the month of July 2021. There is shortfall in recovery of fixed charges as the availability for peak and off-peak hours in July 2021 was lower than the target availability of 85% as per MYT Regulations, 2019. The Commission has approved fixed charges Rs. 24.91 Crore on account of lower availability than the target availability of 85%.

- 5.8 **Due to lower generation, per unit impact on Fixed Cost has increased by Rs. 0.447 /kWh and accordingly the Fixed Cost per unit has slightly increased from approved FC rate of Rs. 0.88 /kWh to actual FC rate of Rs. 1.32/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 July 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 July 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 1,26,048.07 MT Coal from SECL in the month of July 2021. AEML-D has also submitted the breakup and supporting documents for “Other Charges” of Rs. 0.25 Crore. AEML-D has submitted that the booking of cost under the head “Uploading on washed coal inventory” is due to adjustment of the difference in lag in invoices with the provisional booking of cost in previous months. In the month of July 2021, Rs. 7,56,393/- has been included as an adjustment under freight charges for raw coal, Rs 5,29,343/- under freight charges for washed coal and Rs. 2,36,921/- under coal loading charges, on account of diesel escalation for June 2021. Further Rs. (25,223)/- and Rs (634)/- have been included as an adjustment under raw coal analysis at SECL mines end and wash coal analysis charges at ADTPS end respectively.
- 5.12 The washery incentive paid for Q1 of FY 21-22 is Rs 45,67,925/-. The same has been included as adjustment under washing charges in July 2021. The penalty applicable on washery for June 2021 (as the number of rakes with ash content in June 2021 was more



Approval of FAC Charges for the month of July, 2021 than three) was Rs. (18,09,336)/-. The same is also included as adjustment under washing charges in July 2021.

- 5.13 AEML-G has received debit note of Rs. 1,09,64,148/- and credit note of Rs. 21,22,738/- from SECL for grade slippage pertaining to the months of May19, Aug19, Nov19 and Aug 20. The net debit amount is Rs. 88,41,410/-. The same has been considered as an adjustment under SECL charges in July 2021. The ITC available to AEML-D for supply to SEEPZ area is set off against the GST paid on purchase of coal / LDO or against the GST paid for other services such as coal washing, coal analysis, liasoning and supervision etc. The ITC available on GST paid for SECL charges for June 2021 is Rs. (99,292)/-. The ITC available for the GST paid on freight charges of Indian Railways in July 2021 is Rs. (1,98,230)/-. The ITC available for the GST paid on liasoning charges, coal analysis charges at ADTPS end, coal analysis charges at washery end and coal analysis charges at mine end in June 2021 are Rs. (46,268)/-, Rs. (709)/-, Rs. (368)/-and Rs. (2661)/- respectively. Further there are adjustments relating to ITC on GST paid on washing charges amounting to Rs. 23,402/-, which is considered as an adjustment in July 2021.
- 5.14 The ITC available for supply to SEEPZ area on the GST paid on freight charges of Indian Railways in July 2021 is Rs. (13,721)/-. The ITC available for the GST paid on liasoning charges, coal analysis charges at ADTPS end, coal analysis charges at mine end and SECL charges in June 2021 are Rs. (27,377)/-, Rs. (420)/-, Rs. (182)/- and Rs. (68060)/- respectively, which are included in July 2021.
- 5.15 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 July 2021 is as shown in the Table 6 below:

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

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st July)	1,49,412.42	80.39	5,380.14
Addition during month	1,26,516.40	67.70	5,350.72
Total	2,75,928.82	148.08	5,366.65
Consumption			
Actual	1,19,286.49	64.02	5,366.65
Other Charges		0.25	
Total	1,19,286.49	64.27	5,387.51



- 5.16 The overall cost approved towards fuel expenses is Rs. 64.27 Crore for the month of July 2021.
- 5.17 **With regards to the washed coal, the landed cost for the month of July 2021 is Rs. 5,387.51/MT as compared to MYT approved Rs. 5,689.76 /MT**, which is 5.31% lower than the approved MYT rate.
- 5.18 AEML-D has considered 'As billed' GCV of 3,695 kcal/kg for washed coal and 'As received' GCV of 3,653 kcal/kg for July 2021. The GCV loss (difference between As Billed GCV and As Received GCV) for washed coal for the month of July 2021 is 42 Kcal/Kg, which implies that As Received GCV is slightly less than As Billed GCV.
- 5.19 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."



Approval of FAC Charges for the month of July, 2021

- 5.20 The transit loss claimed by AEML-D for the month of July 2021 is (0.003)%. AEML-D has submitted that raw coal was lifted from SECL during July 2021 and has raised dispute pertaining to grade slippage to the results declared by CIMFR in the month of July 2021. The coal received at ADTPS in July 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 weighing of coal at the time of its unloading through wagon tippler. The difference is reported as the transit loss which is **(4.22) MT which is (0.003)%** of the total coal received during the month of July 2021. AEML-D has submitted that during monsoon months, the weight of coal increases while in transit as rains along the transit route add moisture to the coal, due to open rakes and hence the transit loss works out to be negative in July 2021.
- 5.21 As submitted by AEML-D, actual stacking loss of washed coal is 113 kcal/kg for month of July 2021.
- 5.22 **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 submitted supporting documents for purchase of 7,929.29 MT Coal from SECL in the month of July 2021.
- 5.23 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 July 2021 is as shown in the Table 7 below:

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

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st July)	83,760.06	39.71	4,740.44
Addition during month	8,006.15	3.79	4,728.72
Total	91,766.21	43.69	4,739.416
Consumption			
Actual	13,826.13	6.55	4,739.42



Total	77,940.08	36.94	4,739.42
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- 5.24 The overall cost approved towards fuel expenses (raw coal) is Rs. 6.55 Crore for the month of July 2021.
- 5.25 **With regards to the raw coal, the landed cost for the month of July 2021 is Rs. 4,739.42/MT.**
- 5.26 AEML-D has considered 'As billed' GCV of 3,902 kcal/kg for raw coal and 'As received' GCV of 3,642 kcal/kg for July 2021. The GCV loss (difference between As Billed GCV and As Received GCV) for raw coal for the month of July 2021 is 260 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. Hence, in present case, actual loss is restricted to 300 kcal/kg and as received GCV is considered as 3,642 kcal/kg for calculation of energy charges.
- 5.27 The transit loss claimed by AEML-D for the month of July 2021 is (0.97)%. AEML-D has submitted that raw coal was lifted from SECL during July 2021 and has raised dispute pertaining to grade slippage to the results declared by CIMFR in the month of July 2021. The coal received at ADTPS in July 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 sending 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 **(76.86) MT which is (0.97)%** of the total coal received during the month of July 2021. AEML-D has submitted that during monsoon months, the weight of coal increases while in transit as rains along the transit route add moisture to the coal, due to open rakes and hence the transit loss works out to be negative in July 2021.
- 5.28 Based on as received GCV considered for calculation of energy charges, actual stacking loss of raw coal works out to 764 kcal/kg for month of July 2021.
- 5.29 **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 not purchased any imported coal July 2021. AEML-G has consumed 5148.68 MT imported coal from the vessel MV General Guisan in the month of July 2021.



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- 5.30 For the purpose of computation of cost of coal consumption, AEML-G adopts weightage average method for accounting of imported coal from 1st April, 2021. AEML-G has provided imported coal inventory and its consumption detail which is as shown in **Error! Reference source not found.** below:

Table 8: Imported Coal Inventory

Sr. No.	Date of Purchase	Vessel Name	Cost (Rs./MT)	Opening Quantity (as on 1 st July, 2021) (MT)	Purchase during Month of March(MT)	Consumption during Month of March (MT)	Closing Quantity (as on 31st July, 2021) (MT)
1	Jan-21	MV General Guisan	6,694.47	13,367.18	-	5,148.68	8,218.50
2		Total	6,694.47	13,367.18	-	5,148.68	8,218.50

- 5.31 The Coal Cost and GCV of imported coal is as shown in Table 9 below:

Table 9: Cost and GCV of Imported Coal

S. No.	Vessel Name	Cost (Rs./MT)	Consumption (MT)	Coal Cost (Rs. Crore)	GCV (kcal/kg)
1	MV General Guisan	6,694.47	5,148.68	3.45	4,065
2	Other Expense			0.00	
3	Total	6,694.47	5,148.68	3.45	4,065

- 5.32 The Commission has considered the 'As received' GCV of 4,065 kcal/kg based on the GCV from Certificate of Sampling & Analysis Report provided by AEML-D for FAC calculation.
- 5.33 It is observed that ADTPS has consumed imported coal from MV General Guisan in July 2021. It is also observed that no imported coal was purchased during July 2021. The actual landed cost of coal from the above vessel would account for the actual transit loss. The actual transit loss is 114.65 MT which is 0.19%. However, for FAC, normative landed cost is to be computed by considering normative transit losses of 0.2% for imported coal, as Transit loss is a performance parameter. Therefore, in order to arrive at the normative cost of imported coal consumed, the landed rate from the above vessel is adjusted for actual and normative transit losses.
- 5.34 As submitted by AEML-D the actual stacking loss for imported coal is 216 kcal/kg for month of July 2021. The Commission has noted that the stacking loss in case of imported coal is more than the approved stacking loss of 120 kcal/kg.



- 5.35 **LDO:** AEML-D has purchased 96 MT of Light Diesel Oil for the month of July 2021. The working of the LDO fuel cost considered for July 2021 is as shown in the Table 10 below:

Table 10: Working of LDO Rate for July, 2021

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st July)	457.55	1.98	43,283.89
Addition during month	96.00	0.56	58,225.94
Total	553.55	2.54	45,875.23
Consumption	216.28	0.99	45,875.23
Total	216.28	0.99	45,875.23

- 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 stacking loss considering washed coal, raw coal and imported coal of 182 kcal/kg or 120 kcal/kg as per Regulation) for calculation of energy charge rate.
- 5.38 AEML-D has submitted that the Stacking loss is the difference between ‘as Received GCV’ and ‘as Fired GCV’, the reporting of “as Received GCV” is based on the coal receipt during the month and “as Fired GCV” is based on Coal fired during the month. As the consumption of coal is from the previous stock available and partial feeding from received rakes the comparison of ‘as Received GCV’ and ‘as Fired GCV’ on monthly basis would always provide a varied result.



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- 5.39 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. 4.127/kWh which is higher than the approved variable cost of Rs. 3.90/kWh.
- 5.40 **Incentive:** As per Regulation 46.3 of MYT Regulations, 2019, the target PLF for earning incentive is 85%. Since the PLF for the July 2021 both for peak and off-peak hours were less than 85%, AEML-G has not claimed any incentive for July 2021.
- 5.41 Variation in power purchase expenses from ADTPS 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 ADTPS for July, 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	188.32	5.45	(58.66)	12.64	(46.02)

- 5.42 Based on the above, **APPC for ADTPS works out to Rs. 5.45/kWh as against approved Rs. 4.78/kWh. There is Rs. 0.671/kWh increase in APPC for month of July 2021. Fixed cost variation is contributing to Rs. 0.447/kWh increase and variable cost variation is contributing to Rs. 0.224/kWh increase.**
- 5.43 The energy charge in July 2021 is significantly more than the energy charge of previous months from April 2021 to June 2021 which were in the range of Rs. 3.70/kWh to Rs. 3.80/kWh. This is because coal being received from SECL in recent months is of inferior quality. the quality of coal being received from SECL has deteriorated from May 2021 onwards. Therefore, the GCV at washery end (post washing) as well as at ADTPS has been reducing from April 2021 onwards. Further, there was stacking loss (weighted average) of 182 Kcal/kg in July 2021. In April 2021 and May 2021, the stacking loss was within the limit of 120 Kcal/kg, while in June 2021 the stacking loss was -160 Kcal/kg. In July 2021, as per MYT Regulations, 2019, AEML-G has limited the stacking loss to 120 Kcal/kg, for calculation of energy charge. Thus, there was reduction in As fired GCV in July 2021. Because of combined effect of low quality coal from SECL being received in previous months and the stacking loss in July 2021, the energy charge in July 2021 has increased significantly, compared to earlier months.
- 5.44 **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.



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- 5.45 **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 July 2021.**
- 5.46 **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 12 below:

Table 12: 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

- 5.47 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 July 2021. This rate is being considered as approved rate for calculation of FAC as the payments done to the generator is based on PPA.
- 5.48 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 July 2021.
- 5.49 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.
- 5.50 AEML-D has submitted that the bills for the months of December 2020 to July 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



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- 5.51 Variation in power purchase expenses from RE sources on account of change in quantum and per unit rate is as shown in Table 13 below:

Table 13: Variation in Power Purchase expenses from Renewable Energy Sources for July, 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	4.08	10.30	(1.47)	0.0004	(1.47)
Wind Solar Hybrid	255.50	3.24	-	-	(82.78)	-	(82.78)
Reliance Innoventure	6.57	5.00	13.74	5.30	3.59	0.41	4.00
AAA Sons Enterprise	0.52	5.00	0.46	5.30	(0.03)	0.01	(0.02)
Vector Green Energy Pvt Ltd	2.63	5.00	6.65	5.30	2.01	0.20	2.21
Vector Green Energy Pvt Ltd	0.88	5.07	2.20	5.07	0.67	(0.0003)	0.67
Tembhu Power Pvt. Ltd.	0.99	4.26	-	-	(0.42)	-	(0.42)
Reliance Power Ltd.	6.26	5.81	13.18	5.81	4.02	0.0004	4.02
Total RE Sources	278.86	3.51	40.31	5.96	(83.68)	9.89	(73.79)

- 5.52 **APPC for renewable sources for the month July 2021 works out to Rs. 5.96/kWh as against approved level of Rs. 3.51/kWh. The increase is on account of no power 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, lower purchase from some of the non-solar sources which are cheaper in cost as compared to solar source (DSPPL) and escalations provided in EPA to the approved cost which is not reflected in the present approved rates.**

- 5.53 **Bilateral Purchase:** AEML-D has purchased power from IEX and IEX linked bilateral contracts at the average rate of Rs. 3.17/ kWh which is less than the approved rate of Rs. 3.50/ kWh. It is observed that the power prices in the short term market has decreased



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Table 14: Power Prices in short term market

Month	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	June-21	Jul-21
RTC	2.73	2.83	3.18	3.39	4.02	3.70	2.83	3.06	2.95
Evening (17-23 Hrs)	3.03	2.99	3.44	3.71	4.91	4.26	3.23	3.85	3.81
Day (10-17 Hrs)	2.81	3.08	3.48	3.44	3.78	3.09	2.47	2.36	2.29
Night (0-6, 23-34 Hrs)	2.26	2.04	2.03	2.37	3.49	3.96	3.04	3.44	3.12
Morning (6-10 Hrs)	2.95	3.52	4.29	4.62	4.02	3.47	2.47	2.45	2.50

- 5.54 Due to limited long term tie-up, AEML-D relies significantly on the short term purchase. AEML-D has purchased 491.49 MUs through bilateral purchase which is 65.79% of its total power purchase for July 2021. Further, the actual rate of bilateral purchase is less than the actual rates of other sources such as ADTPS (Rs. 5.45/ Unit) and RE sources (Rs. 5.96/Unit). AEML-D has also 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. 3.17/Unit. AEML-D has also considered the STOA fees paid to SLDC towards IEX standing clearance as Rs. 7,500 per application. The Commission approves both the charges as part of bilateral purchase for the month of July 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 15 below:

Table 15: Variation in Power Purchase expenses from Bilateral for July, 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	491.49	3.17	84.44	(16.28)	68.15

- 5.56 **FBSM/ Imbalance Pool:** The Commission observes that **AEML-D has purchased 19.57 MU** from the Imbalance Pool and considered associated charges with regards to imbalance pool for the month July 2021 on provisional basis at the rate of Rs. 2.86/kWh as per the rate considered by the Commission in MYT Order .



- 5.57 AEML-D has drawn 19.57 MU from the imbalance pool for the month of July 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 **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:”



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- 5.60 The surplus energy of RE Open Access consumers (Non-firm) purchased by AEML-D as per the aforementioned regulations is 0.89 MU at a cost of Rs. 0.24 Crore and is considered in the FAC for the month of July 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.
- 5.61 **Standby Purchase:** AEML-D has submitted that it has stand-by arrangement with MSEDCL to supply standby power in the event of outage or non-availability or constrained availability of any of their contracted / scheduled generation, irrespective of whether it is planned or forced outage. AEML-D has submitted that MSEDCL bills the standby power based on FBSM bills which have not been raised after March 2018, therefore the cost of Rs 2.57 Crore at Rs. 4.00/kWh has been provisionally booked for the month of July 2021. The Commission has considered as submitted by AEML.
- 5.62 **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 July 2021. The Commission has scrutinized the bills and has approved Rs. (0.56) Crore as rebate to be considered as part of Power purchase cost for the month of July 2021.
- 5.63 Summarised reasons for the rate variation for various sources are given in Table 16 below:

Table 16: Reasons for the rate variation for various sources for July, 2021

Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
1	ADTPS	4.78	5.45	Fixed charges are higher by Rs. 0.447/ kWh due to lower generation and energy charges are higher by Rs. 0.224/ kWh. Also because of combined effect of low quality coal from SECL being received and higher stacking loss in July 2021, the APPC works out is higher than the approved rate.
2	RE Sources	3.51	5.96	There is no purchase from wind solar hybrid source which is the cheapest source as the Commission, in MYT Order, 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 to lower power purchase from some of the non-solar sources which are cheaper in cost in comparison to solar source (DSPPL) and non-consideration of



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Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
				escalation in EPA the approved rate is lesser than actual rate.
3	Power Exchange	3.50	3.17	Market discovered rate; Short term power purchase from Power Exchange and through day ahead exchange linked contracts.
	Total	3.98	3.89	Variation due to above reasons

5.64 **Considering the above, the Commission allows the actual average power purchase cost of Rs. 3.89/kWh for the month of July 2021 as shown in Table 16 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 July 2021 as shown in Table 16 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 lower 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 July 2021 is negative as shown in the Table 17 below.

Table 17: FAC on account of Power Purchase Cost

Sr. No.	Particulars	Units	July 2021
1	Average power purchase cost approved by the Commission	Rs./kWh	3.98
2	Actual average power purchase cost	Rs./kWh	3.89
3	Change in average power purchase cost (= 2-1)	Rs./kWh	(0.09)
4	Net Power Purchase	MU	747.02
5	Change in power purchase cost (=3 x 4/10)	Rs. Crore	(6.78)

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 has determined a negative FAC of Rs. (15.69) Crore for June 2021 which is contributed to the FAC Pool and the total carrying cost on FAC Fund of Rs. 2.35 Crore for June 2021. Thus, the opening balance for FAC fund for July 2021 is Rs. (372.97) Crore. The Commission has taken into consideration the submission made by AEML-D towards holding cost of Rs. 2.46 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 July 2021 and holding cost worked out is Rs. 2.46 Crore.
- 8.3 The Commission has considered MCLR rate of July month plus 150 basis points which works out to 8.50%. Accordingly, the Commission has calculated holding cost of Rs. 2.46 Crore to be contributed to the FAC Pool.

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

Table 18: Disallowance of FAC due to excess Distribution Loss



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Sr. No.	Particulars	Units	Approved in Tariff Order	Actual for July, 2021	Cumulative up to July, 2021	Annual Sliding Distribution Loss up to July, 2021
1	Net Energy input at Distribution Voltages	MU	813.46	725.02	2914.38	8141.00
2	Energy sales at Distribution voltages	MU	754.08	656.52	2719.13	7450.48
3	Distribution Loss (1 - 2)	MU	59.39	68.50	195.25	690.53
4	Distribution Loss as % (3/1)	%	7.30%	9.45%	6.70%	8.48%
5	Excess Distribution Loss = [Annual Sliding Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	8.57		
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	-	-	-	

- 9.3 As seen from the above Table 18, distribution loss for the month of July 2021 is 9.45% which is higher than the MYT approved distribution loss of 7.30%. The annual sliding Distribution Loss up to July, 2021 is 8.48% 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. The



Approval of FAC Charges for the month of July, 2021
Commission has not worked out any disallowance on account of Distribution Loss since the standalone FAC for the month of July 2021 is negative.

- 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.
- 9.7 AEML-D submits that the lowering of consumption in July 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 19 below:

Table 19: 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 - Cumulative till July	6.70%	8.05%

- 9.9 As seen from the above Table 18, **disallowance of FAC due to excess distribution loss for the month of July 2021 is NIL since the standalone FAC for the month of July 2021 is negative.**

10. Summary of Allowable ZFAC

- 10.1 The summary of the FAC amount as approved by the Commission for the month of July 2021 as shown in the Table 20 below.

Table 20: Summary of Allowable Z_{FAC} for July, 2021

Sr. No.	Particulars	Units	As Claimed July 2021	As Approved July 2021
1	Calculation of Z _{FAC}			



Approval of FAC Charges for the month of July, 2021

Sr. No.	Particulars	Units	As Claimed July 2021	As Approved July 2021
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	(6.78)	(6.78)
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	(6.78)	(6.78)
2	Calculation of FAC Charge			
2.1	Energy Sales within the License Area	MU	656.52	656.52
2.2	Excess Distribution Loss	MU	-	-
2.3	Z _{FAC} per kWh	Rs./kWh	(0.10)	(0.10)
3	Recovery of FAC			
3.1	FAC disallowed corresponding to excess Distribution Loss $[(2.1+2.2) \times 2.3/10]$	Rs. Crore	-	-
3.2	Allowable FAC	Rs. Crore	(6.78)	(6.78)
4	Utilization of FAC Fund			
4.1	Opening Balance of FAC Fund	Rs. Crore	(372.97)	(372.97)
4.2	Holding Cost on FAC Fund	Rs. Crore	(2.46)	(2.46)
4.3	Z _{FAC} for the month (Sr. No. 3.2)	Rs. Crore	(6.78)	(6.78)
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	(382.21)	(382.21)
4.7	Z _{FAC} leviable/refundable to consumer	Rs. Crore	-	(382.21)
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	-	(382.21)

10.2 It can be seen from the above Table 20 that opening FAC fund for month of July 2021 is Rs. (372.97) Crore and standalone FAC for the month of July 2021 approved by the Commission is Rs. (6.78) Crore. The Commission has also approved a holding cost of Rs. (2.46) Crore for the FAC fund accrued during the month of April 2020 to June 2021. The overall FAC amount for the month till July 2021 is Rs. (382.21) Crore. As the FAC is negative, the said amount will be contributed to FAC Fund.

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:

$Z_{FAC\ Cat}$ = 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 The Commission allows the FAC amount of Rs. (6.78) Crore for the month of July, 2021.
- 11.3 The Commission in its FAC approval for the month of June, 2021 has directed AEML-D to carry forward the approved FAC amount of Rs. (372.97) 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. (372.97) Crore, standalone FAC amount of Rs. (6.78) Crore for the month of July, 2021, holding cost of Rs. (2.46) Crore, the total amount of Rs. (382.21) 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



Approval of FAC Charges for the month of July, 2021 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. 382.21 Crore to the next billing cycle with holding cost.
- 11.7 **In view of the above, per unit Z_{FAC} for the month of July 2021 to be levied on consumer of AEML-D in the billing month of September 2021 is Nil.**

