



महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

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

Date: 30 November, 2021

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

Subject: Prior approval of FAC submissions of AEML-D for the month of August 2021.

Reference: 1. AEML-D FAC submission vide email dated 29 September, 2021.
2. The data gaps were communicated vide email dated 13 October 2021.
3. AEML-D replied vide email dated 09 November 2021
4. Discussion held with AEML-D on 22 November 2021

Sir,

Upon vetting the FAC calculations for the month of August, 2021 as mentioned in the above reference, the Commission has accorded approval for charging FAC of **Rs. 87.66 Crore** to its consumers as shown in the table below:

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

The Commission allows the accumulation of FAC amount of **Rs. (297.06) 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 August 2021.



PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF AUGUST 2021

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

Reference:

1. AEML-D FAC submission for the month of August 2021 vide email dated 29 September, 2021.
2. The data gaps were communicated vide email dated 13 October 2021.
3. AEML-D replied vide email dated 09 November 2021
4. Discussion held with AEML-D on 22 November 2021

1. FAC submission by AEML-D:

1.1 AEML-D has made FAC submissions for the month of August 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 October 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 29 September, 2021, AEML-D has filed FAC submissions for the month of August 2021 for prior approval of the Commission. The Commission has



Approval of FAC Charges for the month of August, 2021 scrutinized the submissions provided by AEML-D and has also verified the power purchase bills and other fuel related invoices provided along with its submissions.

3. Energy Sales of the Licensee

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

Table 1: Energy Sales – Approved and Actual

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales (August, 2021) (MU)
	(I)	(II=I/12)	(III)
LT Category			
BPL	0.01	0.001	0.0003
LT -I Residential	4,644.19	387.02	353.65
LT II Commercial	2,661.44	221.79	159.88
LT III(A) - LT Industrial up to 20 kW TOD Option	186.97	15.58	27.24
LT III(B) - LT Industrial above 20 kW	383.85	31.99	26.33
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	2.06
LT X: LT -Public Service (B)	206.62	17.22	11.73
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	11.84
HT 2 (Commercial.)	276.26	23.02	28.18
HT 3 (Group Housing Soc.)	32.24	2.69	2.72
HT 4 (Temporary Supply)	24.13	2.01	-
HT – Railways	31.04	2.59	1.66
HT - Public Services (A)	6.21	0.52	0.55
HT - Public Services (B)	97.20	8.10	9.06
HT - Public Water Works	8.13	0.68	-
Total	9,048.92	754.08	634.94



Approval of FAC Charges for the month of August, 2021

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

- 3.2 It can be observed from above Table 1 that **actual sales during August 2021 is 634.94 MU which is 15.80% 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 August 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 August 2021).
 - For cycle consumers (LT cycle billing), consumption data provided is for meter reading from 1st August to 31st August.
- 3.3 The total sale of 634.94 MU for the month of August 2021 which is still lower than the usual consumption of the month of August. For instance, in August 2019, the energy sales were 734.12 MU. August, 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
Actual – August, 2021	356	188	65	25	635	538
Approved - Cumulative till August, 2021	1949	1224	394	204	3770	3681
Actual - Cumulative till August, 2021	1981	892	362	119	3354	2904

- 3.5 It is observed that sales to Residential and commercial category is low as compared to approved level.



4. Power Purchase Details

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

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

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

4.2 The Commission in its MYT Order dated 30 March, 2020 in Case No. 325 of 2019 had approved the Power Purchase for FY 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 August, 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 August 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 12.68 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 August 2021.			
6	Power Purchase	Actual Power Purchase is 743.00 MU as against approved 840.18 MU due to lower sales.			
7	Source wise Power Purchase	Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in Actual Purchase
		ADTPS	311.08	286.35	38.54%
		RE Sources	278.86	52.65	7.09%
		Exchange	250.24	389.49	52.42%
		Others	-	14.51	1.95%
		Total	840.18	743.00	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.			



Approval of FAC Charges for the month of August, 2021

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 August, 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 743.00 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 August 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 286.35 MU for the month of August 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 23.50 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	4.64
Wind Solar Hybrid	700	255.50	-



Approval of FAC Charges for the month of August, 2021

Source	Contracted Capacity (MW)	Approved (MU)	Actual (MU)
Non-Solar			
Reliance Innoventures	45	6.57	9.82
AAA Sons Enterprise	3.38	0.52	0.47
Vector Green Energy Private Limited (Mar 2009)	18	2.63	4.47
Vector Green Energy Private Limited (Apr 2010)	6	0.88	1.47
Tembhu Power Private Limited	4.5	0.99	-
Reliance Clean Power Pvt. Limited	45	6.26	8.27
Short Term RE/GTAM			23.50
Total		278.86	52.65

- 4.7 AEML-D has procured 0.88 MU lower than the approved from DSPPL, 255.50 MU not available than the approved from wind solar hybrid, 3.25 MU higher than the approved from Reliance Innoventures, 0.05 MU lower than approved from AAA Sons Enterprise, 2.44 MU higher than the approved from Vector Green Energy Private Limited, 0.99 MU not available than the approved from Tembhu Power Private Limited (small hydro plant affected due to flooding happened (Krishna river) in July 2021) and 2.01 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 389.49 MU from a Power Exchange 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 procured 12.68 MU from the imbalance pool for the month of August 2021.
- 4.10 **Power Procurement from Open Access and Roof Top Solar Consumers:** AEML-D has purchased 1.83 MU from the Open Access and Roof top Solar Consumers for the month of August 2021.
- 4.11 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 August, 2021

5.1 The Commission has scrutinised the detailed bills/invoices submitted for power purchase during the month of August 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 August 2021 is Rs. 384.59 Crore** which is higher than the **approved Power Purchase cost of Rs. 334.06 Crore** by the Commission for the month of August 2021. **This is on account of the variation in power purchase rates due to fuel prices variation, higher bilateral purchase cost which is linked to exchange rates and non-availability of 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. 384.59 Crore with APPC of Rs. 5.18 per Unit.** The actual purchase for same month in FY 2020-21 i.e. August 2020 was 588.98 MU and power purchase cost was Rs. 218.56 Crore with APPC of Rs. 3.71/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 August 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	0.876	121.42	3.90	148.66	4.78
	Actual	286.35	32.09	1.12	116.68	4.07	148.77	5.20
Solar and Non Solar Purchase	Approved	278.86	-	-	97.82	3.51	97.82	3.51
	Actual	52.65	-	-	29.12	5.53	29.12	5.53
Bilateral Purchase	Approved	250.24	-	-	87.59	3.50	87.59	3.50
	Actual	389.49	-	-	203.57	5.23	203.57	5.23
Pool/FBSM	Approved	-	-	-	-	-	-	-
	Actual	12.68	-	-	3.63	2.86	3.63	2.86
OA/RTS	Approved	-	-	-	-	-	-	-
	Actual	1.83	-	-	0.61	3.34	0.61	3.34



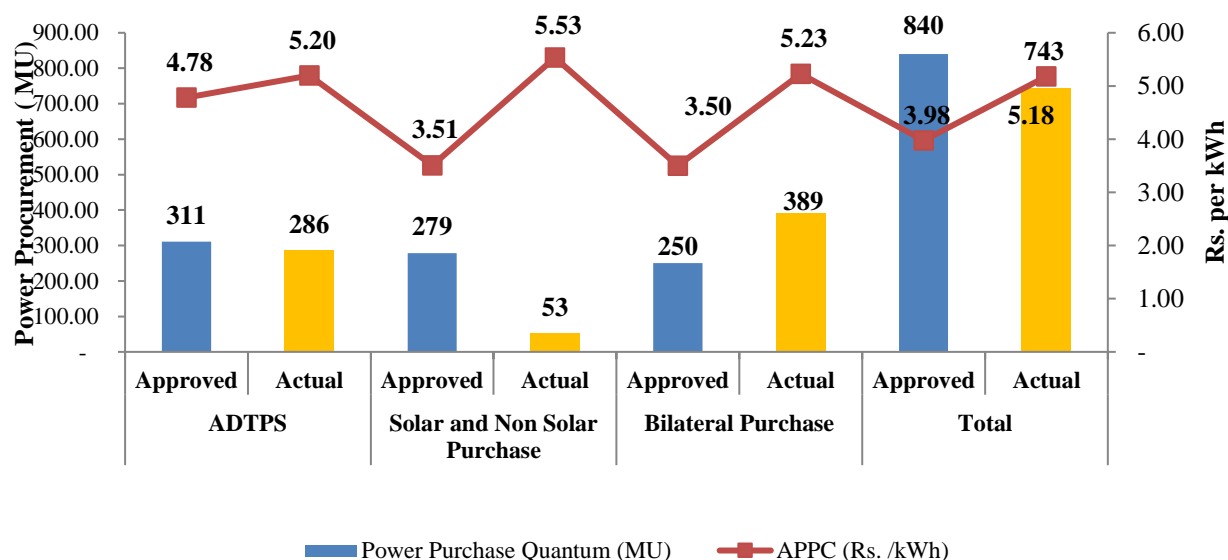
Approval of FAC Charges for the month of August, 2021

Standby Charges	Approved	-	-	-	-	-	-	-
	Actual	-	-	-	-	-	0.04	-
Other Charges	Approved	-	-	-	-	-	-	-
	Actual	-	-	-	(1.16)	-	(1.16)	-
Total	Approved	840.18	27.24	0.32	306.82	3.65	334.06	3.98
	Actual	743.00	32.09	0.43	352.50	4.74	384.59	5.18

*- 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. 5.20/kWh for the month of August 2021. The Commission has also worked out the rate for purchase from AEML-D as Rs. 5.20/kWh for the month of August 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



Approval of FAC Charges for the month of August, 2021 of 2019 (AEML-G) is Rs. 326.03 Crore. The actual payment of Fixed Cost for the month of August 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 August 2021 was 85.25% 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 100%. Since cumulative PAFM for the period April 2021 to August 2021 is more than Normative Plant Availability Factor (NPAF) of 85%, the Commission has considered the fixed cost of Rs. 32.09 Cr. as per invoices submitted by AEML-D and as per the provisions of MYT Regulations, 2019.
- 5.8 **Due to lower generation, per unit impact on Fixed Cost has increased by Rs. 0.245 /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 August 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 August 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 1,37,135.83 MT Coal from SECL in the month of August 2021. AEML-D has also submitted the breakup and supporting documents for “Other Charges” of Rs. 0.27 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 August 2021, Rs. 6,86,962/-, Rs 4,90,159/- and Rs. 2,32,475/- 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 July 2021. Further, Rs (1070)- has been included as an adjustment under washed coal analysis charges at ADTPS end.



Approval of FAC Charges for the month of August, 2021

- 5.12 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 August 2021 was Rs. 37,70,513/- (Rs. 31,95,350/- plus 18% GST), which has been considered under washing charges. Further 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 July 2021 (as the number of rakes with ash content in July 2021 was more than three) was Rs. (22,02,861)/- (Rs. 18,66,831/- plus 18% GST) has been added as an adjustment under washing charges. AEML-G submitted that as per SECL invoices, sizing charges charged by SECL for 100 mm size of coal is Rs. 87/- and for 250 mm size of coal, it is Rs. 56/- i.e. SECL charges less for over size coal of 250 mm by Rs. 31/- per MT. This difference of Rs. 31/- per MT is what is paid to washery for crushing 250 mm oversize coal.
- 5.13 The input tax credit (ITC) due to sale of coal rejects works out to Rs. (13,44,866)/-, which has been included as an adjustment under SECL coal purchase cost. In addition, Rs 12,99,693/- has been paid as Railway Demurrage for the month May 2021 to July 2021. AEML-D has also submitted the demand letters from Railways in this regard.
- 5.14 AEML-D has submitted that AEML-G had procured raw coal from SECL in line with the policy of Govt. of India regarding import substitution. However, the raw coal allocated by SECL in May 2021 and June 2021 from other mines was having oversized (250 mm plus) boulders, which caused delay in rake unloading as they were stuck/ blocked in apron grill after unloading in rotary type tipplers of ADTPS. These boulders had to be manually broken and removed to continue the unloading operation. Further due to Covid 19, limited workforce was deployed for breaking coal in order to maintain social distancing. This has also contributed to the delay in unloading of coal, both in case of raw coal and washed coal. Railway rakes were queued up while unloading and detention time for calculating demurrage was compounded due to unprecedented time taken for unloading. The rakes received were having boulders, big size coal and stones. Those were removed manually by engaging about 20-22 nos. of people in each shift. Therefore, there was delay in unloading of rakes which has led to demurrage. Railways has claimed Rs 61,14,316/- demurrage charges on 37 coal rakes for delay in unloading.
- 5.15 AEML-G had prayed for waiver of demurrage charges to Railways. However the same has been rejected by Railways. AEML has paid the demurrage charges to Railways under protest and subsequently has filed Appeal before the concerned department of Railways. AEML-D has submitted the copies of letters by AEML-G praying for waiver of demurrage charges, letter to Railways for payment of charges under protest, Appeal by AEML. **AEML has requested the Commission to allow the demurrages claimed for August**



Approval of FAC Charges for the month of August, 2021 since AEML has paid the demurrage charges to Railways. In case the same are reversed in future as a result of the appeal, credit shall be passed on in FAC. The Commission has allowed the same in present FAC approval.

- 5.16 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 for the GST paid on SECL coal purchase for July'21 was Rs (76,196)/-. The ITC available for the GST paid on freight charges of Indian Railways in August 2021 is Rs. (69,602). The ITC available for the GST paid on liasoning charges and coal analysis charges at washery end in July 2021 are Rs. (33,473)/-, Rs. (266)/- respectively for washed coal. Also there have been an adjustments in the ITC payable on GST on coal washing charges, coal analysis charges at ADTPS end and on coal analysis at mine end amounting to Rs. (47,919)/-, Rs. 2,012/- and Rs. 260/- respectively. These charges have been considered in the month of August 2021.
- 5.17 With reference to ITC, the Commission has sought detailed calculation along with supporting documents. AEML has submitted the same and on scrutiny it is found that it is in line with AEML's claim in various months.
- 5.18 The Commission has examined the invoices and the supporting excel working provided by AEML-D and has found it to be appropriate. The working of the washed coal fuel cost considered for August 2021 is as shown in the Table 6 below:

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

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st August)	1,56,642.33	84.06	5,366.65
Addition during month	63,725.28	34.37	5,393.80
Total	2,20,367.61	118.44	5,374.50
Consumption			
Actual	1,60,564.24	86.30	5,374.50
Other Charges		0.27	
Total	1,60,564.24	86.57	5,391.60

- 5.19 The overall cost approved towards fuel expenses is Rs. 86.57 Crore for the month of August 2021.



- 5.20 **With regards to the washed coal, the landed cost for the month of August 2021 is Rs. 5,391.60/MT as compared to MYT approved Rs. 5,689.76 /MT, which is 5.24% lower than the approved MYT rate.**
- 5.21 AEML-D has considered 'As billed' GCV of 3,660 kcal/kg for washed coal and 'As received' GCV of 3,694 kcal/kg for August 2021. The GCV loss (difference between As Billed GCV and As Received GCV) for washed coal for the month of August 2021 is (34) Kcal/Kg, which implies that As Received GCV is slightly more than As Billed GCV.
- 5.22 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."

- 5.23 The transit loss claimed by AEML-D for the month of August 2021 is 0.56%. AEML-D has submitted that raw coal was lifted from SECL during August 2021 and has raised dispute pertaining to grade slippage to the results declared by CIMFR in the month of August 2021. The coal received at ADTPS in August 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



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- 5.24 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, 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 since in the As Received GCV, the effect of GCV of the opening stock as well as that of the stock received during the month is included. The GCV of opening stock of washed coal in August 2021 was 3793 kCal/kg and the GCV of washed coal received in August 21 was 3694 kCal/kg. Hence the weighted average GCV of 3764 kCal/kg has been considered as the As Received GCV of washed coal in August 2021.
- 5.25 Considering this method, the stacking loss for washed coal work out to 118 Kcal/Kg respectively. AEML has requested the Commission to approve this method of computing Stacking loss as this is much more representative. The coal to be consumed is drawn from the yard stack, which is composed of both the existing stock as well as that received during the month and hence the GCV of As Received Coal must be considered as the weighted average of opening stock as well as that received during the month. The Commission accepts the submission of AEML-G for weighted average methodology of GCV as the price of coal is also computed based on weighted average methodology.
- 5.26 **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 not purchased Raw Coal from SECL but has consumed 31,922.56 MT of raw coal in the month of August 2021.
- 5.27 AEML has paid railway demurrage charges of Rs. 0.48 Crore for the month of May 21 to June 21. The issue has been discussed in detail in 5.13 and 5.14 of this report.



5.28 The working of the raw coal fuel cost considered for August 2021 is as shown in the Table 7 below:

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

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st August)	77,940.080	36.94	4,739.42
Addition during month	0.00	0.48	0.00
Total	77,940.080	37.42	4,801.13
Consumption			
Actual	31,922.563	15.33	4,801.13
Total	46,017.52	22.09	4,801.13

5.29 The overall cost approved towards fuel expenses is Rs. 15.33 Crore for the month of August 2021.

5.30 **With regards to the raw coal, the landed cost for the month of August 2021 is Rs. 4,801.13/MT.**

5.31 Raw coal has not been procured in August 2021, there is no transit loss in case of raw coal.

5.32 Based on as received GCV considered for calculation of energy charges, actual stacking loss of raw coal works out to 21 kcal/kg for month of August, 2021.

5.33 **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 in August 2021. AEML-G has consumed 8218.50 MT imported coal from the vessel MV General Guisan in the month of August 2021.

5.34 **For the purpose of computation of cost of coal consumption, AEML-G adopted 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 August, 2021) (MT)	Purchase during Month of August (MT)	Consumption during Month of May (MT)	Closing Quantity (as on 31 st August, 2021) (MT)
1	Jan-21	MV General Guisan	6,694.47	8,218.50	-	8,218.50	-
2		Total	6,694.47	8,218.50	-	8,218.50	-

5.35 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	8,218.50	5.50	4,065
2	Other Expense			0.00	
3	Total	6,694.47	8,218.50	5.50	4,065

5.36 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.

5.37 It is observed that ADTPS has consumed imported coal from MV General Guisan in August 2021. It is also observed that no imported coal was purchased during August 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.

5.38 As submitted by AEML-D the actual stacking loss for imported coal is 206 kcal/kg for month of August 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.

5.39 **Light Diesel Oil (LDO):** AEML-D has purchased 120 MT of LDO for the month of August 2021. The working of the LDO fuel cost considered for August 2021 is as shown in the Table 10 below:



Table 10: Working of LDO Rate for August, 2021

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st August)	337.27	1.55	45,875.23
Addition during month	120.00	0.68	56,513.94
Total	457.27	2.23	48,667.11
Consumption	-	-	-
Total	-	-	-

- 5.40 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.”

- 5.41 In line with MYT Regulations, 2019 and MYT Order in Case No. 298 of 2019, the Commission has considered stacking loss of 106.18 kcal/kg (minimum of actual weighted average stacking loss considering washed coal, raw coal and imported coal of 106.18 kcal/kg or 120 kcal/kg as per Regulation) for calculation of energy charge rate.
- 5.42 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. 4.075/kWh which is higher than the approved variable cost of Rs. 3.90/kWh.
- 5.43 **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 and August 2021 both for peak and off-peak hours were less than 85%, AEML-G has not claimed any incentive for August 2021.
- 5.44 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 August, 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	286.35	5.20	(11.82)	11.93	0.11

- 5.45 Based on the above, **APPC for ADTPS works out to Rs. 5.20/kWh as against approved Rs. 4.78/kWh. There is Rs. 0.671/kWh increase in APPC for month of August 2021. Fixed cost variation is contributing to Rs. 0.245/kWh increase and variable cost variation is contributing to Rs. 0.172/kWh increase.**
- 5.46 The energy charge in August 2021 is significantly higher 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 received from SECL in recent months has been 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. Quality of coal being supplied by SECL is not under the control of AEML. Consequently, the As Fired GCV has also been reducing from April 2021 onwards. Due to the above reasons, the energy charge for August 2021 has increased significantly.
- 5.47 **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.
- 5.48 **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. **This source is not available for month of August 2021 due to delay in commissioning of the project on account of COVID 19.**
- 5.49 **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



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Vector Green Energy Private Limited	5.00	5.30
Vector Green Energy Private Limited	5.07	5.07
Tembhu Power Private Limited	4.26	-
Reliance Clean Power Private Limited	5.81	5.81

- 5.50 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 August 2021. This rate is being considered as approved rate for calculation of FAC as the payments done to the generator is based on PPA.
- 5.51 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 August 2021.
- 5.52 **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.**
- 5.53 **AEML-D has submitted that the bills for the months of December 2020 to August 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 books. Accordingly, the cost of power purchase is worked out provisionally as per the PPA rate.
- 5.54 For the month of July 2021 FAC, AEML-D had submitted the invoice received from Reliance Innoventures Private Limited (RINL) with quantum of 13.74 MU amounting to Rs. 7.28 crore (at PPA rate of Rs. 5.30/kWh). RINL has now revised the bill amounting to Rs. 7.14 crore, which is submitted by the AEML-D in its submission. Accordingly, Rs. 0.14 crore is being considered in the present FAC as reduction in power purchase cost.
- 5.55 AEML-D has submitted that there will not be any contra affect on the imbalance pool, since SLDC has raised the provisional bill for July 2021 and the effect of the same (pool



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5.56 Regulation 19.3 of the MERC MYT Regulations, 2019 provide as follows:

“All future procurement of short-term or medium-term or long-term power, including Renewable Energy, shall invariably be undertaken through competitive bidding in accordance with Guidelines notified by the Government of India under Section 63 of the Act.”

5.57 1st proviso to Regulation 7.6 of RPO-REC Regulations, 2019 states as follows:

*“An Obligated Entity may meet its RPO target by way of its own generation or procurement of power from another RE Project or by purchase from a Licensee or by purchase of RECs or by a combination of these options:
Provided that procurement of RE power by a Distribution Licensee at a Generic Tariff rate approved by the State Commission or at a rate discovered through transparent process of competitive bidding and duly approved/adopted by the Commission shall be considered as eligible quantum for fulfilment of the RPO of such Distribution Licensee...”*

5.58 Accordingly, AEML-D has purchased short term RE power based on IEX Green Term Ahead Market (GTAM) DAC tariff minus discount of Rs 0.04/unit. AEML-D submitted 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/unit of IEX is also saved. 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. The Commission has verified the supporting documents and approved the same.

5.59 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 August, 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	4.64	10.30	(0.90)	-	(0.90)
Wind Solar Hybrid	255.50	3.24	-	-	(82.78)	-	(82.78)



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Reliance Innoventure	6.57	5.00	9.82	5.30	1.63	0.29	1.92
AAA Sons Enterprise	0.52	5.00	0.47	5.30	(0.02)	0.01	(0.01)
Vector Green Energy Pvt Ltd	2.63	5.00	4.47	5.30	0.92	0.13	1.06
Vector Green Energy Pvt Ltd	0.88	5.07	1.47	5.07	0.30	-	0.30
Tembhu Power Pvt. Ltd.	0.99	4.26	-	-	(0.42)	-	(0.42)
Reliance Clean Power Pvt. Ltd.	6.26	5.81	8.27	5.81	1.17	-	1.17
Short Term RE			23.50	4.73	-	11.11	11.11
Total RE Sources	278.86	3.51	52.65	5.53	(79.35)	10.65	(68.70)

5.60 **APPC for renewable sources for the month August 2021 works out to Rs. 5.53/kWh as against approved level of Rs. 3.51/kWh. The increase is on account of non-availability of 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, the escalations provided in EPA to the approved cost which is not reflected in the present approved rates.**

5.61 **Bilateral Purchase:** AEML-D has purchased power from IEX and IEX linked bilateral contracts at the average rate of Rs. 5.23/ 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 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 14: Power Prices in short term market

Month	Mar-21	Apr-21	May- 21	June - 21	Jul -21	Aug-21
RTC	4.02	3.70	2.83	3.06	2.95	5.06
Evening (17-23 Hrs)	4.91	4.26	3.23	3.85	3.81	7.87
Day (10-17 Hrs)	3.78	3.09	2.47	2.36	2.29	3.44
Night (0-6, 23-34 Hrs)	3.49	3.96	3.04	3.44	3.12	4.63



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Morning (6-10 Hrs)	4.02	3.47	2.47	2.45	2.50	4.46
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- 5.62 Due to limited long term tie-up, AEML-D relies significantly on the short term purchase. AEML-D has purchased 389.49 MUs through bilateral purchase which is 54.42% of its total power purchase for August 2021. The bilateral cost for the month of August 2021 is relatively higher when compared with earlier months. AEML-D has submitted the monthly bulletin issued by IEX which also states about the increase in price. 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. AEML-D has also submitted the sample LOAs for day ahead exchange linked contract. **Accordingly, the Commission approves the aforesaid bilateral purchase with APPC of Rs. 5.23/Unit.** AEML-D has also considered the STOA fees paid to SLDC towards IEX standing clearance as Rs. 7,500 per application. WRPC members have to contribute towards incidental charges of Rs. 50,000 annually to contingency fund of WRPC for every FY. Accordingly, WRPC has now raised the invoice for FY 20-21, for which AEML-D has paid an amount of Rs. 50,000 and the same is proposed to be considered in the month of FAC for August 2021. AEML-D has submitted the invoice for the same.
- 5.63 The Commission approves the charges as part of bilateral purchase for the month of August 2021.
- 5.64 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 August, 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	389.49	5.23	48.74	67.25	115.99

- 5.65 **FBSM/ Imbalance Pool:** The Commission observes that **AEML-D has purchased 12.68 MU** from the Imbalance Pool and considered associated charges with regards to imbalance pool for the month August 2021 on provisional basis at the rate of Rs. 2.86/kWh as per the rate considered by the Commission in MYT Order.
- 5.66 AEML-D has drawn 12.68 MU from the imbalance pool for the month of August 2021. The said drawl from the pool may be on account of either increase in demand of consumers than estimated drawal schedule 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



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- 5.67 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.
- 5.68 At the time of submission of FAC return for the month of July 2021, the imbalance pool cost was worked out considering the energy balance available at that point of time at a provisional rate of Rs. 2.86/kWh, which amounted to Rs. 5.60 Crore. SLDC has now issued the provisional bill for July 2021 as per which AEML-D has to pay Rs. 5.04 Crore. The invoice for the same is submitted by AEML-D in its submission. Accordingly, Rs. 0.56 crore is being considered as credit adjustment in the present FAC of August 2021.
- 5.69 **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:



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“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:”

- 5.70 The surplus energy of RE Open Access consumers (Non-firm) purchased by AEML-D as per the aforementioned regulations is 1.83 MU at a cost of Rs. 0.61 Crore and is considered in the FAC for the month of August 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.
- 5.71 **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 in the month of July 2021, AEML-D had considered standby purchase of 6.43 MU as part of FAC submission for July 2021. Subsequently, on post-facto basis, MSEDCL, in August and September 2021, has provided its consent for standby purchase for 2 days in the month of July 2021, which were earlier not considered as part of standby quantum. Thus, standby quantum for July 2021 stands revised at 6.54 MU. **Accordingly, the cost of Rs. 0.04 crore, considering the incremental quantum of 0.11 MU at provisional rate of Rs. 4/kWh is proposed to be considered in the month of FAC for August 2021. The Commission has considered as submitted by AEML.**
- 5.72 AEML-D has further submitted that here will not be any contra affect on the imbalance pool, since SLDC has raised the provisional bill for July 2021 and the effect of the same has been considered as an adjustment in imbalance pool as elaborated above.
- 5.73 **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 August 2021. The Commission has scrutinized the bills and has approved Rs. (0.60) Crore as rebate to be considered as part of Power purchase cost for the month of August 2021.
- 5.74 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 August, 2021

Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
1	ADTPS	4.78	5.20	Fixed charges are higher by Rs. 0.245/ kWh due to lower generation. Energy charges are higher by Rs. 0.172/ kWh due to deteriorated quality of coal being received from SECL, so



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Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
				the APPC works out is higher than the approved rate.
2	RE Sources	3.51	5.53	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 non-consideration of escalation in EPA the approved rate is lesser than actual rate.
3	Power Exchange	3.50	5.23	Market discovered rate; Short term power purchase from Power Exchange and through day ahead exchange linked contracts.
	Total	3.98	5.18	Variation due to above reasons

5.75 **Considering the above, the Commission allows the actual average power purchase cost of Rs. 5.18/kWh for the month of August 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 August 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 August 2021 is negative as shown in the Table 17 below.

Table 17: FAC on account of Power Purchase Cost

Sr. No.	Particulars	Units	August 2021
1	Average power purchase cost approved by the Commission	Rs./kWh	3.98
2	Actual average power purchase cost	Rs./kWh	5.18
3	Change in average power purchase cost (= 2-1)	Rs./kWh	1.20
4	Net Power Purchase	MU	743.00



Sr. No.	Particulars	Units	August 2021
5	Change in power purchase cost (=3 x 4/10)	Rs. Crore	89.17

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. (6.78) Crore for July 2021 which is contributed to the FAC Pool and the total carrying cost on FAC Fund of Rs. 2.46 Crore for July 2021. Thus, the opening balance for FAC fund for August 2021 is Rs. (382.21) Crore. The Commission has taken into consideration the submission made by AEML-D towards holding cost of Rs. 2.51 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 August 2021 and holding cost worked out is Rs. 2.51 Crore.

8.3 The Commission has considered MCLR rate of August 2021 month plus 150 basis points which works out to 8.50%. Accordingly, the Commission has calculated holding cost of Rs. 2.51 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:



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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

Sr. No.	Particulars	Units	Approved in Tariff Order	Actual for August, 2021	Cumulative up to August, 2021	Annual Sliding Distribution Loss up to August, 2021
1	Net Energy input at Distribution Voltages	MU	813.46	712.43	3,626.81	8,276.62
2	Energy sales at Distribution voltages	MU	754.08	634.94	3.354.06	7,547.48
3	Distribution Loss (1 - 2)	MU	59.39	77.49	272.75	729.15
4	Distribution Loss as % (3/1)	%	7.30%	10.88%	7.52%	8.81%
5	Excess Distribution Loss = [Annual Sliding Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU		10.75		
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore		1.51		

9.3 As seen from the above Table 18, distribution loss for the month of August 2021 is 10.88% which is higher than the MYT approved distribution loss of 7.30%. The annual sliding Distribution Loss up to April, 2021 is 8.81% which is more 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



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- 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 Commission has worked out any disallowance on account of Distribution Loss since the standalone FAC for the month of August 2021 is positive.
- 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 August 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 - August	10.88%	6.74%
Actual - Cumulative till August	7.52%	7.81%

- 9.9 As seen from the above Table 18, **disallowance of FAC due to excess distribution loss for the month of August 2021 is Rs. 1.51 Crore since the standalone FAC for the**



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month of August 2021 is positive and actual cumulative distribution losses are higher than approved by the Commission.

10. Summary of Allowable ZFAC

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

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

Sr. No.	Particulars	Units	As Claimed August 2021	As Approved August 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	89.17	89.17
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	89.17	89.17
2	Calculation of FAC Charge			
2.1	Energy Sales within the License Area	MU	634.94	634.94
2.2	Excess Distribution Loss	MU	-	10.75
2.3	Z _{FAC} per kWh	Rs./kWh	1.40	1.40
3	Recovery of FAC			
3.1	FAC disallowed corresponding to excess Distribution Loss $[(2.1+2.2) \times 2.3/10]$	Rs. Crore	-	1.51
3.2	Allowable FAC	Rs. Crore	89.17	87.66
4	Utilization of FAC Fund			
4.1	Opening Balance of FAC Fund	Rs. Crore	(382.21)	(382.21)
4.2	Holding Cost on FAC Fund	Rs. Crore	(2.51)	(2.51)
4.3	Z _{FAC} for the month (Sr. No. 3.2)	Rs. Crore	89.17	87.66
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	(295.55)	(297.06)
4.7	Z _{FAC} leviable/refundable to consumer	Rs. Crore	-	(297.06)
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	-	(297.06)

10.2 It can be seen from the above Table 20 that opening FAC fund for month of August 2021 is Rs. (382.21) Crore and standalone FAC for the month of August 2021



Approval of FAC Charges for the month of August, 2021 approved by the Commission is Rs. 87.61 Crore. The Commission has also approved a holding cost of Rs. (2.51) Crore for the FAC fund accrued during the month of April 2020 to July 2021. The overall FAC amount for the month till August 2021 is Rs. (297.06) 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:

$Z_{FAC\ Cat}$ = 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....”



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- 11.2 The Commission allows the FAC amount of Rs. 87.66 Crore for the month of August, 2021.
- 11.3 The Commission in its FAC approval for the month of July, 2021 has directed AEML-D to carry forward the approved FAC amount of Rs. (382.21) 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. (382.21) Crore, standalone FAC amount of Rs. 87.66 Crore for the month of August, 2021, holding cost of Rs. (2.51) Crore, the total amount of Rs. (297.06) 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. 297.06 Crore to the next billing cycle with holding cost.
- 11.7 **In view of the above, per unit Z_{FAC} for the month of August 2021 to be levied on consumer of AEML-D in the billing month of October 2021 is Nil.**

