



महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2022-23/E-Letter

Date: 1 July, 2022

To,

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

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

Reference:

1. Commission's letter regarding levy of FAC on consumers dated 5 April, 2022.
2. AEML-D FAC submission for the month of February 2022 vide email dated 30 May, 2022.
3. The data gaps were communicated vide email dated 31 May, 2022.
4. AEML-D replied vide email dated 1 June, 2022.

Sir,

Upon vetting the FAC calculations for the month of February, 2022 as mentioned in the above reference, the Commission has accorded approval for charging FAC amount of **Rs. 1.63 Crore**. However, the net leviable amount after adjustment from the existing FAC fund is **Rs. 30.63 Crore**. The FAC leviable for the month of December 2021 was positive and the same was allowed to be carried forward and accumulated for next three-month period i.e. up to the month of February 2022 as per letter dated 5 April, 2022 issued by the Commission. The month of February 2022 is the third month of this three-month period and accordingly, net FAC leviable accumulated FAC upto February 2022 as per letter dated 5 April, 2022 issued by the Commission is recoverable equally in the months of April 2022, May 2022 and June 2022 along with the applicable carrying cost. However, there was a delay in filing of the FAC submissions by AEML-D and also the months of April 2022 and May 2022 have already passed. Further, AEML-D has also recently filed the FAC submission for the months of March 2022 and April 2022. AEML-D has also requested the Commission to consider the cumulative recovery amount till April 2022 to be recovered over a prospective three-month period subsequent to approval of April 2022 FAC. However, if recovery of the FAC accumulated over the five months' period is allowed to be recovered in three months' period as prayed by AEML-D would be against the objective of equal spread for FAC recovery. Accordingly, considering the delay, the Commission allows the combined recovery of the FAC accumulated for the period December 2021 to April 2022 in the months of July 2022, August 2022, September 2022, October 2022 and November 2022. Accordingly, the FAC chargeable to consumers is as shown in the table below:

Approval of FAC Charges for the month of February, 2022

Month	FAC Amount (Rs. Crore)
February, 2022	0

The accumulation of positive FAC for five months instead of three months as per the guidelines issued by the Commission on 5 April 2022 and further recovery from consumers in five month's period is being allowed as an exceptional dispensation and the Commission will take an appropriate view on the carrying cost for the period by which AEML-D has delayed its FAC submission.

The Commission allows the accumulation of FAC amount of **Rs. 30.63 Crore** which shall be carried forward to next FAC billing cycle with carrying cost as per the Order dated 30 March, 2020 in Case No. 325 of 2019 and allowed for recovery as per letter dated 5 April, 2022 issued by the Commission.

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 February, 2022.

PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF February 2022

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

Reference:

1. AEML-D FAC submission for the month of February 2022 vide email dated 30 May, 2022.
2. The data gaps were communicated vide email dated 31 May, 2022.
3. AEML-D replied vide email dated 1 June, 2022.
4. Commission's guideline regarding levy of FAC on quarterly basis issued on 5 April, 2022.

1. FAC submission by AEML-D:

- 1.1 AEML-D has made FAC submissions for the month of February 2022 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by AEML-D, the Commission has accorded prior approval to AEML-D for the FAC amount of Rs. 1.63 Crore. The approved FAC amount is being adjusted from the FAC Fund and the balance amount works out to Rs. 30.63 Crore.
- 1.2 The FAC leviable for the months of December 2021 was positive and the same was allowed to be carried forward and accumulated for next three-month period i.e. up to the month of February 2022 as per letter dated 5 April, 2022 issued by the Commission. However, considering the delayed FAC submissions on part of AEML-D, as an exceptional circumstances, the Commission is allowing accumulation of FAC for the five months' period (i.e. from December 2021 to April 2022) instead of three months' period as envisaged as per the guidelines dated 5 April 2022 and such accumulated FAC is being allowed in five months' period from July 2022 to November 2022.

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

Approval of FAC Charges for the month of February, 2022 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 31 May, 2022, AEML-D has filed FAC submissions for the month of February 2022 for prior approval of the Commission. The Commission has scrutinized the submissions provided by AEML-D and has also verified the power purchase bills and other fuel related invoices provided along with its submissions.

3. Energy Sales of the Licensee

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

Table 1: Energy Sales – Approved and Actual

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales (February, 2022) (MU)
	(I)	(II=I/12)	(III)
LT Category			
BPL	0.01	0.001	0.0003
LT -I: Residential	4,644.19	387.02	263.15
LT II: Commercial	2,661.44	221.79	157.05
LT III(A): LT Industrial up to 20 kW TOD Option	186.97	15.58	25.32
LT III(B): LT Industrial above 20 kW	383.85	31.99	26.07
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 IX: LT -Public Service (A)	35.09	2.92	1.65
LT IX: LT -Public Service (B)	206.62	17.22	10.93
LT X (A): LT - Agriculture Pumpsets	0.11	0.01	0.00
LT X (B): LT - Agriculture Others	0.38	0.03	0.01
LT IV: Public Water Works	12.77	1.06	-
LT IX: LT – EVCS	-	-	0.03
HT Category			
HT 1 (Industrial)	375.11	31.26	27.92
HT 2 (Commercial.)	276.26	23.02	27.26
HT 3 (Group Housing Soc.)	32.24	2.69	0.75
HT 4 (Temporary Supply)	24.13	2.01	-
HT – Railways	31.04	2.59	1.56
HT - Public Services (A)	6.21	0.52	0.41
HT - Public Services (B)	97.20	8.10	9.72

Approval of FAC Charges for the month of February, 2022

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales (February, 2022) (MU)
	(I)	(II=I/12)	(III)
HT - Public Water Works	8.13	0.68	-
Total	9,048.92	754.08	551.84

*- 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 February 2022 is 551.84 MU which is 26.82% 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 February 2022 as follows:

- Energy sales data for HT consumers (AMR) & LT consumers (load above 20 kW) where meters are read remotely or where monthly reading are downloaded is considered for nth month (i.e., for February 2022).
- For cycle consumers (LT cycle billing), consumption data provided is for meter reading from 1 February to 28 February 2022.

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

Table 2: Monthly and Cumulative Sales for major Consumer Categories

Year\ Sales (MU)	Residential	Commercial	Industrial	Others	Total (FY 2021-22)	Total (FY 2020-21)
Monthly Approved	390	245	79	41	754	736
Actual – April, 2021	406	193	75	24	697	629
Actual – May, 2021	433	164	81	24	703	481
Actual – June, 2021	408	162	70	23	663	586
Actual – July, 2021	377	185	71	23	657	669
Actual – August, 2021	356	188	65	25	635	538
Actual – September, 2021	351	207	86	24	668	586
Actual – October, 2021	383	231	82	26	722	624
Actual – November, 2021	379	232	83	26	719	642
Actual – December, 2021	342	220	88	28	678	595
Actual – January, 2022	289	192	73	27	581	589
Actual – February, 2022	264	184	79	24	552	560
Approved - Cumulative till February, 2022	4,290	2,695	869	451	8,305	8,098
Actual - Cumulative till February, 2022	3,990	2,158	854	274	7,275	6,500

4. Power Purchase Details

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

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

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

4.2 The Commission in its MYT Order dated 30 March, 2020 in Case No. 325 of 2019 had approved the Power Purchase for FY 2021-22 from three major sources i.e. Adani Dahanu Thermal Power Station, Renewable sources and Short-term sources.

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

Table 3: Summary of Power Purchase for January, 2022

Sr. No.	Particular	Compliance			
1	Purchase from Approved Sources	Yes. AEML-D has procured power from ADTPS, Solar and Non-solar Sources and Bilateral in the month of February 2022, 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	DSM Pool	AEML-D has injected (0.01) MU into the imbalance pool as per DSM mechanism.			
5	Sale of Surplus Power	AEML has sold 0.01 MU of surplus power during the month of February 2022.			
6	Power Purchase	Actual Power Purchase is 598.08 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	202.07	35.61%
		RE Sources	278.86	99.90	17.61%
		Exchange & banking transaction	250.24	265.09	46.72%
		Imbalance Pool & Other	-	0.40	0.07%
		Total	840.18	567.46	100.00%
*The power purchase quantum/cost approved in MYT Order on yearly basis, however monthly approved numbers are derived from comparison purpose.					

Sr. No.	Particular	Compliance
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. 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 February 2022 are submitted by AEML-D. All the power purchase quantum and rate are verified from the invoices, and it is ensured that same has been considered in the FAC calculation.

- 4.4 **AEML-D has purchased 567.46 MUs of power 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 February 2022.
- 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 202.07 MU for the month of February 2022.**
- 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 also has PPA with Adani Hybrid Energy Jaisalmer Four Limited for 700 MW. 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 10.97 MU short term RE power based on IEX Green Day Ahead Market (GDAM) and exchange linked contracts (linked to IEX DAM tariff). 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 – Solar	40.00	5.52	4.69
Adani Hybrid Energy Jaisalmer Four Limited – Wind Solar Hybrid (AHEJFL)	700.00	255.50	78.93
Non-Solar			
Reliance Innoventures	45.00	6.57	1.56
AAA Sons Enterprise	3.38	0.52	0.07
Vector Green Energy Private Limited	18.00	2.63	0.93

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Vector Green Energy Private Limited (April 2009)	6.00	0.88	0.38
Tembhu Power Private Limited	4.50	0.99	-
Reliance Clean Power Limited	45.00	6.26	2.38
Short Term RE/GDAM			10.97
Total		278.86	99.90

- 4.7 AEML-D has procured 0.83 MU lower than the approved from DSPPL, 176.57 MU lower than approved from AHEJFL from wind solar hybrid (project partially commissioned with pure solar capacity of 150.4 MW (Solar) and with Hybrid capacity of 225.78 MW, which provided 78.93 MU for February 2022), 5.01 MU lower than the approved from Reliance Innoventures, 0.45 MU lower than approved from AAA Sons Enterprise, 2.20 MU lower than the approved from Vector Green Energy Private Limited, 0.99 MU lower than the approved from Tembhu Power Private Limited (small hydro plant affected due to flooding happened (Krishna river) in July 2021) and 3.88 MU lower than approved from Reliance Clean Power Private Limited. Further, as the approval by the Commission is on yearly energy quantum, this variation is being accepted provided cumulative power procured for majority of the sources is within the approved energy quantum. Also, AEML-D has purchased 10.97 MU short term RE power through IEX Green Day Ahead Market and exchange linked contracts (linked to IEX DAM tariff).
- 4.8 **Power Procurement from Exchange:** AEML-D has purchased power from exchange and exchange linked day ahead contracts on day ahead basis. **AEML-D has purchased 148.17 MU from these sources which is lower than the monthly approved quantum of 250.24 MU.**
- 4.9 **Power procurement through banking transaction:** For the month of February 2022, AEML-D has made a banking transaction of 116.91 MU. The quantum of Banking is presently considered as part of FAC for the month of February 2022. The cost related to the Banking will be considered in the month in which the banking power is returned. For the purpose of Banking, Open Access charges as well as Trading margin charges has been incurred, the cost thereof is proposed to be considered as part of Bilateral purchase cost, in FAC for February 2022. This transaction is considered as part of the short term bilateral transactions.
- 4.10 **Power Procurement from DSM Pool:** AEML-D has injected (0.01) MU power into the imbalance pool under the DSM mechanism for the month of February 2022.
- 4.11 **Power Procurement from Open Access and Roof Top Solar Consumers:** AEML-D has purchased 0.41 MU from the Open Access and Roof top Solar Consumers for the month of February 2022.
- 4.12 **Sale of Power:** AEML has sold 0.01 MUs under bilateral sale for the month of February 2022.
- 4.13 The Commission has noted that AEML-D has followed Merit Order Dispatch for scheduling of power. As solar and non-solar sources have must run status, they have been scheduled first and all the other sources are scheduled according to SLDC instructions.

5. Power Purchase Cost

- 5.1 The Commission has scrutinised the detailed bills/invoices submitted for power purchase during the month of February 2022, in order to verify the claim of AEML-D regarding Average Power Purchase Cost (APPC). The Commission has verified the actual as well as approved Net Purchase (Mus), Variable Cost (Rs./kWh) and Power Purchase Cost considered in FAC computation from the invoices and applicable MYT Order respectively.
- 5.2 As submitted by AEML-D, the **Power Purchase cost incurred in February 2022 is Rs. 227.25 Crore** which is lower than **the approved Power Purchase cost of Rs. 334.06 Crore** by the Commission for the month of February 2022. **This is on account of the variation in power purchase quantum due to lower sales.** AEML-D has considered the power purchase cost of RINL for the month of February 2022 in line with the stand taken by the Commission while approving the FAC charges for the month of December 2021. 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 February 2022 is shown in Table 5 below:

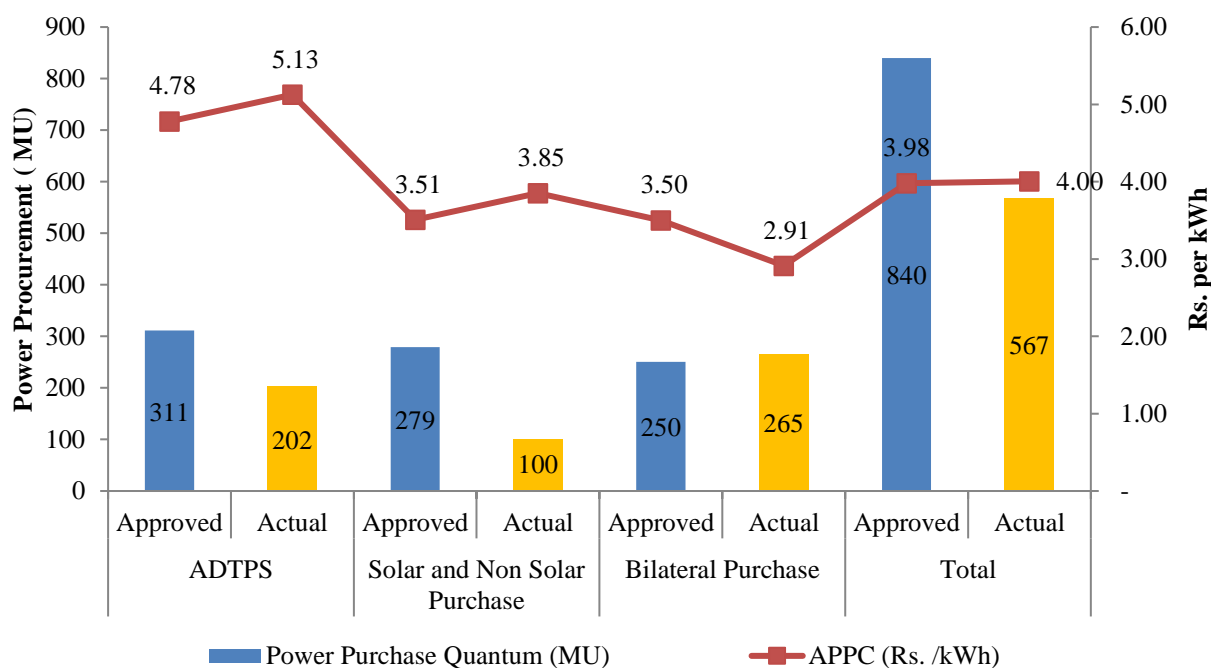
Table 5: Approved and Actual APPC and Power Purchase Quantum & Cost

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	202.07	27.17	1.34	76.42	3.78	103.58	5.13
Solar and Non-Solar Purchase	Approved	278.86	-	-	97.82	3.51	97.82	3.51
	Actual	99.90	-	-	38.50	3.85	38.50	3.85
Bilateral Purchase	Approved	250.24	-	-	87.59	3.50	87.59	3.50
	Actual	265.09	-	-	77.25	2.91	77.25	2.91
Pool/ DSM	Approved							
	Actual	(0.01)	-	-	8.63	7.49	8.63	#
OA/RTS	Approved							
	Actual	0.41	-	-	0.11	2.48	0.11	2.59
Sale of Power	Approved							
	Actual	(0.01)	-	-	(0.002)	-	(0.002)	3.88
Other Charges	Approved							
	Actual	-	-	-	(0.81)	-	(0.81)	-
Total	Approved	840.18	27.24	0.32	306.82	3.65	334.06	3.98
	Actual	567.46	27.17	0.48	200.08	3.53	227.25	4.00

*- 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.

The APPC not computed as it works out to be abnormal as the total cost considered under the DSM mechanism include an adjustment of Rs. 8.16 Crore attributable to the variation between the earlier DSM bills issued by the SLDC and the new bills issued for the period 11 October, 2021 to 5 December, 2021.

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

Figure 1: Approved & Actual Power Purchase and APPC

ADTTPS

- 5.4 The Commission in Case No. 325 of 2019 has approved an energy quantum from ADTTPS at the rate of Rs. 4.78/kWh. AEML-D has purchased power at the rate of Rs. 5.13/kWh for the month of February 2022. The Commission has also worked out the rate for power purchase from AEML-D as Rs. 5.13/kWh for the month of February 2022.
- 5.5 **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 February 2022 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.
- 5.6 **The actual PLF of ADTTPS in February 2022 was 66.60% as compared to approved PLF of 94.38%.** ADTTPS was available for generation during the month, the average Plant Availability Factor for the month (PAFM) for both Units of AEML-G was 87.41%. The cumulative availability for June 2021, July 2021, August 2021, September 2021, October 2021, November 2021, December 2021, January 2022 and February 2022 was 87.31% during peak hours and 87.42% during off peak hours. The capacity charge for peak hours works out to Rs. 5.43 Crore and the capacity charge for off peak hours works out to Rs. 21.74 Crore, totalling Rs. 27.17 Crore for the month of February 2022.
- 5.7 **Due to lower generation, per unit impact on Fixed Cost has increased by Rs. 0.47 /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. 1.34/kWh.**

- 5.8 **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 February 2022.
- 5.9 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 February 2022.
- 5.10 **Washed Coal:** AEML-D has submitted detailed computation and methodology for booking the coal consumption cost. AEML-D has calculated the total coal consumption cost on the basis of Weighted Average Price Method by adding the purchases during the month in the opening inventory stock. The closing inventory is then obtained by deducting the coal consumed from the total of opening inventory and purchases during the respective month. AEML-D has submitted supporting documents for purchase of 2,03,876.87 MT raw Coal from SECL in the month of February 2022. AEML-G has also stated that it has received 1,19,108.84 MT of washed coal at the plant boundary of ADTPS and has consumed 1,24,252.46 MT of washed coal in February 2022. AEML-D has also submitted the breakup and supporting documents for “Other Charges” of Rs. 30,16,456/-. AEML-D has submitted that in the month of February 2022, Rs. 6,65,739/-, Rs 7,01,828/- and Rs. 2,80,881/- have been included as an adjustment under freight charges for raw and washed coal and for coal loading charges respectively, on account of diesel escalation for January 2022. Further, Rs (1760)/- has been included as an adjustment under raw coal analysis charges at mines end.
- 5.11 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 February 2022 was Rs. 20,18,119/- (Rs. 17,10,270/- plus 18% GST), which has been considered under washing charges.
- 5.12 The input tax credit (ITC) due to sale of coal rejects works out to Rs. (20,37,474)/-, which has been included as an adjustment under SECL coal purchase cost.
- 5.13 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, liaisoning and supervision etc. The ITC available for the GST paid on SECL coal purchase for January 2022 was Rs (1,18,519)/-, which has been considered in February 2022. The ITC available for the GST paid on freight charges of Indian Railways, coal liaisoning charges, coal analysis charges amounting to Rs. (3,37,409)/- has been adjusted in February 2022.

Approval of FAC Charges for the month of February, 2022

- 5.14 AEML-G has received debit notes / credit notes pertaining to the months of June 2021 and September 2021 totalling to Rs. 41,39,078/-. Same has been accounted and claimed under washed coal in February 2022.
- 5.15 In addition, AEML-G has incurred demurrage charges of Rs. 1,90,104/- paid for washed coal rakes, which has been considered in February 2022. Similarly, in case of raw coal, AEML-G has incurred demurrage charges of Rs. 1,19,970/- for raw coal rakes, which has been considered in February 2022. The Commission allows the recovery of the demurrage as part of the FAC mechanism for the month of February 2022.
- 5.16 The Commission has examined the invoices and the supporting excel working provided by AEML-D and has found it to be appropriate. The working of the washed coal fuel cost considered for February 2022 is as shown in the Table 6 below:

Table 6: Working of Washed Coal Rate for February, 2022

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st December)	31,330.73	16.95	5,409.96
Addition during month	119,108.84	64.97	5,454.54
Total	150,439.57	81.92	5,445.25
Consumption			
Actual	124,252.46	67.66	5,445.25
Other Charges		0.28	
Total	124,252.46	67.94	5,468.00

- 5.17 The overall cost approved towards fuel expenses (Washed coal) is Rs. 67.94 Crore for the month of February 2022.
- 5.18 **With regards to the washed coal, the landed cost for the month of February 2022 is Rs. 5,468.00/MT as compared to MYT approved Rs. 5,689.76 /MT, which is 3.90% lower than the approved MYT rate.**
- 5.19 AEML-D has considered ‘As billed’ GCV of 4,023 kCal/kg for washed coal and ‘As received’ GCV of 4,016 kCal/kg for February 2022.
- 5.20 AEML-D has submitted third party sampling report from Inspectorate Griffith India Pvt Ltd (IGI) for GCV of the washed coal. The GCV of washed coal used for Energy Charge calculation matches with the GCV ‘As billed’ 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.

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Further, AEML-G itself has submitted that loss in calorific value is much less than 300 kcal/kg.

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

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

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

- 5.21 The transit loss claimed by AEML-D for the month of February 2022 is 0.834%%. The coal received at ADTPS in February 2022 is the mix of coal dispatched from the washery from the already existing stock at the washery and Raw Coal purchased and washed at washery. Transit loss of washed coal is calculated as the difference between net weight of coal in rakes sent by Indian Railways from washery end and the net weight of coal received at ADTPS railway siding. The net weight of coal sent by Railways is ascertained from Railway Receipts (RR). The net weight of coal at ADTPS railway siding is ascertained by weighment of coal at the time of its unloading through wagon tippler. As per weighment of coal at ADTPS, the washed coal received is 1,19,108.84 MT and as per weighment of coal at washery end, the washed coal dispatched was 1,20,110.61 MT. The difference is reported as the transit loss which is **1,001.77 MT which is 0.834%** of the total coal received during the month of February 2022.
- 5.22 The weighted average GCV of opening stock of washed coal in February 2022 was 4,017 kCal/kg. The 'As received' GCV of washed coal received in February 2022 was 4,016 kCal/kg and 'As billed' GCV was 4,023 kCal/kg. As the 'As billed' GCV is higher than the 'As received' GCV of washed coal, the Commission has considered the 'As billed' GCV for computing the weighted average GCV of 4,022 kCal/kg for February 2022. The 'As fired' GCV of washed coal considered by AEML-D is 3,914 kCal/kg. Considering the difference between the 'As received' GCV and the 'As Fired' GCV, the stacking loss for washed coal works out to 108 kCal/kg which is within the limit of 120 kCal/kg.
- 5.23 **Raw Coal:** AEML-D has submitted detailed computation and methodology for booking the coal consumption cost. AEML-D has calculated the total coal consumption cost on the basis of Weighted Average Price Method by adding the purchases during the month in the opening inventory stock. The closing inventory is then obtained by deducting the coal consumed from the total of opening inventory and purchases during the respective month. AEML-D has purchased 3,937.80 MT Raw Coal (at plant boundary) from SECL and has

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- 5.24 The ITC on GST paid on railway charges, coal liasoning charges and coal analysis charges considered by AEML-D in February 2022 is Rs. (10,732)/-. The ITC on GST paid for supply of raw coal from SECL for January 2022 amounting to Rs. (4,945)/- has been included as an adjustment under SECL charges in February 2022. All the above charges have been considered as adjustment in February 2022.
- 5.25 The Commission has examined the invoices and the supporting excel working provided by AEML-D and has found it to be appropriate. The working of the raw coal fuel cost considered for February 2022 is as shown in the Table 7 below:

Table 7: Working of Raw Coal Rate for February 2022

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1st February)	4,797.04	2.51	5,235.83
Addition during month	3,937.80	1.90	4,833.15
Total	8,734.84	4.41	5,054.29
Consumption			
Actual	8,138.94	4.11	5,054.29
Other Charges	-	-	-
Total	8,138.94	4.11	5,054.29

- 5.26 The overall cost approved towards raw coal expenses is Rs. 4.11 Crore for the month of February 2022.
- 5.27 **With regards to the raw coal, the weighted average landed cost for the month of February 2022 is Rs. 5,054.29/MT.** AEML-D has consumed 8,138.94 MT of raw coal during the month of February 2022.
- 5.28 AEML-D has submitted that in February 2022, AEML-G has purchased raw coal from SECL only. AEML-D has considered the ‘As billed’ GCV of raw coal as per CIMFR certificate is 4,081 kCal/kg, while the ‘As Received GCV’ of same coal as per M/s IGI certificate (third party appointed by AEML-G for GCV measurement at receiving end) is 3,807 kCal/kg. for February 2022. AEML-D has disputed the GCV results as declared by CIMFR. As per clause 50.6 of MYT Regulations, 2019, actual loss in GCV of coal between “as billed by Supplier” and “as received at generating station” is allowed subject to maximum loss of 300 kcal/kg. The GCV loss calculated by AEML- D (difference between ‘As Billed’ GCV and ‘As Received’ GCV) for raw coal for the month of February 2022 is 274 kcal/kg. Hence, GCV loss is within the limit of 300 kcal/kg and ‘As received” GCV of 3,807 kCal/kg for calculation is considered (i.e. maximum of the ‘As received’ GCV or ‘As billed’ GCV minus 300 kCal/kg).

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- 5.29 The GCV of opening stock of raw coal in February 2022 was 3,974 kCal/kg. Accordingly, the weighted average GCV of 3,899 kCal/kg has been considered as the GCV of raw coal stock in February 2022.
- 5.30 Considering the method explained in the section of washed coal, the stacking loss for raw coal works out to 377.86 kCal/kg .
- 5.31 **Imported Coal:** AEML-G has neither purchased nor consumed any imported coal in February 2022.
- 5.32 **LDO:** AEML-D has purchased 98 KL of Light Diesel Oil in the month of February 2022. AEML-D has not consumed LDO in the month of February 2022. The working of the LDO fuel cost considered for February 2022 is as shown in the Table 8 below:

Table 8: Working of LDO Rate for February, 2022

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1 st February)	375.11	1.83	48,667.11
Addition during month	96.00	0.58	60,904.59
Total	471.11	2.41	51,160.79
Consumption	-	-	-
Total	-	-	-

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

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

- 5.34 In line with MYT Regulations, 2019 and MYT Order in Case No. 298 of 2019, the Commission has considered stacking loss of 120 kcal/kg (minimum of actual weighted average stacking loss considering washed coal, raw coal and imported coal of 124.40 kcal/kg or 120 kcal/kg as per Regulation) for calculation of energy charge rate.
- 5.35 Considering the approved rates for Washed Coal and Imported Coal fuel cost, GCV and normative operational parameters, the revised energy charges works out to Rs. 3.782/kWh which is lower than the approved variable cost of Rs. 3.871/kWh.
- 5.36 **Incentive:** As per Regulation 46.3 of MYT Regulations, 2019, the target PLF for earning incentive is 85%. Since the cumulative PLF for the period from June 2021 to February

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

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

Source	Approved Quantum (MU)	Approved rate (Rs./kWh)	Actual quantum (MU)	Actual rate (Rs./kWh)	Variation due to quantum (Rs. Crore)	Variation due to rate (Rs. Crore)	Total variation (Rs. Crore)
ADTPS	311.08	4.78	202.07	5.13	(52.09)	7.02	(45.07)

- 5.38 Based on the above, **APPC for ADTPS works out to Rs. 5.13/kWh as against approved Rs. 4.78/kWh. There is Rs. 0.35/kWh increase in APPC for month of February 2022. Fixed cost variation is contributing to Rs. 0.47/kWh increase and variable cost variation is contributing to Rs. 0.12/kWh decrease.**

- 5.39 **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.

- 5.40 **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 purchased 78.93 MU from wind solar hybrid source for month of February 2022.**

- 5.41 **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 10 below:

Table 10: 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

- 5.42 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 considering the 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,

Approval of FAC Charges for the month of February, 2022 per unit rate works out to Rs. 5.30/kWh for April 2021 and which was approved by the Commission in the FAC submission for April 2021. This rate is being considered as approved rate for calculation of FAC as the payments done to the generator is based on PPA.

- 5.43 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 February 2022.
- 5.44 AEML-D has submitted that the bills for the months of December 2020 to February 2022 of AAA Sons (*name has been changed to 'Triumvirate Sons Enterprises Pvt. Ltd.' and communicated to the Commission in the July 2020 month FAC submission*) 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. The Commission has scrutinized the bills/invoice submitted for RE sources and found that AAA Sons Enterprise invoices are not available. It is observed that historically AAA Sons has been delaying the raising of bill and as a result provisional numbers are being used.
- 5.45 **The Commission notes that this delay is not observed with any other sources. Hence AEML-D shall take up matter of delay in raising invoices with AAA Sons Enterprise and such invoices should be raised as per timelines provided in the PPA.**
- 5.46 AEML-D has also purchased short term RE power based on IEX Day Ahead Market (DAM) tariff minus discount of Rs 0.04/kWh and also directly from the power exchange through the IEX Green Day Ahead Market (GDAM) route. AEML-D submitted that power procured through exchange linked contracts is at a rate lower than the rate discovered in IEX DAM tariff for corresponding time block. Through such contract, trading margin of Rs 0.02/kWh of IEX is also saved. AEML-D has requested the Commission to consider such sourcing of RE power towards meeting its RPO obligation.
- 5.47 The average rate of short term RE purchase (IEX GDAM and exchange linked contracts) in February 2022 is Rs. 4.71/kWh. This is higher than that observed in the month of December 2021 and January 2022. However, these are linked to the power markets and will vary according to the market trends. It is also observed that AEML-D has changed the tariff linkage of the exchange linked RE contracts from IEX GDAM to IEX DAM. Upon comparison between the rates in the GDAM segment and DAM segment in the month of February 2022, it is observed that the average DAM rates were lower than GDAM for majority part of the month which is beneficial to the consumers considering the contractual terms. Accordingly, the Commission approves the power purchase of short term RE for the month of February 2022.
- 5.48 AEML-D has submitted that the accounts of RINL have been frozen by ICICI Bank and as per request of RINL, payment has not been made to RINL. AEML-D has been communicating to RINL on regular basis on the status of the unfreezing of its account for

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5.49 However, considering the stand taken in the approval of the Commission for the FAC for December 2021, the cost of power procurement from RINL for the month of February 2022 has been considered for the FAC calculation by AEML-D though the same is not actually paid. Further, the quantum as per invoice is also considered as the same has been consumed. Accordingly, the Commission has considered the cost of power purchase from RINL incurred for the month of February 2022 (Rs. 0.83 Crore).

5.50 Variation in power purchase expenses from RE sources on account of change in quantum and per unit rate is as shown in Table 11 below:

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

Source	Approved Quantum (MU)	Approved rate (Rs./ kWh)	Actual quantum (MU)	Actual rate (Rs./ kWh)	Variation due to quantum (Rs. Crore)	Variation due to rate (Rs. Crore)	Total variation (Rs. Crore)
DSPPL	5.52	10.30	4.69	10.30	(0.85)	0.00	(0.85)
Wind Solar Hybrid	255.50	3.24	78.93	3.24	(57.21)	0.00	(57.21)
Reliance Innoventure	6.57	5.00	1.56	5.30	(2.50)	0.05	(2.46)
AAA Sons Enterprise	0.52	5.00	0.07	5.30	(0.22)	0.00	(0.22)
Vector Green Energy Pvt Ltd	2.63	5.00	0.93	5.30	(0.85)	0.03	(0.82)
Vector Green Energy Pvt Ltd	0.88	5.07	0.38	5.07	(0.25)	(0.00)	(0.25)
Tembhu Power Pvt. Ltd.	0.99	4.26	-	-	(0.42)	-	-
Reliance Power Ltd.	6.26	5.81	2.38	5.81	(2.26)	0.00	(2.26)
Short Term RE	-	-	10.97	4.71	-	5.16	5.16
Total RE Sources	278.86	3.51	99.90	3.85	(64.57)	5.24	(59.33)

5.51 **APPC for renewable sources for the month February 2022 works out to Rs. 3.85/kWh as against approved level of Rs. 3.51/kWh. The increase is on account of lower power purchase from wind solar hybrid source which is the cheapest source as the Commission has approved 92% of total quantum from wind solar hybrid at the rate of 3.24/kWh. The purchase from short term RE sources is also at a rate higher than that approved for wind solar hybrid source. Also, the escalations provided in EPA to the approved cost which is not reflected in the present approved rates.**

5.52 **Bilateral Purchase:** AEML-D has purchased power from IEX and IEX linked bilateral contracts at the average rate of Rs. 5.19/ kWh which is higher than the approved rate of Rs. 3.50/ kWh. It is observed that the power prices in the short-term market have increased significantly in the month of February 2022 as compared to the prices in the months of November 2021 to January 2022, and the same is also seen in the average price of power

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

Month	Aug-21	Sept- 21	Oct - 21	Nov- 21	Dec-21	Jan-22	Feb-22
RTC	5.06	4.40	8.01	3.08	3.54	3.39	4.35
Evening (17-23 Hrs)	7.87	7.07	11.09	4.12	4.69	4.27	5.00
Day (10-17 Hrs)	3.44	3.19	5.86	2.74	3.39	3.41	4.11
Night (0-6, 23-34 Hrs)	4.63	3.83	8.10	2.13	2.05	1.98	2.82
Morning (6-10 Hrs)	4.46	3.49	7.00	3.76	4.60	4.49	6.44

- 5.53 Due to limited long-term tie-up, AEML-D relies significantly on the short-term purchase. AEML-D has purchased 148.17 MUs through bilateral purchase (IEX and IEX linked contracts) which is 26.11% of its total power purchase for February 2022. AEML-D has submitted the bill/invoices regarding the purchase of power from exchange and the Commission has verified the energy quantum and power purchase cost and found it to be appropriate considering. AEML-D has also submitted the sample LOAs for day ahead exchange linked contract. Accordingly, the Commission approves the aforesaid bilateral purchase with APPC of Rs. 5.19/Unit. AEML-D has also considered the STOA fees paid to SLDC towards IEX standing clearance as Rs. 7,500 per application.
- 5.54 The Commission approves the charges as part of bilateral purchase for the month of February 2022.
- 5.55 In addition, AEML-D, for the month of February 2022, has made a banking transaction of 116.91 MU. The quantum of Banking is considered as part of FAC for the month of February 2022. However, the cost related to the Banking will be considered in the month in which the banking power is returned. For the purpose of Banking, OA charges as well as Trading margin charges has been incurred, the cost thereof (Rs. 0.28 Crore) is proposed to be considered as part of Bilateral purchase cost, in FAC for February 2022.
- 5.56 The Commission has examined the submissions of AEML-D and notes that AEML-D has entered into the banking arrangement with two parties i.e. M/s Arunachal Pradesh Power Corporation Private Limited (APPCPL) and M/s Manikaran Power Limited (MPL). In the context of banking transactions undertaken by AEML-D in the past, the Commission while issuing the MYT Order in Case no. 325 of 2019 had directed AEML-D to ensure that the banking arrangement should benefit the end consumers by bringing the average power purchase cost down. The Commission had also directed AEML-D to further evaluate its banking arrangements with the contracted parties and substantiate and submit the party-wise benefits of such transactions at the time of filing of Truing-up Petition for FY 2019-20. In this context, the Commission directed AEML-D to provide details of the steps taken to ensure that the consumer is benefitted from this transaction. Also, AEML-D was directed to provide details of the process adopted to enter into the banking arrangement with the parties while ensuring that the AEML-D has got the best terms from the contracting parties.

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- 5.57 In response AEML-D submitted that the banking transaction was executed for the period from February 2022 to April 2022 on bilateral basis with Arunachal Pradesh Power Corporation Private Limited (APPCPL) and M/s Manikaran Power Limited (MPL). As of now, there is no guideline available for banking transaction and the contracts are being executed by utilities based on bilateral negotiation. The return of banked power by AEML is from July 2022 to September 2022 with the return percentage at 105% of banked energy at delivery point. It is further submitted that the return power is secured by AEML at Rs. 4.03/kWh for July 2022 and August 2022 and Rs. 4.21/kWh for September 2022.
- 5.58 AEML-D further submitted that consumers are benefitted by these banking contracts taking into account higher prices in Power Exchanges during the period from February 2022 to April 2022. The weighted average RTC price on IEX was Rs 7.72/kWh during February 2022 to April 2022 against the banking return power contracted by AEML at weighted average rate of ~ Rs. 4.09/kWh. Therefore, there is savings of approximately Rs. 136 Crore under the banking transaction. The actual savings would be known once the power is returned and shall be presented at the time of true-up for the respective year, as per the direction in the MYT Order.
- 5.59 The Commission has noted the submissions and directs AEML-D to submit the details of the savings accrued from the banking arrangement after the transaction is completed and also at the time of trueing up for the respective year. Considering the above, the Commission has approved the banking arrangement for consideration in the FAC approval for February 2022.
- 5.60 As regards bilateral purchases, it is observed that AEML has been purchasing short term power on a daily basis from power exchange or exchange linked bilateral contracts. Considering the variation in prices on exchange, AEML should explore the option of tying up partial quantum for slightly longer duration contracts after assessing the market conditions through competitive bidding to avoid variation in short term prices on a daily/monthly basis. Such longer period may be up till 100% availability of hybrid contracted power, as the availability of cheaper source of Hybrid power will take some time.
- 5.61 Variation in power purchase expenses from Bilateral 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 Bilateral for February, 2022

Source	Approved Quantum (MU)	Approved rate (Rs./kWh)	Actual quantum (MU)	Actual rate (Rs./kWh)	Variation due to quantum (Rs. Crore)	Variation due to rate (Rs. Crore)	Total variation (Rs. Crore)
Bilateral Purchase including banking transaction	250.24	3.50	265.09	2.91	5.19	(15.53)	(10.33)

Note: The average rate of power purchase of Rs. 2.91/kWh is computed considering the quantum of power procured through the banking transaction (116.91 MU) as well as through IEX/Exchange linked contracts

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(148.17 MU), however, presently, there is no cost towards the banked power and same will be incurred when banked power will be returned by AEML-D. .

5.62 **DSM Pool:** AEML-D has submitted that for the month of February 2022, it has injected 0.01 MU under the DSM mechanism and has incurred cost of Rs. 0.47 Crore.

5.63 AEML-D has also submitted that SLDC had when issuing the DSM bills commencing from 11 October, 2021 considered the RE purchase on scheduled basis. Subsequently, SLDC from 6 December, 2021 changed the methodology and started considering RE purchase on actual basis. Accordingly, SLDC has now issued new DSM bills from 11 October, 2021 to 05 December, 2021 by revising the RE purchase to actual quantum from scheduled basis. SLDC has thus raised new bills for the said period amounting to Rs. 2.65 Crore. In the previous FAC submissions, AEML-D had claimed the DSM cost as per the then issued DSM bills (Rs. 5.51 Crore was passed on as reduction in cost in the FAC submissions). Accordingly, in the present submission, Rs. 8.16 Crore (Rs. 5.51 Crore passed on + Rs. 2.65 Crore new bill) is proposed to be considered in the month of FAC for February 2022 as part of power purchase cost.

5.64 The Commission has examined the submissions of AEML-D and the supporting documents submitted along with the submission. Based on the same, the Commission approves the proposed adjustment in the DSM cost for the month of February 2022. Accordingly, the total cost considered against DSM pool is Rs. 8.63 Crore.

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

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

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

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

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

5.66 The surplus energy of RE Open Access consumers (Firm and Non-firm) purchased by AEML-D as per the aforementioned regulations is 0.41 MU at a cost of Rs. 0.11 Crore and is considered in the FAC for the month of February 2022. AEML-D has submitted

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5.67 **Sale of Power:** AEML has sold 0.01 MUs under bilateral sale for the month of February 2022.

5.68 **Other Charges:** AEML-D has considered rebate pertaining to payments made towards power purchase from contracted generators of Renewable energy, traders from short term power purchase, payment made for InSTS charges, SLDC charges etc. in the month of February 2022. The Commission has scrutinized the details and has approved Rs. (0.81) Crore as rebate to be considered as part of Power purchase cost for the month of February 2022. There is no standby previous year adjustment for the month of February 2022.

5.69 Summarised reasons for the rate variation for various sources are given in Table 14 below:

Table 14: Reasons for the rate variation for various sources for February, 2022

Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
1	ADTPS	4.78	5.13	The fixed charges are higher by Rs. 0.47/kWh due to lower generation and variable cost variation has reduced by Rs. 0.12/kWh.
2	RE Sources	3.51	3.85	The main reason is the less purchase of power from wind solar hybrid source which is the cheapest source approved by the Commission in the MYT Order and it contributes to around 92% of total approved renewable quantum. The rate of purchase is Rs. 3.24/kWh which is lower than the other sources. Rest of the RE power is purchased at approved rate. There is also purchase of RE from short term sources through market linked contracts at the rate of Rs. 4.71/kWh which is higher than the hybrid power source. Non-consideration of escalation in EPA has resulted in the approved rate being lesser than actual rate.
3	Power Exchange / Banking power	3.50	2.91	Market discovered rate; Short term power purchase from Power Exchange and through day ahead exchange linked bilateral contracts is done at an average rate of Rs. 5.19/kWh. AEML-D has done a banking transaction during the month for which the quantum of power procured has been considered and only the related open access charges have been considered. The cost of this power purchased will be considered when the return transaction is undertaken. Hence, the average rate of power

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Sr. No.	Source	Approved Rate (Rs. /kWh)	Actual Rate (Rs. /kWh)	Reason for rate variation
				purchase from bilateral sources appears to be lower.
	Total	3.98	4.00	Variation due to above reasons

5.70 Considering the above, the Commission allows the actual average power purchase cost of Rs. 4.00/kWh for the month of February 2022 as shown in Table 14 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 February 2022 as shown in Table 14 above. The same has been compared with the average power purchase cost approved by the Commission in MYT Order dated 30 March, 2020 to arrive at the differential per unit rate at which Z_{FAC} is to be passed on to the consumers.

6.2 It is noted that AEML-D has incurred the per unit Power Purchase cost higher than the Approved per unit Power Purchase Cost hence the Z_{FAC} worked out by the Commission on account of difference in power purchase cost for the month of February 2022 is positive as shown in the Table 15 below.

Table 15: FAC on account of Power Purchase Cost

Sr. No.	Particulars	Units	February 2022
1	Average power purchase cost approved by the Commission	Rs./ kWh	3.98
2	Actual average power purchase cost	Rs. /kWh	4.00
3	Change in average power purchase cost (= 2-1)	Rs./ kWh	0.03
4	Net Power Purchase	MU	567.46
5	Change in power purchase cost (=3 x 4/10)	Rs. Crore	1.63

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 has been done 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.

8.2 The holding cost is computed considering the MCLR + 150 basis points. This turns out to be 8.50% for February 2022, however, there is no carrying cost worked out for February 2022 as there is no over/under-recovery mentioned in para 7.1 above.

8.3 The carrying cost on the unrecovered FAC fund due to non-recovery of the positive FAC in the months of December 2021, January 2022 and February 2022 is discussed separately in para 10 of the report.

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

Table 16: Disallowance of FAC due to excess Distribution Loss

Sr. No.	Particulars	Units	Approved in Tariff Order	Actual for February, 2022	Cumulative up to February, 2022	Annual Sliding Distribution Loss up to February, 2022
1	Net Energy input at Distribution Voltages	MU	813.46	563.44	7,690.73	8,488.02
2	Energy sales at Distribution voltages	MU	754.08	551.84	7,275.47	7,872.15
3	Distribution Loss (1 - 2)	MU	59.39	11.60	415.26	615.87
4	Distribution Loss as % (3/1)	%	7.30%	2.06%	5.40%	7.26%
5	Excess Distribution Loss = [Annual Sliding Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	-	-	-
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	-	-	-	-

9.3 As seen from the above Table 16, distribution loss for the month of February 2022 is 2.06% which is lower than the MYT approved distribution loss of 7.30%. Similarly, the

Approval of FAC Charges for the month of February, 2022 cumulative distribution losses upto February 2022 are 5.40% and lower than the distribution losses approved in the MYT Order. AEML-D submitted that the distribution loss are being reported considering the difference between the input and sales attributable to AEML-D's own consumers. Further, the sales being reported for LT cycle billing is as per bill posting date, whereas the input will be pertaining to the concerned month itself and thus there will be variation in losses on account of the differing period of purchase and sales.

- 9.4 Further, the Annual Sliding Distribution Loss up to February 2022 is 7.26% which is lower than the approved distribution loss of 7.30% as approved in MYT Order.
- 9.5 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.
- 9.6 As part of the analysis, monthly as well as cumulative distribution losses trend is also examined with reference to approved by the Commission and similar period of last financial year as shown in Table 17 below:

Table 17: Monthly and Cumulative Distribution Loss trend of AEML-D

Year	FY 2021-22	FY 2020-21
Approved	7.30%	7.55%
Actual – April	7.46%	4.90%
Actual – May	7.93%	34.41%
Actual – June	1.48%	-1.78%
Actual – July	9.45%	-11.22%
Actual - August	10.88%	6.74%
Actual - September	5.53%	9.78%
Actual – October	11.52%	15.94%
Actual – November	3.34%	2.62%
Actual – December	-3.77%	1.10%
Actual – January	-0.42%	3.45%
Actual – February	2.06%	4.91%
Actual - Cumulative till February	5.40%	7.16%

- 9.7 As seen from the above Table 16, disallowance of FAC due to excess distribution loss for the month of February 2022 is Nil since, though the standalone FAC for the month of February 2022 is positive, the annual sliding distribution losses are lower than approved cumulative losses by the Commission.

10. Summary of Allowable ZFAC

- 10.1 The summary of the FAC amount as approved by the Commission for the month of February 2022 as shown in the Table 18 below.

Table 18: Summary of Allowable Z_{FAC} for February, 2022

Sr. No.	Particulars	Units	As Claimed February 2022	As Approved February 2022
1	Calculation of Z_{FAC}			
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	1.63	1.63
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	1.63	1.63
2	Calculation of FAC Charge			
2.1	Energy Sales within the License Area	MU	551.84	551.84
2.2	Excess Distribution Loss	MU	-	-
2.3	Z _{FAC} per kWh	Rs./kWh	0.03	0.03
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	1.63	1.63
4	Utilization of FAC Fund			
4.1	Opening Balance of FAC Fund	Rs. Crore	28.59	28.57
4.2	Carrying Cost on FAC	Rs. Crore	0.44	0.44
4.3	Z _{FAC} for the month (Sr. No. 3.2)	Rs. Crore	1.63	1.63
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	30.65	30.63
4.7	Z _{FAC} leviable/refundable to consumer	Rs. Crore	-	30.63
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	30.65	30.63

10.2 It can be seen from the above Table 18 that opening FAC fund for month of February 2022 is Rs. 28.57 Crore and standalone FAC (after disallowance for excess distribution losses) for the month of February 2022 approved by the Commission is Rs. 1.63 Crore. The Commission has also approved a carrying cost of Rs. 0.44 Crore for February 2022 on the FAC accrued during the period April 2020 to February 2022. The FAC amount leviable on the consumer as on the month of February 2022 is Rs. 30.63 Crore.

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.

Approval of FAC Charges for the month of February, 2022

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

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

Where:

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

k = Average Billing Rate / ACOS;

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

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

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

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

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

- 11.2 The Commission allows the FAC amount of Rs. 1.63 Crore for the month of February 2022.
- 11.3 The Commission in its FAC approval for the month of January 2022 has directed AEMLD to carry forward the approved FAC amount of Rs. 28.57 Crore to be recovered from FAC Fund with carrying cost.
- 11.4 Accordingly, considering the approved opening balance FAC Fund of Rs. 28.57 Crore, standalone FAC amount of Rs. 1.63 Crore for the month of February 2022, carrying cost of Rs. 0.44 Crore, the total amount of Rs. 30.63 Crore is leviable on the Consumers.
- 11.5 The FAC leviable for the month of December 2021 was positive and the same was allowed to be carried forward and accumulated for next three-month period i.e. up to the month of February 2022 as per letter dated 5 April, 2022 issued by the Commission. The month of February 2022 is the third month of this three-month period and accordingly, net FAC leviable accumulated upto February 2022 as per letter dated 5 April, 2022 issued by the Commission is recoverable equally in the months of April 2022, May 2022 and June 2022

Approval of FAC Charges for the month of February, 2022 along with the applicable carrying cost. However, there was a delay in filing of the FAC submissions by AEML-D and also the months of April 2022 and May 2022 have already passed. Further, AEML-D has also recently filed the FAC submission for the months of March 2022 and April 2022. AEML-D has also requested the Commission to consider the cumulative recovery amount till April 2022 to be recovered over a prospective three-month period subsequent to approval of April 2022 FAC. However, if recovery of the FAC accumulated over the five months' period is allowed to be recovered in three months' period as prayed by AEML-D would be against the objective of equal spread for FAC recovery. Accordingly, considering the delay, the Commission allows the combined recovery of the FAC accumulated for the period December 2021 to April 2022 in the months of July 2022, August 2022, September 2022, October 2022 and November 2022.

- 11.6 The accumulation of positive FAC for five months instead of three months as per the guidelines issued by the Commission on 5 April 2022 and further recovery from consumers in five month's period is being allowed as an exceptional dispensation and the Commission will take an appropriate view on the carrying cost for the period by which AEML-D has delayed its FAC submission.
- 11.7 **In view of the above, per unit Z_{FAC} for the month of February 2022 to be levied on consumer of AEML-D in the billing month of April 2022 is nil.**