

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Ref. No. MERC/Tech/FAC/2020-21/E-Letter

Date: 12 June, 2020

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 April, 2020.

Reference:

1. AEML-D's FAC submission for the month of April, 2020 vide email dated 18 May, 2020.
2. The data gaps communicated vide email dated 19 May and 2020, 29 May, 2020.
3. Complete submissions received from AEML-D on 1 June, 2020

Sir,

Upon vetting the FAC calculations for the months of April, 2020 as mentioned in the above reference, the Commission has accorded approval for charging FAC to its consumers as shown in the table below:

Month	FAC Amount (Rs. Crore)
April, 2020	0

The Commission allows the accumulation of FAC amount of Rs. 19.87 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 in Case No. 325 of 2019 dated 30 March, 2020. 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.

Yours faithfully,
Sd/-
(Prafulla Varhade)
Director (EE), MERC



Encl: Annexure A: Detailed Vetting Report for the period of April, 2020.

ANNEXURE
Detailed Vetting Report
Date: 12 June, 2020

PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF APRIL, 2020

Subject: Prior approval of Fuel Adjustment Charges (FAC) submissions of AEML-D for the month April, 2020.

Reference:

1. AEML-D's FAC submission for the month of April, 2020 vide email dated 18 May, 2020.
2. The data gaps were communicated vide email dated 19 May, 2020 and 29 May, 2020.
3. AEML-D replied vide email dated 26 May, 2020 and 01 June, 2020

1. FAC submission by AEML-D:

1.1 AEML-D has made FAC submissions for the months of April, 2020 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 June, 2020.

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.

2.3 As per provisions of MYT Regulations, 2019, before levying FAC, the Distribution Licensee including SEZ is required to seek prior approval of the Commission. Accordingly vide its email dated 18 May, 2020, AEML-D has filed FAC submissions for the month of April, 2020 for prior approval of the Commission. The Commission has scrutinized the



submissions provided by AEML-D and has also verified the power purchase bills 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 in MUs

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales (April, 2020) (MU)
	(I)	(II=I/12)	(III)
LT Category			
BPL	0.01	0.00	0.00
LT -I Residential	4,506.33	375.53	302.51
LT II Commercial	2,629.50	219.13	202.68
LT III(A) - LT Industrial upto 20 kW TOD Option	182.89	15.24	15.15
LT III(B) - LT Industrial above 20 kW	388.81	32.40	30.40
LT-V : LT- Advertisements and Hoardings	3.04	0.25	0.16
LT VI: LT -Street Lights	52.30	4.36	3.99
LT-VII : LT -Temporary Supply	12.25	1.02	0.85
LT VIII: LT - Crematorium & Burial Grounds	1.41	0.12	0.10
LT X: LT -Public Service (A)	30.85	2.57	1.80
LT X: LT -Public Service (B)	171.62	14.30	9.22
LT X (A) : LT - Agriculture Pumpsets	0.09	0.01	0.00
LT X (B) : LT - Agriculture Others	0.30	0.03	0.01
LTIV - Public Water Works	12.77	1.06	1.11
LT IX : LT – EVCS	-	-	0.02
HT Category			
HT 1 (Industrial)	339.76	28.31	18.15
HT 2 (Commercial.)	304.26	25.36	30.79
HT 3 (Group Housing Soc.)	34.70	2.89	2.77
HT 4 (Temporary Supply)	19.30	1.61	0.05
HT – Railways	30.84	2.57	1.64
HT - Public Services (A)	6.45	0.54	0.41
HT - Public Services (B)	98.67	8.22	6.25
HT - Public Water Works	8.13	0.68	0.68
Total	8,834.29	736.19	628.75



3.2 It can be observed from above Table 1 that actual sales during the month April, 2020 is 628.75 MU which is 15% lower than approved energy sales of 736.19 MU per month for the FY 2020-21. AEML-D submitted that T-D energy input reflects lower consumption of energy due to lockdown, the energy sales to consumers (in absence of meter reading, except AMR) is assessed as per Supply Code Regulations. The major variation was observed in the LT-I Residential and LT-II Commercial categories as seen in the Table 1 above. As submitted by AEML-D, this variation is on account of unprecedented lockdown announced in the month of April due to Covid-19 emergency.

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

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 2020-21 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 under:

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 April 2020, 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 and hence no scope for improvement in optimal fuel utilization corresponds to optimization of fuel mix.								
4	Pool Imbalance	AEML-D has purchased 49.31 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 April, 2020.								
6	Power Purchase	Actual Power Purchase is 665.55 MU as against approved 822.47 MU due to lower sales								
7	Source wise Power Purchase	<table border="1"> <thead> <tr> <th>Source Name</th> <th>Approved (MU)</th> <th>Actual (MU)</th> <th>Proportion of each Source in</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in				
Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in							



				Actual Purchase
	ADTPS	311.08	274.64	41.26%
	Solar and Non-Solar	23.36	15.32	2.30%
	Exchange	488.03	326.29	49.03%
	Imbalance Pool	-	49.31	7.41%
	Total	822.47	665.55	100.00%

- 4.4 AEML-D has purchased power of 665.55 MUs as against approved 822.47 MUs from the sources approved by the Commission. The reduction in Power purchase is due to reduction in Sales of AEML-D in the month of April, 2020.
- 4.5 **Power Procurement from ADTPS:** AEML-D has a medium term PPA with ADTPS (own generation). The Commission in Case No. 325 of 2019 has approved an energy quantum of 311.08 MU. AEML-D has purchased 274.64 MU for the month of April, 2020.
- 4.6 **Power Procurement from Solar and Non-Solar:** AEML-D has an Energy Purchase Agreement (EPA) with Dhursar Solar Power Private Limited (DSPPL). AEML-D also has an EPA with five non-solar sources namely Reliance Innoventures, AAA Sons Enterprise, Vector Green Energy Private Limited, Tembhu Power Private Limited and Reliance Clean Power Private Limited. The Actual energy quantum purchased and Approved by the Commission in Case No. 325 of 2019 is as shown in the Table 2 below:

Table 2: Approved and Actual Energy Quantum from Solar and Non-Solar Sources

Source	Contracted Capacity (MW)	Approved (MU)	Actual (MU)
Solar			
DSPPL	40	5.52	5.30
Non-Solar			
Reliance Innoventures	45	6.57	3.52
AAA Sons Enterprise	3.38	0.52	0.11
Vector Green Energy Private Limited	18	2.63	1.42
Vector Green Energy Private Limited	6	0.88	0.30
Tembhu Power Private Limited	4.5	0.99	1.09
Clean Power Private Limited	45	6.26	3.56
Total		23.36	15.32

- 4.7 AEML-D has procured 0.10 MU more than the approved from Tembhu Power Private Limited but as the approval by the Commission is on yearly energy quantum this minor variation is being accepted provided cumulative power procured is within the approved



energy quantum. The Commission has noted reduction in power purchase is mainly from non-solar sources.

4.8 Power Procurement from Exchange: AEML-D has purchased power from IEX based on DA Planning on daily basis and Short term power purchase from JSW Energy Limited (JSWEL), Kilaj Solar (Maharashtra) Pvt Ltd (KSMPL) and Tata Power Trading Company Limited (TPTCL). AEML-D has purchased 326.29 MU from all these sources which is within the approved quantum of 488.03 MU. The purchase of power is either through Competitive Bidding via DEEP e-portal or Power Exchange or day ahead exchange linked contracts.

4.9 Power Procurement from Imbalance Pool: AEML-D has purchased 49.31 MU from the imbalance pool for the month of April, 2020.

4.10 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 April, 2020, 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 The Power Purchase cost incurred in April, 2020 is Rs. 253.35 Crore which is lower than the approved Power Purchase cost of Rs. 337.64 Crore by the Commission for the month of April, 2020. 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 April, 2020 is shown in Table 3 below:

Table 3: Approved and Actual APPC and Power Purchase Quantum & Cost

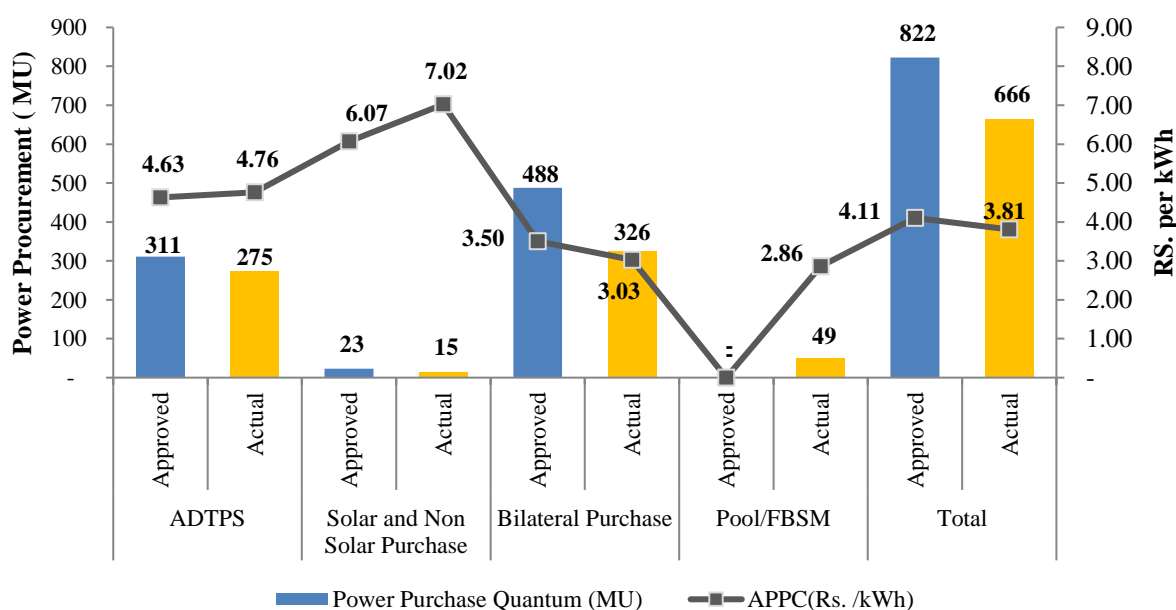
Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs./kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs. /kWh)	Total Cost (Rs. Crore)	APPC (Rs. /kWh)
ADTPS	Approved	311.08	26.15	0.84	117.90	3.79	144.05	4.63
	Actual	274.64	26.08	0.95	104.67	3.81	130.75	4.76
Solar and Non Solar Purchase	Approved	23.36	-	-	15.04	6.07	15.04	6.07
	Actual	15.32	-	-	10.76	7.02	10.76	7.02



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)
Bilateral Purchase	Approved	488.03	-	-	170.81	3.50	170.81	3.50
	Actual	326.29	-	-	98.88	3.03	98.88	3.03
Pool/FBSM	Approved	-	-	-	-	-	-	-
	Actual	49.31	-	-	14.10	2.86	14.10	2.86
Other Charges	Approved	-	-	-	7.74	-	7.74	-
	Actual	-	-	-	(1.14)	-	(1.14)	-
Total	Approved	822.47	26.15	0.32	311.49	3.79	337.64	4.11
	Actual	665.56	26.08	0.39	227.27	3.41	253.35	3.81

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

Figure 1: Approved & Actual Power Purchase and APPC



ADTPS

5.4 The Commission in Case No. 325 of 2019 has approved an energy quantum from ADTPS at the rate of Rs. 4.63/kWh. AEML-D has purchased at the rate of Rs. 4.76/kWh for the month of April, 2020.



- 5.5 **Fixed Cost:** The Fixed cost approved for FY 2020-21 in Case No. 325 of 2019 (AEML-D) is Rs. 313.81 Crore whereas the Fixed cost approved for FY 2020-21 in Case No. 298 of 2019 (AEML-G) is Rs. 312.99 Crore. The actual payment of Fixed Cost for the month of April, 2020 is to be done according to the entitlement under Case No. 298 of 2019 i.e 312.99 Crore, as the payment is to be done according to Generators Order. Due to decrease in sales and the reason as mentioned in the paragraph above, actual PLF of ADTPS in April is 84.50% as compared to approved PLF of 94.38%. Due to lower generation, per unit impact on Fixed Cost has increased by Rs. 0.11 /kWh and it has increased from approved FC rate of Rs. 0.84 /kWh to actual FC rate of Rs. 0.95/kWh.
- 5.6 **Energy Charges:** AEML-G has met the 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 April, 2020.
- 5.7 AEML-D as a response to data gap 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 liasoning charges incurred for Domestic Coal and Imported Coal for the month of April, 2020. Analysis of fuel segregated into two parts i.e. Washed Coal and Imported Coal.
- 5.8 **Washed Coal:** The Commission has sought for detailed computation and methodology for booking the coal consumption cost. In response to this, AEML-D stated that the total coal consumption cost is calculated on the basis of Moving 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 form the total of opening inventory and purchases during the respective month. The Commission further sought reconciliation of coal cost considered in Form F12 along with each coal invoice. AEML-D submitted the detailed coal computation for the coal purchased in April 2020. AEML-D has submitted supporting invoices for purchase of coal during April, 2020. AEML-D has also submitted the breakup and supporting documents for “Other Charges” of Rs. 0.27 Crore. The working of the washed coal fuel cost considered for April, 2020 is as shown in the Table 4 below:

Table 4: Working of Washed Coal Rate for April, 2020

Particular	Quantity (MT)	Cost (Rs. Crore)	Price (Rs./MT)
Inventory			
Opening (as on 1 st April)	3,31,356.44	186.77	5,636.39
Addition during month	98,959.50	52.36	5,290.60
Total	4,30,315.94	239.12	5,556.87
Consumption			
Actual	98,351.84	54.65	5,556.87



Additional Charges		0.27	
Total	98,351.84	54.93	5,584.60

5.9 With regards to the washed coal, the landed cost considered by ADTPS for the month of April, 2020 is Rs. 5584.60/MT as compared to MYT approved Rs. 5524.04/MT.

5.10 In absence of CIMFR results for month of April, 2020, AEML-D has considered as billed GCV of 3720 kcal/kg for washed coal based on weighted average GCV of raw coal for April, 2019 to June, 2019. AEML-D has considered as received GCV of 3956 kcal/kg for April, 2020. 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 matches with the GCV “As received” used for Energy Charge calculation. In MYT Order in Case No. 298 of 2019, the Commission has stated 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.”

5.11 AEML-D has considered GCV of 3926 kcal/kg (as received GCV of 3956 kcal/kg minus stacking loss of 30 kcal/kg) for calculation for energy charges in line with MYT Order in Case No. 298 of 2019.



5.12 **Imported Coal:** AEML has submitted bid documents, Contract agreement and actual bills/Invoices of the vessels through which it has imported the 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 purchased imported coal of 60,256 MT during April, 2020.

5.13 For the purpose of computation of cost of coal consumption, AEML-G adopts FIFO method for computation of imported coal cost. AEML-G has provided imported coal inventory and its consumption detail which is as shown in Table 5 below:

Table 5: Imported Coal Inventory

S. No.	Date of Purchase	Vessel Name	Cost (Rs./MT)	Opening Quantity (as on 1 st April, 2020) (MT)	Purchase during Month of April (MT)	Consumption during Month of April (MT)	Closing Quantity (as on 30 th April, 2020) (MT)
1	Jan-20	MV SSI Formidable	5,605.59	9,,807.99	-	9,807.99	-
2	Feb-20	MV Yuanping Sea	6,110.90	55,227.23	-	55,227.23	-
3	Feb-20	MV Great Pioneer	6,028.55	60,399.77	-	3,550.54	56,849.23
4	Mar-20	MV CD Callao	6,095.49	60,425.44	-	-	60,425.44
5	Mar-20	MV Fast	5,748.63	55,364.37	-	-	55,364.37
6	Apr-20	MV Genoa	5,319.83	-	60,174.85	-	60,174.85
				2,41,224.80	60,174.85	68,585.76	2,32,813.89

5.14 Working of weighted average cost and GCV of imported coal is as shown in Table 6 below:

Table 6: Weighted average cost and GCV of Imported Coal

S. No.	Vessel Name	Cost (Rs./MT)	Consumption (MT)	Coal Cost (Rs. Crore)	GCV (kcal/kg)
1	MV SSI Formidable	5,605.59	9,807.99	5.50	4,182
2	MV Yuanping Sea	6,110.90	55,227.23	33.75	4,383
3	MV Great Pioneer	6,028.55	3,550.54	2.14	4,302
	Total	6,034.45	68,585.76	41.39	4,350

5.15 With regards to the imported coal, the landed cost considered by ADTPS for the month of April, 2020 is Rs. 6034.45/MT as compared to MYT approved Rs. 5661.98/MT. The Commission has noted that Coal Index has increased in February, 2020 as compared to January, 2020 and hence FoB price of coal has increased to \$49.10/ MT as compared to \$42.47 / MT respectively. The Commission has also observed that AEML-G has entered into new coal supply agreement with Taurus Commodities General Trading LLC on 13



November, 2019 for five years. As per new agreement, ocean freight price has increased to \$22.42 / MT as compared to \$15 / MT in old agreement.

- 5.16 Due to above two reasons, actual imported coal cost has increased to Rs. 6034.45 /MT as compared to MYT approved Rs. 5661.98 / MT
- 5.17 The Imported Coal GCV “as billed” and “as received” considered for FAC calculation is weighted average of the coal used from all the three vessels and work out to 4350 kcal/kg.
- 5.18 AEML-D has considered GCV of 4330 kcal/kg (as received GCV of 4350 kcal/kg minus stacking loss of 20 kcal/kg) for calculation for energy charges in line with MYT Order in Case No. 298 of 2019.
- 5.19 Based on the above actual fuel cost & GCV and normative operational parameters, actual energy charges work out to Rs. 3.81/kWh which is higher than the approved variable cost of Rs. 3.79/kWh.
- 5.20 Based on the above, APPC for ADTPS works out to Rs. 4.76 /kWh as against approved Rs. 4.63 /kWh. Overall variation in APPC for month of April, 2020 is Rs. 0.13 /kWh in which fixed cost variation is contributing Rs. 0.11 /kWh and energy charge variation is contributing Rs. 0.02 /kWh.
- 5.21 **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. The Commission has verified the bills/invoices submitted and found to be correct.
- 5.22 **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 7 below:

Table 7: Approved and Actual APPC from Non-Solar Sources

Source	Approved (Rs./kWh)	Actual (Rs./kWh)
Reliance Innoventures	5.00	5.15
AAA Sons Enterprise	5.00	5.15
Vector Green Energy Private Limited	5.00	5.15
Vector Green Energy Private Limited	5.07	5.07
Tembhu Power Private Limited	4.26	4.26
Clean Power Private Limited	5.81	5.81

- 5.23 The Commission has approved power purchase rate at Rs.5/kWh for Reliance Innoventures, AAA Sons Enterprise and Vector Green Energy Limited based on the PPA signed by AEML-D with the sources. The Commission in MYT Order of Case No. 325 of 2019 has



not considered the annual escalation of 3% on these sources and approved the base rate of FY 2019-20 for FY 2020-21. Therefore, considering the annual escalation of 3% per unit rate works out to Rs. 5.15/kWh for April, 2020. This rate is being considered as approved rate for calculation of FAC as the payments done to the generator is on PPA basis.

- 5.24 The Commission has also approved power purchase rate for Vector Green Energy Limited, Tembhu Power Private Limited and Clean Power Private Limited and AEML-D has procured power from these sources at the same rate during April, 2020.
- 5.25 The Commission has scrutinized the bills/invoice submitted for RE sources and found that AAA Sons Enterprise invoices are not available. The Commission has sought details of the same and in response to the same, 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. AEML-D should ensure that the bills are raised in time and are submitted on actual basis for levying the FAC in future.
- 5.26 APPC for renewable sources for the month April, 2020 works out to Rs. 7.02/kWh as against approved level of Rs. 6.07/kWh. Main reason for increase in APPC of renewable sources is due to lower availability of cheaper sources (non-solar sources).
- 5.27 **Bilateral Purchase:** AEML-D has purchased power from IEX and Short term power purchase (STTP) at the average rate of Rs. 3.03/kWh from all these sources which is within the approved rate of Rs. 3.50/kWh. AEML-D has purchased power at Rs. 2.94 /kWh from exchange and at Rs. 3.08/kWh from short-term bilateral sources. As part of data gap, AEML-D has submitted the bill/invoices regarding the purchase of power from exchange and other sources and the Commission has verified the energy quantum and power purchase cost and found it to be appropriate.
- 5.28 **FBSM/ Imbalance Pool:** The Commission observes that AEML-D has purchased 49.31 MU and considered associated charges with regards to imbalance pool for the month April, 2020 on provisional basis at the rate of Rs. 3.15/kWh.
- 5.29 AEML-D has drawn 49.31 MUs from the imbalance pool. The said drawl from the pool may be on account of either increase in demand of consumers than estimated by the Licensee or due to lower generation than scheduled by the generator. In both the scenarios, power has been drawn by the Licensee and supplied to its consumers. The said power supplied to the consumers is already billed as per Tariff approved by the Commission. The Energy Charge approved also includes the element of power purchase. It is therefore



pertinent that such cost of such power drawn from the pool is considered while computing FAC.

- 5.30 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 MSDLC, 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.
- 5.31 **Other Charges:** The Commission has approved banking and Open Access charges of Rs. 7.74 Crore for April, 2020. AEML-D has not considered cost of banked energy and OA charges in the Power purchase cost of the month April, 2020 as the scheduling is from June 2020 to September 2020. AEML-D has passed on rebate received from Generators to the Consumers as part of FAC which is Rs. (1.14) Crore.
- 5.32 Considering the above, the Commission allows the average power purchase cost of Rs.3.81/kWh for the month of April, 2020 as shown in Table 3 above as the actual APPC is within the approved limit of Rs. 4.11/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 April, 2020 as shown in Table 3 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 within the limits of 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 April, 2020 is negative as shown in the Table 8 below.

Table 8: FAC on account of Power Purchase Cost



Sr. No.	Particulars	Units	April, 2020
1	Average power purchase cost approved by the Commission	Rs./kWh	4.11
2	Actual average power purchase cost	Rs./kWh	3.81
3	Change in average power purchase cost (=2 -1)	Rs./kWh	(0.30)
4	Net Power Purchase	MU	665.55
5	Change in power purchase cost (=3 x 4/10)	Rs. Crore	(19.87)

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

7.1 As the Commission is determining the FAC for the first time after the adoption of Tariff from April 2020 there is no past adjustment for over recovery/under recovery.

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

8.1 As the Commission is determining the FAC for the first time after the adoption of Tariff from April 2020 there is no past adjustment for over recovery/under recovery and hence no carrying cost for over recovery/under recovery.

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

Table 9: Disallowance of FAC due to excess Distribution Loss



Sr. No.	Particulars	Units	Approved in Tariff Order	Actual for April, 2020
1	Net Energy input at Distribution Voltages	MU	796.32	661.13
2	Energy sales at Distribution voltages	MU	736.19	628.75
3	Distribution Loss (1 - 2)	MU	60.13	32.37
4	Distribution Loss as % (3/1)	%	7.55%	4.90%
5	Excess Distribution Loss = [Actual 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 9, distribution loss for the month of April, 2020 is 4.90% which lower than the MYT approved distribution loss of 7.55%.

9.4 The Commission noted the submission of AEML-D that low Distribution Loss for the month of April 2020 is on account of the fact that the energy sale to consumers in absence of meter reading, except AMR is assessed as per Supply Code Regulations and maybe inaccurate.

9.5 As seen from the above Table 9, excess distribution loss for the month of April, 2020 is nil, because actual distribution loss is lesser than the approved Distribution loss in the MYT Order.

10. Summary of Allowable Z_{FAC}

10.1 The summary of the FAC amount as approved by the Commission for the month of April, 2020 as shown in the Table 10 below.

Table 10: Summary of Allowable Z_{FAC}

Sr. No.	Particulars	Units	April, 2020
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	(19.87)
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	(19.87)
2	Calculation of FAC Charge		
2.1	Energy Sales within the License Area	MU	628.75



Sr. No.	Particulars	Units	April, 2020
2.2	Excess Distribution Loss	MU	-
2.3	Z _{FAC} per kWh	Rs./kWh	(0.32)
3	Recovery of FAC		
3.1	FAC disallowed corresponding to excess Distribution Loss [((2.1+2.2) x 2.3)/10]	Rs. Crore	-
3.2	Allowable FAC	Rs. Crore	(19.87)
4	Utilization of FAC Fund		
4.1	Opening Balance of FAC Fund	Rs. Crore	-
4.2	Holding Cost on FAC Fund	Rs. Crore	-
4.3	Z _{FAC} for the month (Sr. No. 3.2)	Rs. Crore	(19.87)
4.4	Closing Balance of FAC Fund	Rs. Crore	(19.87)
4.5	Z _{FAC} leviable/refundable to consumer	Rs. Crore	-
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	-

10.2 It can be seen from the above Table 10 that standalone FAC for the month of April, 2020 is Rs. (19.87) Crore. As the FAC is negative, the said amount will be accumulated in FAC Fund for stabilisation of FAC in future and the benefit 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....”

11.2 The Commission had invoked power of removing difficulties under MYT Regulation, 2019 and made following changes for computation of FAC.

“Distribution Licensee shall undertake computation of monthly FAC as per Regulation 10 of the MYT Regulations, 2019 except for treatment to be given to negative FAC as follows:

- Negative FAC amount shall be carried forward to the next FAC billing cycle with holding cost.*
- Such carried forward negative FAC shall be adjusted against FAC amount for the next month and balance negative amount shall be carried forward to subsequent month with holding cost.*
- Such carry forward of negative FAC shall be continued till the accumulated negative FAC becomes 20 % of monthly tariff revenue approved by the Commission in Tariff Order. In case of AEML-D such limit shall be Rs.110 Crore. Any accumulated amount above such limit shall be refunded to consumers through FAC mechanism.*
- In case such FAC Fund is yet to be generated or such generated fund is not sufficient to adjust against FAC computed for given month, then Distribution Licensee can levy such amount to the consumers through FAC mechanism, upon seeking prior approval from the Commission.”*

11.3 The Commission in the Tariff Order had held that negative FAC amount shall be carried forward to the next FAC billing cycle with holding cost till the accumulated negative FAC reaches the limit of Rs. 110 Crore. Accordingly, the Commission allows the FAC amount of Rs. (19.87) Crore to be accumulated as FAC Fund and shall be carried forward to the next billing cycle with holding cost.



11.4 AEML-D has submitted an application dated 18th May 2020 pertaining to post facto approval of FAC for the 4th Quarter of FY 2019-20 and revised submission of chargeable FAC for Q1 to Q3 of FY 2019-20. AEML-D submitted that it has already accumulated negative FAC of Rs. 160.89 Crore at the end of FY 2019-20. AEML-D has requested to consider Rs.50.89 Crore FAC to be passed on to the consumers after netting off Rs. 110 Crore as FAC Fund as per MYT Order. The Commission has already replied to the query in its letter MERC/Tech/FAC/E-Letter dated 10 May, 2020 regarding Levy/ Refund of FAC for balance consumption months of FY 2019-20 to Consumers in FY 2020-21. The relevant part of the same is reproduced here below:

“3. The Commission has in the interim received one request for prior approval of FAC for the month of February 2020 to be levied to the Consumers in the billing month of April 2020.

4. In light of the aforesaid request, I am directed to clarify that while according the approval to the FAC quarterly proposals of FY 2019-20, Commission will appropriately direct as to the treatment that is required to be given to the amount that gets computed based on the scrutiny of FAC proposals of January-March, 2020.”

11.5 Hence, treatment to negative FAC of Rs. 160.89 Crore as submitted by AEML-D at the end of FY 2019-20 will be given separately based on scrutiny of FAC proposals of January-March, 2020. No impact of the same has been considered as part of FAC approval for April, 2020.

11.6 In view of the above, per unit Z_{FAC} for the month of April, 2020 to be levied on consumer of AEML-D in the billing month of June 2020 is Nil.

