

**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
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**Ref. No. MERC/FAC/2020-2021/E-Letter**

**Date: 27 September, 2020**

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

**Subject:** Post facto approval of AEML’s Fuel Adjustment Charges (FAC) for the period of July 2019 to September 2019.

**Reference:** AEML’s FAC submission vide letter dated 2 December 2019 and 13 June 2020 for post-facto approval of FAC for the period from July 2019 to September 2019.

Sir,

Upon vetting the FAC calculations for the months of July 2019 to September 2019, as mentioned in the above reference, the Commission has accorded post facto approval to Adani Electricity Mumbai Limited - Distribution (AEML-D) for charging FAC to its consumers as shown in the Table below:

Month	July 2019	August 2019	September 2019
Z <sub>FAC</sub> allowed for recovery (Rs. Crore)	70.38	75.08	111.53

AEML-D was to recover Rs. 186.62 Crore (inclusive of carry forward) cumulatively for the last two months of quarter against this AEML-D has actually worked out FAC (inclusive of carry forward) as Rs. 194.28 Crore. Hence, there is an over-recovery of amount Rs. 7.66 Crore. Therefore, AEML-D is required to re-fund additional FAC of Rs. (7.66) Crore to consumers. However, as FY 2019-20 is already over, therefore, above adjustment will be rolled over in next FAC approvals (i.e., FAC of Q3 of FY 2019-20) and finally would be adjusted in the final True up of FY 2019-20.



As FY 2019-20 is already over and provisional True-up of FY 2019-20 has also been done in recent MYT Order dated 30 March, 2020, the rationale for post facto approval of Q2 of FY 2019-20 is only to carry forward the allowance or disallowance to next quarter and subsequently to Q4 of FY 2019-20. Any variation in final allowance or disallowance of FAC will be reconciled at the time of final True-up of FY 2019-20 under the MERC (Multi Year Tariff) Regulations, 2015

Yours faithfully,

**Sd/-**  
(Prafulla Varhade)  
Director (EE), MERC

**Encl:** Annexure A: Detailed Vetting Report for the period of July 2019 to September 2019.



**POST FACTO APPROVAL FOR FAC CHARGES FOR THE MONTHS OF JULY 2019  
TO SEPTEMBER 2019**

**Subject:** Post facto approval of AEML's Fuel Adjustment Charges (FAC) for the period of July 2019 to September 2019.

**Reference:** AEML's FAC submission vide letter dated 2 December 2019 and 13 June 2020 for post-facto approval of FAC for the period from July 2019 to September 2019.

**1. FAC submission by AEML-D:**

1.1 AEML-D (formerly RInfra-D) has submitted FAC submissions for the months of July 2019 to September 2019 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by AEML-D, the Commission has accorded post facto approval for the FAC amount to be charged in the billing months of September 2019 to November 2019.

**2. Background**

2.1 On 21 October, 2016, the Commission has issued Tariff Order for RInfra-D (now AEML-D), (Case No.34 of 2016) for True-up of FY 2014-15, provisional Truing-up for FY 2015-16, and Aggregate Revenue Requirement and Tariff for FY 2016-17 to FY 2019-20. Revised Tariff has been made applicable from 1 October, 2016

2.2 On 12 September, 2018, the Commission has issued Tariff Order for RInfra-D (now AEML-D), (Case No.200 of 2017) for Mid-Term Review, including Truing-up of FY 2015-16 and FY 2016-17, provisional Truing-up for FY 2017-18, and revised Aggregate Revenue Requirement and Tariff for FY 2018-19 to FY 2019-20. Revised Tariff has been made applicable from 1 September, 2018.

2.3 On 30 March, 2020 the Commission has issued Tariff Order for AEML-D, (Case No.325 of 2019) for True-up of FY 2017-18 and FY 2018-19, provisional True-up for FY 2019-20 and Aggregate Revenue Requirement and Multi-Year Tariff for 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25. Revised Tariff has been made applicable from 1 April, 2020.

2.4 Vide its letter dated 15 November, 2016, the Commission communicated the excel formats for filing of FAC submissions to all Distribution Licensees. 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.

- 2.5 Vide FAC vetting Report dated 13 January, 2017, the Commission accorded prior approval to the FAC for the month of October, 2016.
- 2.6 In terms of MERC (MYT) Regulations, 2015 a Distribution Licensee is required to obtain post facto approval of the Commission on a quarterly basis for FAC charges. Accordingly, vide its letter dated 2 December 2019 and 13 June 2020, AEML-D has filed FAC submissions for the months of July 2019 to September 2019 for post facto approval as per power purchase figures approved in MTR Order.

### 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 below.

Consumer Category	Approved* by the Commission (MU)	Monthly Approved** (MU)	Actual Sales		
			Jul-19	Aug-19	Sept-19
	(I)	(II=I/12)	MU (III)	MU (IV)	MU (III)
<b>LT Category</b>					
BPL	0.02	0.00	0.00	0.00	0.00
LT -I Residential	3071.56	255.96	366.26	364.41	356.75
LT II Commercial	3979.90	331.66	217.74	217.61	212.66
LT III(A) - LT Industrial upto 20 kW TOD Option	186.82	15.57	13.74	14.21	14.39
LT III(B) - LT Industrial above 20 kW	394.49	32.87	32.60	32.39	30.02
LT-V : LT- Advertisements and Hoardings	3.65	0.30	0.19	0.20	0.21
LT VI: LT -Street Lights	59.47	4.96	3.85	3.77	4.32
LT-VII : LT -Temporary Supply	10.37	0.86	0.92	1.04	1.47
LT VIII: LT - Crematorium & Burial Grounds	1.40	0.12	0.11	0.11	0.11
LT X: LT -Public Service (A)	25.80	2.15	2.28	2.22	2.10
LT X: LT -Public Service (B)	162.50	13.54	10.89	10.72	9.61
LT X (A) : LT - Agriculture Pumpsets	0.06	0.01	0.00	0.00	-0.01
LT X (B) : LT - Agriculture Others	0.14	0.01	0.02	0.02	0.02
LTIV - Public Water Works	13.81	1.15	1.16	1.14	1.14
<b>HT Category</b>					
HT 1 (Industrial)	442.14	36.85	24.03	23.62	22.06
HT 2 (Commercial.)	345.26	28.77	48.22	46.65	45.69
HT 3 (Group Housing Soc.)	40.04	3.34	3.35	3.20	3.02



HT 4 (Temporary Supply)	2.87	0.24	0.28	0.01	0.03
HT – Railways	31.56	2.63	2.81	2.79	2.62
HT - Public Services (A)	8.66	0.72	0.53	0.51	0.46
HT - Public Services (B)	100.16	8.35	9.23	8.67	7.94
HT - Public Water Works	6.74	0.56	0.81	0.83	0.85
<b>Total</b>	<b>8887.41</b>	<b>740.62</b>	<b>739.01</b>	<b>734.12</b>	<b>715.46</b>

\*As per MTR Order dt. 12 September, 2018

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

3.2 The total sale for the month of July, August, and September, 2019 is 739.01 MU, 734.12 MU, and 715.46 MU, respectively as against 740.62 MU approved in MTR Order. It was observed that while the actual sale in the months of July and August 2019 were almost at the levels approved in the MTR Order, the actual sales for the month of September 2019 was significantly lower. In response to the clarification sought, AEML-D submitted that as **the month of July to September of a year are monsoon months hence, there is a decline in consumption due to reduced air conditioning load.** Thus, the sales during July (739.01 MU), August (734.12 MU) and September (715.46 MU) are lower than the average monthly sales approved for FY 2019-20 in the MTR Order, which was 740.61 MU.

#### 4. Cost of Power Purchase

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

- Purchases from ADTPS (Formerly RInfra-G)
- Renewable energy procurement (RPS)
- Bilateral contracts and decrements to the imbalance pool.

4.2 The following Tables show the variation in average power purchase cost (Rs/kWh) for the months of July 2019 to September 2019, as compared to average power purchase cost approved in Tariff Orders dated 12 September, 2018:

Particulars	Tariff Order Dated 12.09.2018			Actual for July 2019		
	Net Monthly Purchase**	Cost**	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh



ADTPS	314.60	135.06	4.29	270.44	128.97	4.77
RE Sources#	261.94	83.44	3.19	49.17	28.43	5.78
VIPL-G	333.41	146.60	4.40	-0.54	-0.42	7.75
Bilateral/Traders@	-	-	-	397.16	182.58	4.60
Others *	-	-	-	102.05	44.14	4.33
Surplus Sale	(52.67)	(18.90)	3.59	-	-	-
<b>Total</b>	<b>857.29</b>	<b>346.21</b>	<b>4.04</b>	<b>818.28</b>	<b>383.70</b>	<b>4.69</b>

Particulars	Tariff Order Dated 12.09.2018			Actual for August 2019		
	Net Monthly Purchase**	Cost**	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
ADTPS	314.60	135.06	4.29	279.11	131.23	4.70
RE Sources#	261.94	83.44	3.19	46.99	26.98	5.74
VIPL-G	333.41	146.60	4.40	-0.50	-0.39	7.75
Bilateral/Traders@	-	-	-	386.50	179.87	4.65
Others*	-	-	-	95.75	37.54	3.92
Surplus Sale	(52.67)	(18.90)	3.59	-	-	-
<b>Total</b>	<b>857.29</b>	<b>346.21</b>	<b>4.04</b>	<b>807.85</b>	<b>375.24</b>	<b>4.64</b>

Particulars	Tariff Order Dated 12.09.2018			Actual for September 2019		
	Net Monthly Purchase**	Cost**	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
ADTPS	314.60	135.06	4.29	237.56	120.83	5.09
RE Sources#	261.94	83.44	3.19	32.99	19.27	5.84
VIPL-G	333.41	146.60	4.40	-0.49	-0.38	7.75
Bilateral/Traders@	-	-	-	393.13	163.74	4.17



Particulars	Tariff Order Dated 12.09.2018			Actual for September 2019		
	Net Monthly Purchase**	Cost**	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
Others*	-	-	-	91.10	77.30	8.48
Surplus Sale	(52.67)	(18.90)	3.59	-	-	-
<b>Total</b>	<b>857.29</b>	<b>346.21</b>	<b>4.04</b>	<b>754.29</b>	<b>380.75</b>	<b>5.05</b>

\*Others include UI, WRPC DSM charges and other charges Pl. refer para.4.40 to 4.43 below.

# There is absence of new cheaper RE sources which was envisaged under the MTR Order. Pl. refer para. 4.24 to 4.28 below.

@ The Commission approved the ceiling rate to Rs. 5 per Unit in a subsequent Order in December, 2018. Pl. refer para.4.29 and 4.31 below.

\*\*In case AEML-D, the power purchase quantum and cost is approved on annual basis. The monthly quantum and cost has been arrived based on yearly approved numbers for comparison purpose.

- 4.3 AEML-D has procured power under its long-term arrangement (Order dated 8 February, 2018 in Case No. 5 of 2017) with AEML-G (ADTPS). After accounting for the availability from long-term source, the shortfall against power requirement was met through purchase from contracted short-term sources and from the Power Exchanges. AEML-D has also contracted Renewable Energy (RE) power from different sources for meeting the Renewable Purchase Obligation (RPO). Further, there was offtake (decrement) from the Imbalance Pool as per real time deviation.
- 4.4 The Commission has sought detailed bills/invoices for all of the power purchase sources in order to verify the claim of AEML-D with respect to average power purchase cost for the months of July to September, 2019. The Commission has verified the Net Purchase, Variable Cost, Fixed Charge and the Power Purchase Cost from the relevant bills/invoices received for all purchasing sources.

#### **ADTPS (Own Generation):**

- 4.5 With regards to ADTPS (own generation), it was observed that **AEML-D has purchased 270.44 MU, 279.11 MU, and 237.56 MU, in the months of July, August and September,**



**2019, respectively as compared to 314.60 MU approved in the MTR Order.** The Table below shows the month wise availability and PLF of ADTPS during Q2 of FY 2019-20

Particular	July 2019	August 2019	September 2019
Availability	99.89%	100.00%	91.80%
PLF	80.30%	82.84%	73.19%

- 4.6 The Commission observed that even though availability of ADTPS was 99.89%, 100%, and 91.80% in respective months of Q2, the actual PLF of plant was below the normative level of 85% and the approved PLF of 95.07% for all months. On response to clarification sought, AEML-D stated that loss of PLF during aforesaid period was because of following reasons:
- a. Due to backing down instructions given by MSLDC, as detailed below:
    - i. July 2019 – 60.998 MU
    - ii. August 2019 – 69.402 MU
    - iii. September 2019 – 65.436 MU
  - b. Due to planned outage of ADTPS Unit-1 taken for preparatory work of Flexible Operation Study, which resulted in loss of Generation of 30.581 MU.
- 4.7 AEML-D further stated that as per existing Regulatory framework under Intra-State ABT, the Generators declare the availability to SLDC and based on the State level load Generation balance requirement, SLDC issues the despatch schedule to all generators connected to InSTS network. The Distribution Licensees have no control over the PLF of Generators, it is function of MOD stack & state level demand /supply position. Therefore, while AEML-D assumes entire availability for despatch from ADTPS, the plant gets backing down instructions from SLDC and hence, the actual PLF is lower than availability. **AEML-D confirmed that it has fully utilised the declared availability of all contracted sources and has followed the MOD principles during Q2 of FY 2019-20.**
- 4.8 Further, even though the monthly PLF was lower than the normative level for above specified period, **the cumulative availability of ADTPS was higher than the normative Target availability of 85% for all the months of Q2. Hence, ADTPS was entitled to recover full monthly fixed cost in line with the Regulation 48.3 of MYT Regulations, 2015.** Accordingly, the spread of full monthly fixed cost over lower generation (with actual PLF between 73% to 82% as compared to approved PLF of 95%) has affected the per unit fixed cost and hence, increase in average power purchase cost from ADTPS. Due to above, per unit fixed cost has increased from approved rate of **Rs. 0.92/kW** for FY 2019-20 to **Rs.1.07/kWh** in July, **Rs. 1.03/kWh** in August and **Rs. 1.22/kWh** in September.





4.9 **The average power purchase cost from ADTPS during the months of July, August, and September, 2019 is Rs. 4.77/kWh, Rs. 4.70/kWh and Rs. 5.09/kWh, respectively, as compared to MTR approved rate of Rs. 4.29/kWh.** The variation in APPC from MTR approved value is mainly on account of following reasons:

- Variation in actual quantum of power purchase during respective period (PLF variation)
- Impact of monthly fixed charge payment (spread of fixed cost over monthly generation)
- Variation in the price of fuel during the respective period

4.10 The paras below provide the detailed analysis of variation in fuel price during Q2 period:

**Fuel Price Analysis:**

4.11 DTSPS uses both Domestic (washed) and Imported coal for its generation. With regards to Domestic coal ADTPS procures it from the South Eastern Coalfields Limited (SECL) having a GCV range band (G-10 & G-11) exceeding 4000 kCal/kg but not exceeding 4600 kCal/kg. The landed cost (i.e., Basic cost + Freight + Taxes/Duties + Handling charges + Other charges) of domestic washed coal for energy charge computation as claimed by ADTPS for the month of July, August and September 2019 is Rs. 5,491.91/MT, Rs. 5,416.97/MT, and Rs. 5,329.81/MT which is around 13% to 16% higher as compared to MTR approved value of Rs. 4,740.41/MT.

4.12 The Commission has sought for actual bills and invoices against the purchase during the respective period. ADTPS has submitted the detailed invoice summary of all the raw coal purchased from South Eastern Coalfields Limited (SECL). ADTPS has also submitted the sample invoices for other handling charges such as washing charges, liasioning and loading supervision charges, local transportation charges, beneficiation charges, third party sampling charges, etc.

4.13 From the invoices submitted, it can be inferred that main reason for such an increase in landed cost of domestic coal compared to MTR approved cost is mainly due to revision in the base freight rate by Railway Board (Ministry of Railways) vide its Circular No. 19 of 2018 w.e.f. 1 November, 2018. The base railway freight was increased by almost Rs. 217/MT as shown in the Table below:

Particular	Circular No. 01 OF 2018 w.e.f. 15/01/2018	Circular No. 19 OF 2018 w.e.f. 01/11/2018	Increment
Base Freight (Rs./MT)	2,361.00	2,567.60	206.60



Particular	Circular No. 01 OF 2018 w.e.f. 15/01/2018	Circular No. 19 OF 2018 w.e.f. 01/11/2018	Increment
+ IGST 5% (Rs./MT)	118.05	128.38	10.33
Total Railway Freight Charge (Rs./MT)	2,479.05	2,695.98	216.93

4.14 Further, in order to ascertain the prudence of landed cost of washed coal claimed, the Commission has worked out the landed cost of domestic coal on sample basis. The Commission has considered the basic Run of Mine price of above specified G-11 grade coal from the price notification notified by CIL (M&S:GM(F)/Pricing 2018/07). The Table below shows the computation of basic cost of raw domestic coal as per invoices and CIL (Coal India Limited) notifications:

Particular	Cost (Rs./MT)	Remark
Basic Amount (Run of Mine)	955.00	Price notified by CIL for G-11 coal
Royalty @14% of Base price	133.70	Calculated as per CIL notification
DMFT @30% of Royalty	40.11	Calculated as per CIL notification
NMET @2% of Royalty	2.67	Calculated as per CIL notification
Sizing Charges	87.00	As per CIL notification
CG Vikas Upkar and Pryavaran Upkar	15.00	As per CIL notification
Surface Transportation charges	57.00	As per CIL notification
Evacuation facility charges	50.00	As per CIL notification
<b>Total Taxable Value</b>	<b>1,340.48</b>	
GST @ 5%	67.02	Calculated as per CIL notification
<b>Total Cost including GST</b>	<b>1,407.51</b>	
GST Compensation Cess	400.00	As per CIL notification
<b>Total Cost including GST Cess</b>	<b>1,807.51</b>	
TCS @1%	18.08	Calculated as per CIL notification
<b>Grand Total</b>	<b>1,825.58</b>	

4.15 From above the basic raw cost of domestic coal worked out as Rs.1,825.58/MT. This price is the basic cost of raw coal available at the boundary of mine. This raw coal is then transported to Coal washery located within 4-5 km area. The raw coal is being washed at washery and thereafter despatched to ADTPS by first transporting coal from washery to Railway Siding and thereafter transporting the clean coal through Rail to ADTPS station. Accordingly, washery charges, railway freight charges, local transport charges and other handling charges are added to above basic cost of coal to arrive at the landed cost of coal at ADTPS station. As stated above, ADTPS has submitted the invoices for washing charges, railway freight and other charges. The Commission has considered standard per MT charges



as specified in sample bills to work out the landed cost of washed coal as shown in Table below:

Particular	Cost (Rs./MT)	GST (Rs./MT)
Basic raw coal cost	1,825.58	
#Railway Freight charges	2,567.60	128.38
*Coal Handling Charges:		
i. Local transportation charges	75.12	13.52
ii. Beneficiation charges	170.00	30.60
iii. Other handling charges	4.20	0.76
*Other Charges:		
i. Liaisoning and loading supervision, Weighment, Maintenance of GCV & Transit loss, Placement of rakes etc.	176.00	31.68
*Third party sampling charges	4.40	0.79
Total Charges	4,822.90	205.73
<b>Grand Total Landed Cost</b>		<b>5,028.63</b>
<b>Grand Total Including normative Transit Loss</b>		<b>5,069.19</b>

#As per Ministry of Railways notification; \*As per standard rate specified in sample bills

- 4.16 From the above, the landed cost of domestic coal from the sample bills has been worked out as around Rs. 5,069.19/MT. It is to be noted that the above cost is landed cost of coal purchased during Q2 period as per standard rate and sample bills. However, the cost claimed by ADTPS mentioned in paras above (i.e., Rs.5,491.91/MT, Rs. 5,416.97/MT, and Rs. 5,329.81/MT) is the cost of coal actually consumed during Q2 period. This cost has been derived by ADTPS by Moving Average Price Method based on coal inventory stock pertaining to previously purchased coal and recently added coal. Further, in addition to the above the landed cost claimed also include other expenses towards BG commission, ARC coal rake handling and rail maintenance charges, bank charges, open coal yard insurance, etc. Because of this reason, the landed cost of coal as computed above based on sample bills and as considered in energy charge computation generally varies. However, the Commission has verified the total landed cost (Rs. Crore) of coal purchased and cost of inventory of coal as claimed by ADTPS from the detailed computation submitted by AEML-D for Q2 period vide its data gap reply and found to be in order.
- 4.17 Further, with regards to check the prudence of GCV of washed coal considered for energy charge computation, the Commission sought for third party sampling report for each month of Q2. ADTPS has submitted the coal sampling report issued by Mitra S. K. Pvt. Ltd. and Inspectorate Griffith India Pvt. Ltd. (Bureau Veritas). **The Commission has verified the**



**GCV from the report and found to be in Order.** The Table below shows the summary of GCV as per sample report and as considered by ADTPS for energy charge computation:

Particular	July 2019	August 2019	September 2019
Wt. avg GCV as per 3 <sup>rd</sup> party Sample report (kCal/kg)	3,856 (6 samples)	4,042 (15 samples)	3,847 (18 samples)
Wt. avg GCV as considered by ADTPS (kCal/kg) for energy charge computation	3,856	4,042	3,843

- 4.18 With regard to the imported coal, it was observed that **ADTPS has not procured any imported coal vessel during Q2 of FY 2019-20.** Since ADTPS had the stock of imported coal (purchased in previous quarter Q1), the same has been consumed in present quarter also.
- 4.19 Accordingly, **ADTPS has claimed the landed price of imported coal as considered in energy charge computation as Rs. 5346.71/MT, Rs. 5319.49/MT, and Rs. 5422.06/MT, respectively (considering normative transit losses), for the months of July, August, and September, 2019, as against MTR approved price of Rs. 5,070/MT for FY 2019-20.**
- 4.20 The Commission in previous post facto FAC approval of Q1 of FY 2019-20, had noted that ADTPS procured imported coal during Q1 through competitive bidding and has submitted the competitive bidding documents vide its data gap reply. ADTPS had procured two vessels (MV Ikan Senyur an MV Poseidon S) of imported coal in the month of April 2019 (total billed quantity 1,13,602.00 MT) and one vessel (MV Porthos) of imported coal in the month of May 2019 ( total billed quantity 55000 MT) from Indonesia. The aforesaid purchase has already been verified by the Commission in previous quarter FAC approval. In the present quarter the Commission has verified the computation of price of imported coal as shown in Table below:

Sr No.	Invoice Rate Calculation	Basis	Imported Coal Vessel			Total
			MV Ikan Senyur (April-19)	MV Poseidon S (April-19)	MV Porthos (May-19)	
1.	Landed price of vessel (Rs./MT)	a	5,535.64	5,412.41	5,186.28	-
2.	Consumption in July, 2019 (MT)	b	22,439.81	-	29,916.16	<b>52,355.97</b>



Sr No.	Invoice Rate Calculation	Basis	Imported Coal Vessel			Total
			MV Ikan Senyur (April-19)	MV Poseidon S (April-19)	MV Porthos (May-19)	
3.	Consumption in August, 2019 (MT)	c	-	29,507.82	24,931.05	<b>54,438.87</b>
4.	Consumption in September, 2019 (MT)	d	-	23,508.33	125.30	<b>23,633.63</b>
5.	Cost of imported coal in July, 2019 (Rs. Crore)	$e=b*a/10^7$	12.42	-	15.52	<b>27.94</b>
6.	Cost of imported coal in August, 2019 (Rs. Crore)	$f=c*a/10^7$	-	15.97	12.93	<b>28.90</b>
7.	Cost of imported coal in September, 2019 (Rs. Crore)	$g=d*a/10^7$	-	12.72	0.06	<b>12.79</b>
8.	Wt avg. price of imported coal in July, 2019 (Rs./MT)	$h=e*10^7/b$	-	-	-	<b>5336.02</b>
9.	Wt avg. price of imported coal in August, 2019 (Rs./MT)	$i=f*10^7/c$	-	-	-	<b>5308.85</b>
10.	Wt avg. price of imported coal in September, 2019 (Rs./MT)	$j=g*10^7/d$	-	-	-	<b>5411.21</b>

4.21 From the above Table, the weighted average price of imported coal works out as Rs. 5336.02/MT, Rs. 5308.85/MT, and Rs. 5411.21/MT, respectively, for the months of July, August, and September, 2019. After considering the normative transit loss of 0.8%, as per 2<sup>nd</sup> Proviso of the Regulation 48.5 of the MERC MYT Regulations, 2015, the landed price of imported coal stands at Rs. 5346.71/MT, Rs. 5319.49/MT, and Rs. 5422.06/MT, respectively, for the months of July, August, and September, 2019.

#### VIPL-G

4.22 With regard to VIPL-G, as already mentioned in previous post facto approval that the Commission has issued the Order in Case No. 247 of 2019 on 16 December, 2019 wherein the Termination Notice is held valid and the Termination MV Notice shall be deemed to have been issued to the Lenders on the date of the Order. **Hence, there is no purchase during Q2 of FY 2019-20 from VIPL-G.**



4.23 Further, during Q2 of FY 2019-20, VIPL-G has drawn power from grid for its auxiliary operations. AEML-D has charged VIPL at the rate of energy charge for HT – I (Industry) as approved in the MTR Order dated 12 September, 2018 in Case No. 200 of 2017, for this energy. VIPL filed a Petition (Case No. 232 of 2019) seeking a clarification on netting off the energy drawn by it with the energy injected into the grid for supply to AEML-D. The Commission in the Order dated 17 October, 2019 in Case No. 232 of 2019 has stated that for the period till October 2019 energy drawn by VIPL from the grid has to be settled with AEML-D at the energy charge rate of AEML-D as approved in the MTR Order dated 12 September, 2018 in Case No. 200 of 2017. Accordingly, the revenue corresponding to the energy drawn from grid by VIPL in July, August, and September 2019 is adjusted in the power purchase expense for the respective months. Hence, the power purchase quantum and cost is considered as negative for Q2 of FY 2019-20.

#### RE Power:

4.24 The sources of RE for AEML-D are DSPPL, Reliance Innoventure, AAA Sons Enterprise, Vector Green Energy Pvt Ltd., Reliance Clean Power Pvt. Ltd. **AEML-D has purchased 49.17 MU, 46.99 MU and 32.99 MU of RE power during the month of July, August and September 2019, respectively.** The APPC from RE sources were Rs. 5.78/kWh, Rs. 5.74/kWh and Rs. 5.84/kWh for the respective months of Q2 as compared to MTR approved rate of Rs. 3.19/kWh for FY 2019-20. The Table below shows the summary of RE power purchase during Q2 of FY 2019-20.

Sources	Approved		July 2019		August 2019		September 2019	
	MUs	(Rs./kWh)	Actual MUs	Actual Rs./kWh	Actual MUs	Actual Rs./kWh	Actual MUs	Actual Rs./kWh
<b>Solar Sources:</b>								
DSPPL	5.73	10.30	4.73	10.30	3.96	10.30	3.53	10.30
New Solar Sources	36.45	2.72	NA	NA	NA	NA	NA	NA
<b>Non-Solar Sources:</b>								
Reliance Innoventure	6.50	5.00	17.80	5.00	15.83	5.00	11.47	5.00
AAA Sons Enterprise*	0.25	5.00	0.46	5.00	0.47	5.00	0.29	5.00
Vector Green Energy Pvt Ltd	2.62	5.00	7.59	5.00	7.57	5.00	5.21	5.00
Vector Green Energy Pvt Ltd	0.92	5.07	2.31	5.07	2.26	5.07	1.52	5.07
Tembhu Power Pvt. Ltd.	0.71	4.26	-	-	-	-	-	-
Reliance Clean Power Pvt. Ltd.	6.07	5.81	16.28	5.81	16.90	5.81	10.97	5.81
Non-Solar New Sources	200.9	2.87	NA	NA	NA	NA	NA	NA
Mini/Micro hydro	1.71	5.64	NA	NA	NA	NA	NA	NA
<b>Total RE Power</b>	<b>261.9</b>	<b>3.19</b>	<b>49.17</b>	<b>5.78</b>	<b>46.99</b>	<b>5.74</b>	<b>32.99</b>	<b>5.84</b>





*\*Actual power purchase quantum and cost considered as per bills as against the provisional number considered by AEML-D in its submission.*

- 4.25 It can be seen from above table, that even though all the RE power has been procured from approved sources at an approved price, APPC is still higher as compared to MTR approved rate of Rs. 3.19/kWh. This is mainly due to the reason that in MTR Order, while determining the power purchase price for RE sources, the Commission has envisaged that the RPO Obligation (Solar and Non-Solar) of AEML-D would first be met from the existing tied up sources (solar and non-solar) and the remaining RPO requirement would then be fulfilled from new RE sources as such new solar, new non-solar and hydro, instead of any REC purchase. Accordingly, for solar RPO obligation, the Commission has considered solar purchase from existing tied up source, i.e., DSPPL at Rs.10.30/kWh. However, in absence of any identified new RE sources at that time, the Commission has considered the additional requirement of Solar power for FY 2019-20 to be purchased at generic tariff of Rs. 2.72/kWh as determined in the Order in Case No. 204 of 2018. Similarly, for non-solar RPO obligation, the Commission has considered the same to be met through existing tied up Non-solar sources at a weighted average price of Rs.5.26/kWh and the remaining through new non-solar sources at the generic tariff of Rs. 2.87/kWh as determined in the Order in Case No. 204 of 2018 instead of any REC purchase. Considering the above-mentioned prices, the weighted average power purchase cost from overall RE sources has been worked out as Rs. 3.19/kWh for FY 2019-20.
- 4.26 As against the above, in the present quarter the solar and non-solar RPO target has been fulfilled by AEML-D through purchase of RE power from existing tied up sources only. There were no new solar or non-solar sources (having cheaper approved rate) identified in Q2 power purchase portfolio. Hence, absence of these new cheaper RE power sources has resulted in higher APPC from RE sources in Q2 of FY 2019-20 than MTR approved price. Further, in response to clarification sought for absence of new cheaper sources as envisaged in MTR Order, AEML-D stated that any RE purchase under competitive guidelines need minimum 18 months lead time, hence AEML could not tie up any new solar or non-solar source for purchase of RE power in FY 2019-20. AEML conducted a competitive bidding for procurement of power from a Wind – solar hybrid source (350 MW + 350 MW) in FY 2019-20. Vide Order dated 8 January, 2020 in Case No. 281 of 2019, the Commission has approved the proposal at the rate of Rs.3.24 per unit. The power procurement from the said new source shall commence from FY 2021-22. Hence in FY 2019-20, AEML has purchased RE power from existing RE sources only.
- 4.27 Further, **the variation in APPC within the months is mainly due to variation in actual quantum of power purchase from these sources during respective period of Q2 of FY 2019-20.** The Table below shows the actual source wise RE quantum purchase along with



% share of each sources vis-à-vis approved source wise RE quantum and approved % share of each sources during Q2 of FY 2019-20:

Sources	Approved			July 2019		August 2019		September 2019	
	MUs	Share (%)	Rate (Rs./kWh)	MUs	% Share	MUs	% Share	MUs	% Share
<b>Solar</b>									
DSPPL	5.73	2.19%	10.30	4.73	9.62%	3.96	8.43%	3.53	10.71%
New Solar Sources	36.45	13.92%	2.72	0.00	0.00%	0.00	0.00%	0.00	0.00%
<b>Non-Solar</b>									
Reliance Innoventure	6.50	2.48%	5.00	17.80	36.20%	15.83	33.69%	11.47	34.77%
AAA Sons Enterprise	0.25	0.10%	5.00	0.46	0.93%	0.47	1.00%	0.29	0.87%
Vector Green Energy Pvt Ltd	2.62	1.00%	5.00	7.59	15.44%	7.57	16.10%	5.21	15.79%
Vector Green Energy Pvt Ltd	0.92	0.35%	5.07	2.31	4.71%	2.26	4.81%	1.52	4.59%
Tembhu Power Pvt. Ltd.	0.71	0.27%	4.26	0.00	0.00%	0.00	0.00%	0.00	0.00%
Reliance Clean Power Pvt. Ltd.	6.07	2.32%	5.81	16.28	33.10%	16.90	35.97%	10.97	33.26%
Non-Solar New Sources	200.98	76.73%	2.87	0.00	0.00%	0.00	0.00%	0.00	0.00%
Mini/Micro hydro	1.71	0.65%	5.64	0.00	0.00%	0.00	0.00%	0.00	0.00%
<b>Total RE Power</b>	<b>261.94</b>	<b>100.0%</b>	<b>3.19</b>	<b>49.17</b>	<b>100.0%</b>	<b>46.99</b>	<b>100.0%</b>	<b>32.99</b>	<b>100.0%</b>
<b>APPC</b>		<b>3.19</b>		<b>5.78</b>		<b>5.74</b>		<b>5.84</b>	

4.28 As can be seen from above Table, there is a substantial variation in actual power purchase quantum from various RE sources within the months. Further, the weighted average power purchase cost (Rs./kWh) is arrived by considering the percentage share of each source and its corresponding approved energy charges. **Therefore, when the quantum and hence, % share of costlier approved sources in the overall RE portfolio is higher, the weighted average power purchase cost (Rs./kWh) has driven towards approved price of costlier sources and vice-versa.**

#### **Bilateral Power:**

4.29 With regards to bilateral power, AEML-D has purchased it mainly from IEX, Adani Enterprises Limited (AEL) and Arunachal Pradesh Power Corporation Private Limited (APPCPL). **AEML-D has purchased 397.16 MU, 386.50 MU and 393.13 MU of bilateral power during the respective months of Q2 of FY 2019-20.** The APPC from bilateral sources were Rs. 3.97/kWh, Rs. 4.01/kWh, and Rs. 3.53/kWh during the above period.





- 4.30 The Commission has asked AEML-D to confirm if it has procured the bilateral power through competitive bidding process. In its reply, AEML-D stated that it has purchased short-term/ bilateral power either through competitive bidding via DEEP e-portal or Power Exchange or through day ahead exchange linked contracts. AEML further clarified that power procured through exchange linked contracts on day ahead basis is at a rate lower than the rates discovered in IEX. It further stated that through such contracts, trading margin of IEX is also saved. AEML-D has also submitted sample exchange linked contracts and sample firm contracts of short-term purchase through DEEP e-portal.
- 4.31 It is observed that the Commission in its MTR Order has not considered any quantum and amount with regards to short term power purchase, as the entire demand of FY 2019-20 would have been considered to be met through projected sources of power inclusive of new solar and non-solar sources. However, AEML-D in its separate Petition had contended before the Commission that for procurement of power from new RE sources through competitive bidding as per guidelines of Central Government, it will take at least 18-20 months for actual realisation of RE power. Till that time, energy which is projected to be procured from RE sources will need to be sourced through other short-term sources. The Commission vide its Order dated 1 January, 2019 in Case No. 335 of 2019 considered the submissions of AEML-D and allowed them to meet shortfall in energy on account of non-availability of RE sources from other short term sources with the ceiling rate for purchase of short-term power at Rs. 5.00/kWh. **Considering that the short-term power has been procured through competitive bidding or through exchange and the price of which is also within the ceiling rate approved by the Commission, same has been considered as submitted by AEML-D.**

#### **Banking Cost:**

- 4.32 AEML-D has entered into a banking contract from October 2018 onwards. As per the contract, there was receipt of energy with AEML-D in the months of October 2018 to March 2019, which has been returned to banking partner during the period from July 2019 to September 2019. For this transaction the actual payment or incurrence of cost will happen in the period when the energy is returned by AEML-D to the banking partner, i.e., during July, 2019 to September, 2019. Accordingly, AEML-D has considered the banking cost in July, 2019 to September, 2019.
- 4.33 The Commission has asked AEML-D to submit the details of banking cost as considered in present quarter. AEML-D submitted the details as shown in Table below:



Source of Banking	Banked Energy for FY 18-19 at G-T (MU)	Rate as per LoI (Rs./kWh)	Cost (Rs. Crore)
MPL	194.00	3.79	73.526
BRPL	65.00	3.79	24.632
APPCPL	243.00	3.79	92.097
<b>Total</b>	<b>502.00</b>		<b>190.258</b>

4.34 From the above Table, **the total cost of banking is Rs. 190.26 Crore at a price of Rs. 3.79/kWh. It is to be noted that out of this cost, AEML-D has already considered Rs. 115.80 Crore in previous quarter, hence, the balance, i.e., Rs. 74.46 Crore (Rs. 24.82 Crore per month) is being considered in present quarter.**

4.35 Further, the Commission is of the view that energy banking transaction should benefit the end consumers by bringing down the average power purchase cost of AEML-D. The Commission observed that in FY 2018-19, AEML-D had to rely on short-term/Power Exchanges to meet its power purchase quantum, due to significant reduction in generation of VIPL-G. During FY 2018-19, **AEML-D has purchased power at average rate of Rs. 4.60 per unit from IEX. As compared to this, the price at which banked energy returned is Rs. 3.79/kWh. Further, considering the banking OA charges, the per unit cost of the banking transaction works out to Rs. 4.10/kWh.** From the above, it can be concluded that the banking transaction made by AEML-D in FY 2018-19 for which the cost is booked in FY 2019-20 is a beneficial transaction since the energy rate for the return banking transaction is lower than the IEX rate in that year. However, the Commission feels that the energy rate of Rs. 4.10/kWh for the return banking transaction is still on a higher side and **AEML-D needs to further evaluate its banking arrangements with the contracted parties in order to further bring down the cost of banking transactions.**

#### **Standby Power:**

4.36 AEML-D has a stand-by arrangement with MSEDCL to supply standby power in the event of outage or non- availability or constrained availability of any of their contracted/ scheduled generation regardless if it is planned or forced. During the present quarter, **AEML-D has purchased standby power of 0.45 MU and 3.55 MU in the months of July and September 2019, respectively, due to unplanned outage of ADTPS.** The Table below provides details of standby power purchase during Q2 period:



Month	Standby Power Scheduled (MU)	Clarification for Standby Scheduled	Amount (Rs. Crore)
July 2019	0.45	DTPS U-2 tripped on 17 July 2019 due to Boiler furnace pressure disturbance	0.18
September 2019	3.55	23 September 2019: Due to delay in synchronization of DTPS U-1 under outage 27 September 2019: DTPS U-1 tripped on flame failure	1.42

4.37 The Commission sought for the actual bills for the above standby power purchase. In its response, AEML-D stated that MSEDCL bills the Standby power based on FBSM bills, but since the FBSM bill for the period after March, 2018 is not issued, the invoices for supply of standby power for Q2 of FY 2019-20 have not been received from MSEDCL yet. Hence, the cost of standby power has been booked on provisional basis.

4.38 Further, it was observed that AEML-D has considered some adjustment towards standby charges of previous year amounting to Rs. (0.08) Crore mainly in the month of August, 2019. AEML-D vide its data gap reply clarified that it had availed standby energy in March, 2016 and April, 2016 against which it had booked cost of Rs. 0.50 Crore on provisional basis. Subsequently, in August, 2019 AEML-D has received two bills from MSEDCL for standby energy scheduled in aforementioned period, i.e., in March 2016 and April 2016 amounting to Rs. 0.51 Crore. However, AEML-D disputed the rate charged by MSEDCL and has paid Rs. 0.42 Crore only. Hence, excess provision made earlier was reversed in August 2019, amounting to Rs. (0.08) Crore and the same has been passed through to consumers in the FAC of August, 2019. AEML-D has submitted the actual bills received along with the reconciliation of Rs. (0.08) Crore as shown in Table below:

Stand-by Energy prior period bills adjusted in Aug 2019						
Details	Provisional Qty (kWh)	Provisional Cost (Rs.)	Actual Qty (kWh)	Bill Amt (Rs.)	Bill Amt accepted by AEML (Rs.)	Diff Amt (Rs.)
May-17	7,00,000	28,00,000	7,00,000	24,02,960	24,02,960	(3,97,040)
Jun-17	5,50,000	22,00,000	5,50,000	27,05,058	18,23,800	(3,76,200)
Total	12,50,000	50,00,000	12,50,000	51,08,018	42,26,760	(7,73,240)

4.39 The Commission in line with the previous approach as considered the stand-by charges as submitted by AEML-D



### **FBSM/Imbalance Pool:**

- 4.40 The Commission observed that AEML-D has not considered any pool quantum and cost in FAC computation as the same being on provisional basis was disallowed by the Commission in previous post facto approvals (Q1 of FY 2018-19). However, AEML-D in its earlier submission (Q2 of FY 2018-19) has requested to consider these provisional entries as UI power is actually consumed and the rates of which are normally lower as compared to other sources of power. Thus, consideration of the same reduces the average power purchase cost and correspondingly reduce FAC burden on consumers. Accordingly, on request of licensee and also to avoid FAC burdens on consumers, the Commission has considered the power purchase quantum as well as the cost towards imbalance pool on provisional basis in post-facto approval of FY 2018-19.
- 4.41 In present approval as well, the Commission has continued with the same approach as adopted in previous post-facto approvals and has considered imbalance power purchase quantum as well as the cost on provisional basis. However, Utility is requested to expedite the FBSM settlement process and submit the actual bills with adjustments, if any, promptly. Further, it is to clarify that AEML-D should not treat the Imbalance Pool mechanism as a source of procuring power. It is only meant for settling the deviations in the real-time power interchange between various pool participants. Therefore, AEML-D is required to carry out due diligence of its Power procurement plans in such a way to minimise quantum of purchase from Imbalance Pool.

### **WRPC DSM Charges:**

- 4.42 Further, it was observed that **AEML-D has considered WRPC charges of Rs. 4.55 Crore and Rs. 0.48 Crore, respectively, in the month of July and August, 2019.** AEML-D has submitted the actual bills. The same has been verified and found to be in order.

### **Other Charges:**

- 4.43 It was observed that AEML-D has considered other charges of Rs. 41.92 Crore in the month of September 2019. In response to clarification sought, **AEML-D stated that Rs. 41.92 Crore is considered on account of payment made to TPC-G towards Additional Energy Charges (AEC) as per the judgment of the Hon'ble Supreme Court in CIVIL APPEAL NO(S). 4161/2008, dated 23 July 2019.** AEML-D submitted the details for aforesaid payment as provided below:

<b>Particular</b>	<b>Basis</b>	<b>Amount (Rs. Crore)</b>
Gross amount payable	a	34.98
Interest	b	31.94



Particular	Basis	Amount (Rs. Crore)
Deposit with TPC	c	25.00
<b>Net amount payable</b>	<b>d=a+b-c</b>	<b>41.92</b>

### Surplus Sale:

4.44 Further, there was no surplus power available with AEML-D during Q2 of FY 2019-20, hence, **no surplus sale has been done in present quarter.**

### Summary:

4.45 Based on above, on an overall basis the key reasons for variation in average power purchase cost is due to **increase in washed and imported coal prices as compared to MTR approved price, impact of full monthly fixed charge payment over lower net generation due to lower PLF, absence of cheaper new sources of RE power in overall RE portfolio, no surplus sale, consideration of cost and quantum for imbalance pool, standby power purchase and banking cost** incurred during respective period.

4.46 The Table below shows the comparison of the power purchase cost claimed by AEML-D-D and as approved by the Commission for Q2 of FY 2019-20:



Source of Power Purchase	July 2019			August 2019			September 2019		
	Net Purchase	Power Purchase Cost	Average power purchase cost	Net Purchase	Power Purchase Cost	Average power purchase cost	Net Purchase	Power Purchase Cost	Average power purchase cost
	MU	Rs. Crore	Rs./kWh	MU	Rs. Crore	Rs./kWh	MU	Rs. Crore	Rs./kWh
<b>Power Purchase Cost claimed by AEML-D</b>									
ADTPS	270.44	128.97	4.77	279.11	131.23	4.70	237.5599	120.83	5.09
RE Power	49.28	28.48	5.78	47.06	27.02	5.74	32.92	19.23	5.84
VIPL-G	(0.54)	(0.42)	7.75	(0.50)	(0.39)	7.75	(0.49)	(0.38)	7.75
Bilateral	397.16	182.58	4.60	386.50	179.87	4.65	393.13	163.74	4.17
Other Sources* (FBSM/Standby)	0.45	4.73	104.17	0.00	0.40	-	3.55	43.34	122.17
<b>Total power purchase claimed</b>	<b>716.79</b>	<b>344.35</b>	<b>4.80</b>	<b>712.17</b>	<b>338.14</b>	<b>4.75</b>	<b>666.67</b>	<b>346.76</b>	<b>5.20</b>
<b>Power Purchase Cost approved by the Commission</b>									
ADTPS	270.44	128.97	4.77	279.11	131.23	4.70	237.5599	120.83	5.09
RE Power	49.17	28.43	5.78	46.99	26.98	5.74	32.99	19.27	5.84
VIPL-G	(0.54)	(0.42)	7.75	(0.50)	(0.39)	7.75	(0.49)	(0.38)	7.75
Bilateral	397.16	182.58	4.60	386.50	179.87	4.65	393.13	163.74	4.17
Other Sources* (FBSM/Standby)	102.05	44.14	4.33	95.75	37.54	3.92	91.10	77.30	8.48
<b>Total power purchase approved</b>	<b>818.28</b>	<b>383.70</b>	<b>4.69</b>	<b>807.85</b>	<b>375.24</b>	<b>4.64</b>	<b>754.29</b>	<b>380.75</b>	<b>5.05</b>



4.47 The Commission thus allows the APPC of **Rs. 4.69/kWh, Rs. 4.64/kWh, and Rs. 5.05/kWh** for the months of July, August and September, 2019, as shown in the Tables above.

**5. FAC on account of fuel and power purchase cost (F)**

5.1 The Commission has worked out the average power purchase costs for the months as shown in above Tables. The same has been compared with the average power purchase cost approved by the Commission in Tariff Order (MTR) dated 12 September, 2018 for the months of July to September, 2019 and arrived at differential per unit rate at which  $Z_{FAC}$  is to be passed on to the consumers.

5.2 The following Table shows the  $Z_{FAC}$  worked out by the Commission on account of difference in fuel and power purchase cost for the months of July to September, 2019.

S. No.	Particulars	Units	July 2019	Aug 2019	Sept 2019
1	Average power purchase cost approved by the Commission*	Rs./kWh	4.04	4.04	4.04
2	Actual average power purchase cost	Rs./kWh	4.69	4.64	5.05
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.65	0.61	1.01
4	Net Power Purchase	MU	818.28	807.85	754.29
<b>5</b>	<b>Change in fuel and power purchase cost (=3 x 4/10)</b>	<b>Rs. Crore</b>	<b>53.23</b>	<b>48.98</b>	<b>76.13</b>

\*As per MTR Order dated 12 September, 2018

**6. Adjustment for over recovery/under recovery (B)**

6.1 The adjustment factor for over recovery/under recovery for Q2 of FY 2019-20 is computed as below:

S. No.	Particulars	Units	July 2019	Aug 2019	Sept 2019
1.1	Incremental cost allowed to be recovered in Month n-4	Rs. Crore	53.47*	62.40*	70.57
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	36.41	36.37	35.00
1.3	Over-recovery/under-recovery (1.2 – 1.1)	Rs. Crore	17.06	26.03	35.57
<b>2.0</b>	<b>Net Adjustment factor for over-recovery/under-recovery</b>	<b>Rs. Crore</b>	<b>17.06</b>	<b>26.03</b>	<b>35.57</b>
2.1	Amount of adjustment facto not considered for carrying cost computation	Rs. Crore	11.97	21.74	33.42





S. No.	Particulars	Units	July 2019	Aug 2019	Sept 2019
2.2	Adjustment factor for carrying cost computation	Rs. Crore	5.08	4.29	1.95

*\*taken as per previous post facto approval*

6.2 Adjustment factor pertains to any under-recovery or over-recovery of FAC amount associated with previous months. AEML-D while working out the adjustment factor has considered the incremental cost allowed to be recovered as per its own FAC computation of previous quarter. However, the Commission has considered the respective values as per the post facto approval of previous quarter.

6.3 It was observed that adjustment factor as computed above is very high. This is mainly because AEML-D in previous quarter has restricted the per unit FAC to be leviable at Rs. 0.50/kWh. AEML-D in present quarter also has undertaken the same approach. The reason for such restriction as stated by AEML-D is mainly to avoid Tariff shock to the consumers. Further, **even though AEML-D has voluntarily charged the FAC lower than the FAC allowed to be recovered, it has not considered the carrying cost on the amount not recovered due to application of ceiling of Rs. 0.50/kWh. As it does not have any financial implication on consumers, the Commission has considered the same approach as adopted by AEML-D while calculating FAC for Q2 of FY 2019-20.**

## 7. Carrying Cost for over recovery/under recovery (B)

7.1 Carrying/ Holding cost for under/ over recovery has been granted at approved interest rate for the eligible amount. The following Table shows the month wise interest rate and amount worked out as Carrying/ Holding cost for under/ over recovery for the months of July to September, 2019.

Month	July 2019	Aug 2019	Sept 2019
Adjustment Factor for carrying cost (Rs. Crore)	5.08	4.29	1.95
Applicable Interest Rate	9.95%	9.75%	9.65%
Carrying/ Holding cost for under/ over recovery (Rs. Crore)	0.08	0.07	0.03

## 8. Disallowance due to excess Distribution Loss

8.1 Regulation 10.8 of MYT Regulations, 2015 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 ZFAC 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 ZFAC 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 distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of ZFAC corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total ZFAC recoverable”*

8.2 The following Table provides the comparison of approved and actual distribution loss and disallowance due to excess distribution loss if any.

S. N o.	Particulars	Units	Approved in MTR Tariff Order	Cumulative up to		
				July 2019	Aug 2019	Sept 2019
1	Net Energy Input at Distribution Voltages for own sales	MU	9,947.90	3499.18	4312.00	5068.92
2	Own Energy sales at Distribution voltages	MU	8,887.41	3179.01	3913.13	4628.59
3	Distribution Loss (1 – 2)	MU	1,060.49	320.17	398.87	440.33
4	Distribution Loss as % of net energy input (3/1)	%	<b>10.66%</b>	<b>9.15%</b>	<b>9.25%</b>	<b>8.69%</b>
5	Excess Distribution Loss =[Actual Distribution Loss (4) – Distribution loss approved] x Net Energy Input (1)	MU	-	-	-	-
6	<b>Disallowance of FAC due to excess Distribution Loss</b>	<b>Rs. Crore</b>	-	-	-	-

8.3 As seen from the above Table, cumulative distribution loss for the months of Q2 of 2019 is lower than the approved distribution losses of 10.66%. Accordingly, no deductions have been made on account of excess distribution loss for the month of July to September, 2019.



## 9. Summary of Allowable Z<sub>FAC</sub>

9.1 The summary of the FAC amount as approved by the Commission for the month of July to September, 2019 which is allowed to be recovered in the billing month of September, 2019 to November, 2019 is as shown in the Table below.

S. No.	Particulars	Units	July 2019	Aug 2019	Sept 2019
<b>1.0</b>	<b>Calculation of ZFAC</b>				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	53.23	48.98	76.13
1.2	Carrying cost for over-recovery/under-recovery ©	Rs. Crore	0.08	0.07	0.03
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	17.06	26.03	35.57
<b>1.4</b>	<b>ZFAC = F+C+B</b>	<b>Rs. Crore</b>	<b>70.38</b>	<b>75.08</b>	<b>111.53</b>
<b>1.5</b>	Amount of instalment as per previous vetting report	Rs. Crore			
<b>2.0</b>	<b>Calculation of FAC Charge</b>				
2.1	Energy Sales within the License Area	MU	739.01	734.12	715.46
2.2	Excess Distribution Loss	MU	0.00	0.00	0.00
2.3	ZFAC per kWh	Rs./kWh	0.95	1.02	1.56
2.4	Cap at 20% of variable component of tariff	Rs./kWh	1.29	1.29	1.29
2.5	FAC Charge allowable (Minimum of 2.3 and 2.4)	Rs./kWh	0.95	1.02	1.29
2.6	FAC Charge considered for billing	Rs./kWh	0.50	0.50	0.50
<b>3.0</b>	<b>Recovery of FAC</b>				
3.1	Allowable FAC [(2.1 x 2.5)/10]	Rs. Crore	36.95	36.71	35.77
3.2	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.5)/10]	Rs. Crore	0.00	0.00	0.00
<b>4.0</b>	<b>Total FAC based on category wise and slab wise allowed to be recovered</b>	<b>Rs. Crore</b>	<b>36.95</b>	<b>36.71</b>	<b>35.77</b>
4.1	Carried forward FAC for recovery during future period (3.1-3.2-4.0)	Rs. Crore	33.42	38.38	75.76

9.2 It can be seen from the above Table that standalone FAC for the months of July, August and September, 2019 is Rs. 70.38 Crore, 75.08 Crore, and Rs. 111.53 Crore, respectively. Based on total energy sales, FAC per unit has been worked out as Rs. 0.95/kWh, Rs. 1.02/ kWh, and Rs.1.56/kWh for the months of July, August and September, 2019, respectively, which



is observed very high as compared to previous quarter. However, as against the above AEML-D in its initial FAC submission of Q2 of FY 2019-20 has worked out standalone FAC as Rs. 73.00 Crore, Rs. 78.73 Crore, and Rs. 115.55 Crore for the months of July, August and September, 2019, respectively. The FAC per unit rate as worked out by AEML-D was Rs. 0.99/kWh, Rs. 1.07/kWh and Rs. 1.62/kWh for the months of July, August and September, 2019, respectively. Further, the Regulation 10.9 of MYT Regulations, 2015 specifies as:

*Provided that the monthly ZFAC 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:*

- 9.3 Thus, from above the FAC per unit mainly for the month of September, 2019 is above the ceiling limit (Rs. 1.29/kWh). Hence, restriction is triggered with regards to such ceiling for the months September, 2019. However, as mentioned in paras above that AEML-D has applied a ceiling of Rs. 0.50/kWh for all the months of quarter 2. In response to query, AEML-D stated that charging such high per unit FAC, would subject the consumers to significantly high electricity bills. Hence, to avoid tariff shock to consumers, it has charged Rs. 0.50/kWh the months from July 2019 to September 2019. The remaining amount has been considered as carry forward FAC for next billing period. Further, **AEML-D has not considered any carrying cost on this carry forward FAC**. Similar methodology was also adopted by AEML-D during previous year too when the FAC rate were very high.
- 9.4 AEML-D further stated that it has submitted revised submission of FAC for Q1 to Q3 of FY 2019-20 along with Q4 of FY 2019-20, wherein it has re-worked FAC by adopting the same principle as adopted by the Commission in the recent MYT Order dated 30 March, 2020 (Case No.325 of 2019). Accordingly, while the quantum of Imbalance Pool, standby charges etc., is considered in revised FAC submission, the cost against the same is excluded in line with the methodology adopted by the Commission in provisional truing up of FY 2019-20. AEML-D stated that the above approach has resulted into a refund of Rs.(160.89) Crore for the entire period of FY 2019-20. AEML-D has proposed to utilise the same against the FAC Corpus fund of Rs. 110 Crore as approved in the MYT Order in Case No. 325 of 2019 and the balance surplus of Rs. 50.89 Crore may be considered as credit FAC to be passed on as a refund to consumers.
- 9.5 The Commission has already dealt with the above issue in previous quarter FAC approval. Hence, **in present FAC approval the Commission has continued with the approach as adopted in previous quarter post facto FAC approval**. Further, **with regard to the FAC ceiling of Rs.0.50/kWh, the Commission has considered the same as long as it does not have any financial impact on the consumers. However, AEML-D is hereby directed that for the future billing cycle, it should not deviate from the FAC levy principles as specified in the MYT Regulations. Any deviation from FAC principles/procedure must**



**be intimated to the Commission and the licensee shall accordingly seek prior approval of the Commission against the same.**

- 9.6 Based on above, it was analysed that AEML-D was to recover Rs. 186.62 Crore (inclusive FAC carry forward) cumulatively for the last two months of quarter. However, against this AEML-D has actually worked out FAC (inclusive of carry forward) as Rs. 194.28 Crore. Hence, there is an over-recovery of amount Rs. 7.66 Crore (i.e., Rs. 194.28 Crore minus Rs. 186.62 Crore). **Therefore, AEML-D is required to re-fund additional FAC of Rs. (7.66) Crore to consumers. However, as FY 2019-20 is already over, therefore, above adjustment will be rolled over in next FAC approvals (i.e., FAC of Q3 of FY 2019-20) and finally would be adjusted in the final True up of FY 2019-20.**

## **10. Recovery from Consumers:**

- 10.1 Regulation 10.9 of MERC MYT Regulations, 2015 provides for methodology of recovery of FAC charge from each category of consumers. The relevant extract is reproduced as below.

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

*ZFAC Cat (Rs/kWh) = [ZFAC / (Metered sales + Unmetered consumption estimates + Excess distribution losses)] \* k \* 10,*

*Where:*

*ZFAC Cat = ZFAC 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 ZFAC 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 ZFAC 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....”*

10.2 The Commission has worked out FAC per unit for each category of consumer based on the formula provided in the above Regulations. The Commission observed that there is a variation of Z<sub>FAC</sub> in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the months of July to September, 2019.

10.3 The variation in FAC in absolute terms is due to formula error of Z<sub>FAC</sub> computed on per unit basis. The variation however is taken care in the adjustment factor of subsequent months.

10.4 The following Table shows per unit Z<sub>FAC</sub> for the month of July to September, 2019 to be charged to the consumers of AEML-D for the billing month of September to November, 2019.

**FAC for Billing Month of September to November, 2019**

S.No.	Consumer Categories	Slabs	ZFAC to be levied in billing month of		
			Sept'19	Oct'19	Nov'19
			Rs./kWh	Rs./kWh	Rs./kWh
(A)	<b>LT Category</b>				
1	LT I - Below Poverty Line	0-30	0.2750	0.2750	0.2750
2	LT -I Residential (Single Phase)				
		0-100	0.2915	0.2915	0.2915
		101-300	0.5144	0.5144	0.5144
		301-500	0.5749	0.5749	0.5749
		500 and above	0.6723	0.6723	0.6723
3	LT -I Residential (Three Phase)				
		0-100	0.2903	0.2903	0.2903
		101-300	0.4730	0.4730	0.4730
		301-500	0.5478	0.5478	0.5478
		500 and above	0.6423	0.6423	0.6423
4	LT II : LT - Non - Residential or Commercial				



S.No.	Consumer Categories	Slabs	ZFAC to be levied in billing month of		
			Sept'19	Oct'19	Nov'19
			Rs./kWh	Rs./kWh	Rs./kWh
		0-20 kW	0.5650	0.5650	0.5650
		20-50 kW	0.6000	0.6000	0.6000
		above 50 kW	0.6150	0.6150	0.6150
5	LT III (A) - LT Industrial	upto 20 kW	0.5150	0.5150	0.5150
6	LT III (B) - LT Industrial	above 20 kW	0.5600	0.5600	0.5600
7	LT IV : LT- Public Water Works	all units	0.5150	0.5150	0.5150
8	LT V : LT- Advertisements and Hoardings	all units	0.6500	0.6500	0.6500
9	LT VI: LT -Street Lights	all units	0.5250	0.5250	0.5250
10	LT VII (A): LT -Temporary Supply Religious	all units	0.4600	0.4600	0.4600
11	LT VII (B): LT -Temporary Supply Others	all units	0.6450	0.6450	0.6450
12	LT VIII: LT - Crematorium & Burial Grounds	all units	0.4000	0.4000	0.4000
13	LT IX (A) : LT -PS - Govt. Hospitals & EI	all units	0.4700	0.4700	0.4700
14	LT IX (B) : LT -PS – Others	all units	0.4900	0.4900	0.4900
15	LT X (A) : LT - Agriculture Pumpsets	all units	0.3350	0.3350	0.3350
16	LT X (B) : LT - Agriculture Others	all units	0.4250	0.4250	0.4250
17	LT IX : LT - EVCS	all units	0.3503	0.3503	0.3503
<b>(B)</b>	<b>High Tension – HT</b>				
18	HT I: HT-Industry	all units	0.5700	0.5700	0.5700
19	HT II : HT- Commercial	all units	0.6200	0.6200	0.6200
20	HT III: HT-Group Housing Society	all units	0.5550	0.5550	0.5550
21	HT IV : HT - Public Water Works	all units	0.5150	0.5150	0.5150
22	HT V (A) - HT Metro & Monorail	all units	0.4211	0.4211	0.4211
23	HT V (B) - HT Metro & Monorail	all units	0.5100	0.5100	0.5100
24	HT VI (A) : HT - PS - Govt. Hospitals & EI	all units	0.5300	0.5300	0.5300
25	HT VI (B) : HT - PS – Others	all units	0.5850	0.5850	0.5850
26	HT VII - Temporary Supply	all units	0.5800	0.5800	0.5800
27	HT VIII - HT - EVCS	all units	0.3531	0.3531	0.3531

## 11. Summary:



11.1 The Table below shows the summary of FAC claimed by AEML-D vis-à-vis approved by the Commission for Q2 of FY 2019-20:

Particular	Month	Claimed	Approved	Remarks
FAC (Rs. Cr.)	July 2019	36.95	36.95	For Q2 of FY 2019-20 (Rs. 186.62 Cr.- Rs. 194.28 Cr.) =Rs. (7.66) Cr. refundable
	August 2019	36.71	36.71	
	September 2019	35.77	35.77	
Carried forward FAC (Rs. Cr.)	July 2019	36.05	33.42	
	August 2019	42.02	38.38	
	September 2019	79.78	75.76	
<b>Total FAC (Rs Cr.)</b>	<b>July 2019</b>	<b>73.00</b>	<b>70.38</b>	
	<b>August 2019</b>	<b>78.73</b>	<b>75.08</b>	
	<b>September 2019</b>	<b>115.55</b>	<b>111.53</b>	
FAC per Unit	<b>July 2019</b>	<b>0.50</b>	<b>0.50</b>	
	<b>August 2019</b>	<b>0.50</b>	<b>0.50</b>	
	<b>September 2019</b>	<b>0.50</b>	<b>0.50</b>	

11.2 AEML-D was to recover Rs. 186.62 Crore (inclusive of carry forward) cumulatively for the last two months of quarter against this AEML-D has actually worked out FAC (inclusive of carry forward) as Rs. 194.28 Crore. Hence, there is an over-recovery of amount Rs. 7.66 Crore. Therefore, AEML-D is required to re-fund additional FAC of Rs. (7.66) Crore to consumers. However, as FY 2019-20 is already over, therefore, above adjustment will be rolled over in next FAC approvals (i.e., FAC of Q3 of FY 2019-20) and finally would be adjusted in the final True up of FY 2019-20.

