



महाराष्ट्र विद्युत नियामक आयोग Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/20182019/1265

Date: 24 October, 2018

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 January, 2018 to March, 2018.

Reference: 1. RInfra-D's FAC submission vide letter dated 24 May, 2018 for post-facto approval of FAC for the period from January, 2018 to March, 2018.
2. Replies to Data Gaps received on 5, 17 and 18 October, 2018

Sir,

Upon vetting the FAC calculations for the months of January, 2018 to March, 2018 as mentioned in the above reference, the Commission has accorded post facto approval to Adani Electricity Mumbai Limited (AEML) (formerly RInfra-D) for charging FAC to its consumers as shown in the Table below:

Month	January 2018	February 2018	March 2018
FAC allowed (Rs. Crore)	29.90	28.31	29.97

AEML is allowed to recover Rs. 28.34 Crore along with interest from the consumers in the next FAC billing cycle. This is on account of correction in power purchase expenses and its impact on adjustment factor, carrying cost, etc as explained in para 9.4 of this Vetting Report.

The above approval of FAC is subject to final True up of FY 2017-18 under the MERC (Multi Year Tariff) Regulations, 2015.

Yours faithfully,


(Dr. Rajendra Ambekar)
Executive Director, MERC

Encl: Annexure A: Detailed Vetting Report for the period of January, 2018 to March, 2018.

**POST FACTO APPROVAL FOR FAC CHARGES FOR THE MONTHS OF JANUARY,
2018 TO MARCH, 2018**

Subject: Post facto approval of AMEL's Fuel Adjustment Charges (FAC) for the period of January, 2018 to March, 2018.

Reference:

1. RInfra-D's FAC submission vide letter dated 24 May, 2018 for post-facto approval of FAC for the period from January, 2018 to March, 2018.
2. Replies to Data Gaps received on 5, 17 and 18 October, 2018

FAC submission by AMEL:

1.1 AMEL (formerly RInfra-D) has submitted FAC submissions for the months of January, 2018 to March, 2018 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by AMEL, the Commission has accorded post facto approval for the FAC amount to be charged in the billing months of March, 2018 to May, 2018.

2. Background

- 2.1 On 21 October, 2016, the Commission has issued Tariff Order for RInfra-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 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.
- 2.3 Vide FAC vetting Report dated 13 January, 2017, the Commission accorded prior approval to the FAC for the month of October, 2016.
- 2.4 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 24 May, 2018, RInfra-D has filed FAC submissions for the months of January, 2018 to March, 2018 for post facto approval. The Commission has scrutinized the submissions provided by RInfra-D and has also verified the fuel and 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 RInfra-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		
			Jan-18	Feb-18	Mar-18
			MU	MU	MU
	(I)	(II=I/12)	(III)	(IV)	(V)
Low Tension - LT					
LT I – BPL	0.02	0.00	0.00	0.00	0.00
LT -I Residential (Single Phase)					
0-100	1712.64	142.72	128.93	130.46	138.57
101-300	1110.85	92.57	60.03	67.63	95.63
301-500	194.23	16.19	5.21	7.24	15.99
500 and above	73.25	6.10	1.37	1.99	5.30
LT -I Residential (Three Phase)					
0-100	235.14	19.60	20.83	20.66	20.94
101-300	352.72	29.39	27.47	28.21	32.00
301-500	185.53	15.46	11.15	12.36	17.30
500 and above	352.08	29.34	24.11	24.95	33.37
LT II-Commercial					
LT II (a) - 0-20 kW	1720.60	143.38	134.14	137.08	154.77
LT II (a) TOD Option	0.00	0.00	0.01	0.01	0.01
LT II (b) - 20-50 kW	221.98	18.50	16.85	16.99	20.32
LT II (c) - above 50 kW	462.16	38.51	39.15	38.87	46.00
LT III - LT Industrial upto 20 kW	163.16	13.60	14.76	14.22	15.14
LT III(A) - LT Industrial upto 20 kW TOD Option	0.00	0.00	0.00	0.00	0.00
LT III(B) - LT Industrial above 20 kW	379.10	31.59	31.91	30.51	35.09
LT IV - Public Water Works	3.23	0.27	1.08	1.02	1.08
LT-V : LT- Advertisements and Hoardings	3.74	0.31	0.32	0.28	0.30
LT VI: LT -Street Lights	66.43	5.54	5.51	5.28	4.78
LT-VII (A): LT -Temporary Supply Religious	2.23	0.19	0.06	0.08	0.03
LT-VII (B): LT -Temporary Supply Others	81.48	6.79	1.16	1.33	1.05
LT VIII: LT - Crematorium & Burial Grounds	1.10	0.09	0.10	0.09	0.09
LT IX: LT -Public Service (A)	20.49	1.71	1.66	1.63	2.01
LT IX: LT -Public Service (B)	68.67	5.72	8.05	7.30	8.79
LT X (A) : LT - Agriculture Pumpsets	0.11	0.01	0.00	0.01	0.01
LT X (B) : LT -Others	0.00	0.00	0.01	0.01	0.02
HT Category					

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales		
			Jan-18	Feb-18	Mar-18
			MU	MU	MU
			(I)	(II=I/12)	(III)
HT 1 (Industrial)	363.22	30.27	24.97	23.78	28.34
HT 2 (Commercial.)	543.88	45.32	32.51	31.07	36.38
HT 3 (Group Housing Soc.)	50.93	4.24	2.86	2.75	3.46
HT 4 (Temporary Supply)	13.30	1.11	0.38	0.43	0.61
HT - Railways	15.96	1.33	2.24	2.10	2.54
HT - Public Services (A)	9.20	0.77	0.51	0.50	0.59
HT - Public Services (B)	95.06	7.92	5.86	5.90	7.13
HT - Public Water works	7.09	0.59	0.57	0.51	0.58
TOTAL	8509.17	709.10	603.76	615.25	728.19

3.2 It was observed that the total sale for January to February, 2018 is 603.76 MUs and 615.25 MUs respectively which is lower than that of the MYT approved monthly energy sales, i.e., 709.10 MUs. The major variation was observed in LT – I Residential, LT – II Commercial and in HT – I Industry and HT – II Commercial Categories. Further, the actual sales achieved during the month of March were slightly higher than that approved in the MYT Order.

4. Cost of Power Purchase

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

- Purchases from RInfra-G (DTPS)
- Purchase from other generating stations such as VIPL
- 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 January, 2018 to March, 2018 as compared to average power purchase cost approved in Tariff Order dated 21 October, 2016:

Particulars	Tariff Order Dated 21.10.2016			Actual for January, 2018		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
RInfra-G	3800.65	1566.90	4.12	176.21	91.96	5.22
RE Sources	275.15	345.43	12.55	9.63	7.71	8.00
VIPL-G	4059.71	1788.08	4.40	298.28	136.98	4.59

Particulars	Tariff Order Dated 21.10.2016			Actual for January, 2018		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
Bilateral/Traders	1700.62	533.95	3.14	149.83	61.29	4.09
Others	-	-	-	-0.73	-0.14	1.95
Total	9836.13	4234.36	4.30	633.23	297.79	4.70

Particulars	Actual for February, 2018			Actual for March, 2018		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
RInfra-G	239.11	116.79	4.88	311.83	145.08	4.65
RE Sources	10.83	8.22	7.58	14.22	10.31	7.25
VIPL-G	162.85	83.10	5.10	305.45	135.91	4.45
Bilateral/Traders	179.12	70.20	3.92	145.57	68.40	4.70
Others	4.22	4.30	10.17	-0.34	-2.73	79.54
Total	596.14	282.60	4.74	776.72	356.97	4.60

4.3 RInfra-D has procured power under its long-term arrangement (Order dated 8 February, 2018 in Case No. 5 of 2017) with RInfra-G (DTPS) and with Vidarbha Industries Power Ltd.-Generation (VIPL-G). After accounting for the availability from long-term sources, the shortfall against power requirement was met by purchase from contracted short-term sources and from the Power Exchanges. RInfra-D has also contracted Renewable Energy (RE) power from different sources for meeting the Renewable Purchase Obligation (RPO) specified by the Commission. The surplus power available at different times was also sold through the Power Exchanges. The shortfall in requirement due to lower generation from DTPS and VIPL is met through off-take (decrement) from the Imbalance Pool.

4.4 The Commission has sought detailed bills/invoices for all of the power purchase sources in order to verify the claim of RInfra-D with regards to average power purchase cost for the months of January to March, 2018. 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.



- 4.5 With regards to DTPS (own generation), it was observed that the average power purchase price claimed by RInfra-D for January, February and March, 2018 is Rs. 5.22 /kWh, Rs. 5.02 /kWh and Rs. 4.75 /kWh respectively against approved price of Rs. 4.12/kWh in the MYT Order. However, the Commission has approved the average power purchase cost as Rs.5.22 /kWh, Rs. 4.88/ kWh and Rs. 4.65 /kWh, the detailed reasoning of the same are provided in the following para's.
- 4.6 For the month of January, 2018 it was observed that the plant availability was 58.12% and PLF was around 52.75%. This has led to lower net generation as compared to other months of Q4. It was clarified in response to data gap query that the lower availability was due to annual over-hauling of Unit 2 from 6 January to 8 February, 2018. Even though the PLF was lower for the above month, the entire monthly fixed cost was payable as the cumulative plant availability was above the normative availability of 85% in line with Regulations 48.3 of MYT Regulations, 2015. This has resulted into fixed cost spread over lower net generation increasing the average power purchase price from this Unit and thus impacting the APPC.
- 4.7 The variation in APPC from that approved in MYT Order is also on account of steep increase in the price of fuel during the respective months. DTPS uses both Domestic (washed) and imported coal for its generation. The landed cost of washed coal claimed by RInfra-G for the month of January to March, 2018 is Rs. 5088/MT, Rs. 5059/MT and Rs.5062 /MT respectively which is around 10% to 12% higher than that of MYT approved value of Rs. 4563/MT. The landed cost of imported coal claimed by RInfra-G for the month of January to March, 2018 is Rs.5677/MT, Rs. 6494/MT and Rs.6376/MT respectively, which is around 8% to 10% higher mainly in the months of February and March, 2018 than that of MYT approved cost of Rs. 5896/MT.
- 4.8 The Commission enquired if the imported coal has been procured through competitive bidding. In response to this RInfra stated that for the months of January to March, 2018, imported coal was purchased through the international competitive bidding process. Notice Inviting Tender (NIT) was floated for selection of vendor for supply of coal of Indonesian Origin on CFR (Cost and Freight) Basis, Dahanu Anchorage, Maharashtra, India to Reliance Infrastructure Limited through International Competitive Bidding on Long Term basis
- 4.9 The Commission scrutinised the sample bills with respect to washed coal for January, February and March, 2018 provided by DTPS for ascertaining the coal price increase.
- 4.10 With regards to imported coal, the Commission has observed that the price of imported coal in international market has increased significantly and the coal index for the Indonesian coal was almost at its peak in these months. Due to this there is a rise in the landed cost of coal.
- 4.11 Further, the increase in the landed cost of coal mainly in the month of February and March, 2018 is also on account of inclusion of the total Cost Recovery Charges of Rs.5.88



crores levied by Principal Commissioner of Customs (Preventive) in the other cost of fuel expenditure. The Commission has sought the challans and supporting documents against such a payment which RInfra has provided. However, the Commission in the MTR Order dated 12 September, 2018 in Case No. 202 of 2017 has held that the cost levied by the by Principal Commissioner of Customs (Preventive) are fixed charges which is not directly dependent on the quantum of coal to be imported from the Dahanu Port and cannot be included in the fuel charges. Further, it was directed that this charge be included in the O&M expense as separate cost for FY 2017-18 and submit the same during Truing up of FY 2017-18. It was also directed to exclude these charges from the FAC. Accordingly, the Commission has excluded the cost recovery charges of Rs.5.88 crores as part of other charges in the fuel expenditure and recalculated the landed fuel cost of imported coal as Rs. 5704/MT and Rs. 5670/MT for the month of February and March, 2018 respectively. Based on this recalculated coal price, the Commission has recomputed the energy charges.

4.12 With regards to GCV of fuel, DTSPS has considered GCV "as fired" based on the weighted average GCV of fuel received and the Commission has considered the same in line with the MYT Regulation, 2015. However, the Commission has observed the Grade Slippage during the months of Q4 of FY 2017-18. The Commission has asked for the impact of Grade Slippage on FAC along with the credit /debit note if any claimed by RInfra-G. In response to this RInfra Stated that, there is both Grade Slippage and Grade Improvement based on the third party sampling and analysis of coal which is carried on a daily basis by Central Institute of Mining and Fuel Research (CIMFR). RInfra has provided snapshot of CIMFR dashboard showing the sampling date, quantity, Grade and GCV as per SECL and CIMFR respectively and expected Credit/Debit amount for the months of January to March, 2018. As per details submitted there is both grade slippage as well as grade improvement and consequently there are both credits and debits. Results are disputed by RInfra-G and SECL on a case to case basis. However, these are ongoing and accordingly final debit / credit for this period is not done by SECL unless the disputes are settled. Further, RInfra-G stated that whenever the disputes are settled and final debit / credit invoice is raised, the same is included in FAC. Accordingly; the Commission has also not considered any adjustment in this FAC approval.

4.13 As regards VIPL-G, the APPC for January, February and March, 2018 is Rs. 4.59/ kWh, Rs. 5.10/ kWh and Rs. 4.45 /kWh respectively which is higher against the MYT approved rate of Rs. 4.40/ kWh. The variation is mainly due to reduction in power purchase quantum (MUs) from VIPL for each month from the approved value and especially to a large extent in Feb, 2018 (actual purchase of 162.85 MU against monthly approved power purchase of 338.31 MU). The lower purchase in the month of February was mainly due to low availability of 52% and low PLF of 41% due to coal shortage which has led to lower net generation. Further, the entire monthly fixed cost was payable as the cumulative plant availability was above the normative availability of 85% in line with Regulation 48.3 of MYT Regulations. The spread of fixed cost over lower net generation has contributed to the increase in the average power purchase cost especially in the month of February, 2018 thus impacting the APPC.



- 4.14 As far as Grade Slippage is concerned, RInfra submits that at present it is not paying FAC to VIPL-G and is only paying the variable charge of Rs. 2.18/ kWh as approved by the Commission. Hence, FAC computation of RInfra-D is not impacted by grade slippage, if any, encountered by VIPL-G.
- 4.15 The sources of R.E. for RInfra-D are DSPPL, Reliance Innoventure, AAA Sons Enterprise, Jindal Steel and Power Ltd., Tembhu Power Pvt. Ltd. and Reliance Clean Power Pvt. Ltd.
- 4.16 The Commission has scrutinised the bills/invoices from R.E. source and found that power purchase cost with regards to AAA Sons has been considered on provisional basis. The Commission has sought for actual bills along with clarification on impact of differential between provisional and actual amount on FAC. In response to this RInfra-D submitted that the bills from AAA sons for the months of June, 2017 to February, 2018 were received in March, 2018. The difference between power purchase cost as per bills and the power purchase cost considered on provisional basis for the period June, 2017 to February, 2018 was Rs. (0.25) Crore. Hence, the net impact of deferential between provisional and actual resulted into a refund of Rs. 0.25 Crore which is accounted in the month of March, 2018.
- 4.17 Further, the power purchase cost for March, 2018 considered was Rs. 0.07 Crore. After accounting for the differential of Rs. (0.25) Crore, the net power purchase cost considered by RInfra-D in FAC calculations for March, 2018 is Rs. (0.18) Crore. Furthermore, RInfra-D stated that the actual bill of AAA sons for the month of March, 2018 is received in August, 2018. Therefore the differential between cost considered for March, 2018 (on provisional basis) and the actual cost for March, 2018 is accounted by RInfra-D in August, 2018. However, the Commission has sought for the actual bill for the month of March, 2018 amounting to Rs. 0.039 Crore and considered the same in March, 2018 instead of provisional amount as considered by RInfra-D in its computation. Accordingly, the Commission has recomputed the average power purchase cost. This has also resulted into lower average power purchase cost of RE sources for the month of March, 2018 as compared to the other months.
- 4.18 Further, the actual power purchase cost from DSPPL is Rs 17.91/kWh, which was restricted to Rs. 10.31/kWh by the Commission in its MYT Order. The Commission has verified that the restricted rate has been considered by RInfra-D in this FAC approval. The power purchase from other R.E. sources has been considered as per rate approved by the Commission in its MYT Order.
- 4.19 The average power purchase cost for R.E. sources for the months of January, February and March, 2018 are Rs. 8.00/kWh, Rs. 7.58/kWh and Rs. 7.25/kWh respectively which is lower against the MYT approved rate of Rs. 12.55/kWh. The lowering trend of APPC is mainly due to lower quantum of power purchase from costly power sources mainly DSPPL and increase of quantum of power purchase form comparatively cheap sources.



- 4.20 RInfra-D has purchased bilateral power mainly from IEX, Dhariwal Infrastructure Limited and NTPC Vidyut Vyapar Nigam Limited, through Competitive Bidding and through the MoP's DEEP Portal, day ahead bilateral purchase at Exchange. The average power purchase cost from Traders during the months of January to March, 2018 is Rs. 4.09/kWh, Rs. 3.92/kWh and Rs. 4.70/kWh respectively.
- 4.21 The Commission observed that quantum of energy and associated charges with regards to imbalance pool of the current quarter of FY 2017-18 was considered on provisional basis. The Commission has sought for actual bills/invoices, in response which RInfra-D stated that up to present provisional FBSM bills are received till August, 2016 only. In the absence of provisional FBSM bills for the months of January, 2018 to March, 2018, power purchase cost for these months is considered on provisional basis at the variable cost of Dahanu Thermal Power Station (DTPS). As the actual bills are not available, hence, the Commission has not considered this amount with respect to imbalance pool in this FAC approval. This has resulted in increase in FAC for the respective months.
- 4.22 Further, it is observed that the RInfra-D has made adjustment with regards to previous period pool during the months of February and March, 2018. The Commission has sought for the actual bills against the same. After scrutinising the bills submitted it was found that the RInfra-D in past period, i.e., in February, 2016 and March, 2016 had considered the pool cost (FBSM) on provisional basis. However, the actual FBSM bills against the same were received in January and March, 2018. Therefore, the differential between the provisional and actual bills has been adjusted in the aforesaid period.
- 4.23 It is also observed the RInfra-D has purchased Standby power under MESDCL Agreement during the months of January, 2018 and February, 2018. RInfra-D has also made sale of surplus energy outside its Licence area through power exchange. The availability of surplus power during certain time-slots is a result of various factors that affect demand and generation, resulting in differences between the forecast, which is made on a day-ahead basis, and the actuals. The energy sold at IEX is at market clearing price. The rate realised is Rs. 3.48/kWh and Rs. 4.09/kWh for the months January and March 2018. The Commission has verified the sample details of the hourly data and the revenue receipt issued by power exchange as was submitted by RInfra-D and found to be in order. Accordingly, considered the surplus sale in this FAC approval.
- 4.24 Based on the above, the power purchase cost claimed by RInfra-D and as approved by the Commission is summarised in the Table below:-



Source of Power Purchase	Jan-18			Feb-18			Mar-18		
	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
Power Purchase Cost claimed by RInfra-D									
Own Generation (DTPS)	176.21	91.96	5.22	239.11	119.98	5.02	311.83	148.26	4.75
FBSM	36.08	6.48	1.80	71.79	22.38	3.12	56.31	16.30	2.90
AAA Sons	0.07	0.03	4.70	0.07	0.03	4.70	0.16	0.18	11.48
Other Sources*	456.95	205.80	4.50	356.96	165.78	4.64	464.81	211.93	4.56
Total power purchase	669.31	304.27	4.55	667.93	308.18	4.61	833.10	376.49	4.52
Power Purchase Cost approved by the Commission									
Own Generation (DTPS)	176.21	91.96	5.22	239.11	116.79	4.88	311.83	145.08	4.65
FBSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AAA Sons	0.07	0.03	4.70	0.07	0.03	4.70	0.08	-0.21 [^]	-25.68
Other Sources*	456.95	205.80	4.50	356.96	165.78	4.64	464.81	212.11	4.56
Total power purchase	633.23	297.79	4.70	596.14	282.60	4.74	776.72	356.97	4.60

*Other sources include VIPL, RE sources, standby charges, etc. and has been approved as claimed. Hence, the power purchase against these sources has not been shown individually and only the sources where revision has been approved is shown.

[^]The amount includes prior period adjustments and hence the power purchase cost is negative.



4.25 The Commission thus allows the APPC of **Rs. 4.70/kWh** for the month of January, 2018 **Rs. 4.74/kWh** for the month of February, 2018 and **Rs. 4.60/kWh** for the month of March, 2018 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 dated 21 October, 2016 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 January, 2018 to March, 2018.

S. No.	Particulars	Units	Jan 2018	Feb 2018	Mar 2018
1	Average power purchase cost approved by the Commission	Rs./kWh	4.30	4.30	4.30
2	Actual average power purchase cost	Rs./kWh	4.70	4.74	4.60
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.40	0.44	0.29
4	Net Power Purchase	MU	633.29	596.14	776.72
5	Change in fuel and power purchase cost (=3 x 4/10)	Rs. Crore	25.19	25.97	22.60

5.3 Therefore, there is an under-recovery on account of revision of power purchase cost by the Commission which is shown below:-

S. No.	Particulars	Jan 2018	Feb 2018	Mar 2018
1	Change in fuel and power purchase cost as claimed by RInfra-D (Rs. Crore)	16.14	20.64	17.85
2	Change in fuel and power purchase cost as approved by the Commission (Rs. Crore)	25.19	25.97	22.60
3	Under-recovery of power purchase cost (Rs. Crore)	9.05	5.33	4.76

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

6.1 After adjustment for over-recovery/under recovery (B), the adjustment factor to be added / reduced is as below:

S. No.	Particulars	Units	Jan 2018	Feb 2018	Mar 2018
1.1	Incremental cost allowed to be recovered	Rs. Crore	23.15	26.49	29.90



S. No.	Particulars	Units	Jan 2018	Feb 2018	Mar 2018
	in Month n-4				
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	18.52	24.19	22.64
1.3	Over-recovery/under-recovery (1.2 - 1.1)	Rs. Crore	4.63	2.30	7.25
1.4	Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit	Rs. Crore	0.00	0.00	0.00
1.5	Adjustment factor for over-recovery/under-recovery (1.3+1.4)	Rs. Crore	4.63	2.30	7.25

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 viz. the difference between the normative actual variable cost of power procurement and approved cost of power procurement for the respective months. 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 January, 2018 to March, 2018.

Month	Jan 2018	Feb 2018	Mar 2018
Adjustment Factor (Rs. Crore)	4.63	2.30	7.25
Applicable Interest Rate	9.45%	9.45%	9.65%
Carrying/ Holding cost for under/ over recovery (Rs. Crore)	0.07	0.04	0.12

7.2 As per Amendment to Regulation 2.1 (10) of MERC (MYT) (First Amendment) Regulations, 2017, the applicable interest rate has been considered as 9.45% for the months of January, 2018 and February, 2018 based on One year SBI MCLR as on 1st December 2017, i.e., 7.95 % plus 150 basis points and 9.65% for the month of March, 2018 based on One year SBI MCLR as on 1st March, 2018, i.e., 8.15% plus 150 basis points.

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. No.	Particulars	Units	Approved in Tariff Order	Actual up to		
				Jan-18	Feb-18	Mar-18
1	Net Energy Input at Distribution Voltages for own sales*	MU	9450.99	7,798.98	8,450.07	9,261.16
2	Own Energy sales at Distribution voltages	MU	8509.17	7,103.34	7,718.58	8,446.77
3	Distribution Loss (1 - 2)	MU	941.82	695.64	731.49	814.39
4	Distribution Loss as % of net energy input (3/1)	%	9.97%	8.92%	8.66%	8.79%
5	Excess Distribution Loss =[Actual Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	0	0	0
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	-	0	0	0

**Net energy input at Distribution Voltage for own sales as approved by the Commission is obtained by reducing the approved “energy injected by TPC-D for change-over consumers (2331.86 MU)” from the approved “total energy input at T<>D (11782.85 MU)”*

8.3 As seen from the above Table, cumulative distribution loss for the months of January, 2018 to March, 2018 is lower than the approved distribution loss of 9.97%. Accordingly, no deductions have been made on account of excess distribution loss for the month of January, 2018 to March, 2018.



9. Summary of Allowable Z_{FAC}

9.1 The summary of the FAC amount as approved by the Commission for the month of January, 2018 to March, 2018 which is allowed to be recovered in the billing month of March, 2018 to May, 2018 is as shown in the Table below.

S. No.	Particulars	Units	Jan 2018	Feb 2018	Mar 2018
1.0	Calculation of ZFAC				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	25.19	25.97	22.60
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	0.07	0.04	0.12
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	4.63	2.30	7.25
1.4	ZFAC = F+C+B	Rs. Crore	29.90	28.31	29.97
2.0	Calculation of FAC Charge				
2.1	Energy Sales within the License Area	MU	603.76	615.25	728.19
2.2	Excess Distribution Loss	MU	-	-	-
2.3	ZFAC per kWh	Rs./kWh	0.50	0.46	0.41
3.0	Recovery of FAC				
3.1	Allowable FAC [(2.1 x 2.5)/10]	Rs. Crore	29.90	28.31	29.97
3.2	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.5)/10]	Rs. Crore	-	-	-
4.0	Total FAC based on category wise and slab wise allowed to be recovered	Rs. Crore	29.90	28.31	29.97
4.1	Carried forward FAC for recovery during future period (3.1-3.2-4.0)	Rs. Crore	-	-	-

9.2 It can be seen from the above Table that standalone FAC for the months of January to March, 2018 is Rs. 25.19 Crore, Rs. 25.97 Crore and Rs. 22.60 Crore respectively. Based on total energy sales, FAC per unit has been work out as Rs. 0.50/ kWh, Rs. 0.46/ kWh and Rs. 0.41/ kWh for the months of January to March, 2018 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 As the FAC per unit computed is already lower than the 20% cap specified in MYT Regulations as shown in Table above, hence, there is no restriction triggered with regards to such ceiling for all the months of Q4 of FY 2017-18.



9.4 Further, the difference in standalone FAC for the above months as claimed by RInfra-D and as approved by the Commission amounts to Rs. 28.34 Crore and is computed in the Table below. This FAC amount remain unrecovered from the consumers in the respective months. Hence, the Commission allows AMEL to recover the same along with interest from the consumers in the next FAC billing cycle.

Month	Basis	Jan 2018	Feb 2018	Mar 2018	Total
Allowable FAC Claimed (Rs. Crore)	a	20.84	22.97	16.02	59.84
Allowable FAC Approved (Rs. Crore)	b	29.90	28.31	29.97	88.18
Difference/under-recovery (Rs. Crore)	c = (b-a)	9.05	5.33	13.95	28.34

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:—

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

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 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....”

- 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_{FAC} in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the months of January, 2018 to March, 2018.
- 10.3 The variation in FAC in absolute terms is due to formula error of Z_{FAC} computed on per unit basis. The variation however is taken care in the adjustment factor of subsequent months.
- 10.4 Further, it was observed that RInfra-D has provided two sets of category-wise FAC levy. Also, the ACoS considered for FAC computation for the months of January and March, 2018 was found different from the ACoS approved by the Commission for the respective period. In response to this, RInfra-D stated that FAC for costing month of January, 2018 is charged in the billing month of March, 2018. Some of the sales in billing month of March, 2018 falls in March, 2018 and rest falls in April, 2018. This is because sales for the meters read from 18 March to 17 April, 2018 are booked in the sales of March, 2018. Since the k factor (ABR/ACoS ratio) for FY 2017-18 and FY 2018-19 are different, two sets of category wise FAC are computed for charging FAC for consumption in March, 2018 and for consumption in April, 2018. Therefore, different values of ABRs and ACoS are considered for working out category wise FAC – one for consumption in March, 2018 and for consumption in April, 2018. The same value of FAC chargeable for January, 2018 has been considered for calculating two sets of category wise FAC. However, the Commission observed that the FAC chargeable for January, 2018 for the second set which was effective from the month of April, 2018 was considered as that of FAC chargeable of February, 2018. The Commission has sought for reasoning to which RInfra-D stated that the aforesaid error was done inadvertently. Accordingly, the correct calculation based on which FAC has been charged are submitted and the Commission has considered the same.
- 10.5 Similarly, FAC for costing month of February, 2018 is charged in the billing month of April, 2018. Again, since meters are read everyday, the meter readings for the billing month of April start from 18 April and include consumption from 19 March onwards till the meter reading date. Therefore, some of the sales in billing month of April, 2018 falls in March, 2018 and rest in April, 2018. Therefore, two sets of FAC have been calculated - one for consumption in March, 2018 and other for rest consumption. Hence, two sets of category wise FAC charged for the billing month of March, 2018 and two sets for billing month of April, 2018.
- 10.6 The following Table shows per unit Z_{FAC} to be charged to the consumers of AMEL for the billing month of March, 2018 to May, 2018.

FAC for Billing Month of March, 2018 to May, 2018



S.No.	Consumer Categories	Slabs	ZFAC to be levied in billing month of		
			Mar'18	Apr'18	May'18
			Rs./kWh	Rs./kWh	Rs./kWh
(A)	LT Category				
1	LT I - Below Poverty Line	0-30	0.1857	0.2009	0.1182
2	LT -I Residential (Single Phase)				
		0-100	0.1532	0.1657	0.1054
		101-300	0.3119	0.3374	0.1916
		301-500	0.3622	0.3918	0.2350
		500 and above	0.4307	0.4659	0.2812
3	LT -I Residential (Three Phase)				
		0-100	0.1510	0.1633	0.1034
		101-300	0.2949	0.3190	0.1802
		301-500	0.3556	0.3846	0.2300
		500 and above	0.4218	0.4563	0.2751
4	LT II : LT - Non - Residential or Commercial				
		0-20 kW	0.3807	0.4118	0.2450
		20-50 kW	0.3844	0.4158	0.2469
		above 50 kW	0.4044	0.4374	0.2600
5	LT III (A) - LT Industrial	upto 20 kW	0.3234	0.3498	0.2038
6	LT III (B) - LT Industrial	above 20 kW	0.3500	0.3786	0.2191
7	LT IV : LT- Public Water Works	all units	0.3174	0.3434	0.2097
8	LT V : LT- Advertisements and Hoardings	all units	0.4740	0.5127	0.2948
9	LT VI: LT -Street Lights	all units	0.3260	0.3526	0.2057
10	LT VII (A): LT -Temporary Supply Religious	all units	0.2827	0.3058	0.1802
11	LT VII (B): LT -Temporary Supply Others	all units	0.4051	0.4382	0.2605
12	LT VIII: LT - Crematorium & Burial Grounds	all units	0.2645	0.2861	0.1633
13	LT IX (A) : LT -PS - Govt. Hospitals & EI	all units	0.3064	0.3314	0.1878
14	LT IX (B) : LT -PS – Others	all units	0.3163	0.3422	0.1993
15	LT X (A) : LT - Agriculture Pumpsets	all units	0.1802	0.1949	0.1197
16	LT X (B) : LT - Agriculture Others	all units	0.2590	0.2802	0.1704
(B)	High Tension – HT				
17	HT I: HT-Industry	all units	0.3626	0.3922	0.2276
18	HT II : HT- Commercial	all units	0.3829	0.4142	0.2383



S.No.	Consumer Categories	Slabs	ZFAC to be levied in billing month of		
			Mar'18	Apr'18	May'18
			Rs./kWh	Rs./kWh	Rs./kWh
19	HT III: HT-Group Housing Society	all units	0.3337	0.3610	0.2140
20	HT IV : HT - Public Water Works	all units	0.3537	0.3826	0.2193
21	HT V : HT – Railways	all units	0.2956	0.3198	0.1931
22	HT VI (A) : HT - PS - Govt. Hospitals & EI	all units	0.3407	0.3686	0.2171
23	HT VI (B) : HT - PS – Others	all units	0.3748	0.4054	0.2334
24	HT VII - Temporary Supply	all units	0.3833	0.4146	0.2388

10.7 The following Table shows per unit Z_{FAC} second set as explained in para above to be charged to the consumers of AMEL for the billing month of March, 2018 to April, 2018:

S.No.	Consumer Categories	Slabs	ZFAC to be levied in billing month of	
			Mar'18 (FAC of Jan'18 w.e.f. 01 Apr'18)	Apr'18 (FAC of Feb'18 w.e.f. 01 Apr'18)
			Rs./kWh	Rs./kWh
(A)	LT Category			
1	LT I - Below Poverty Line	0-30	0.1855	0.2007
2	LT -I Residential (Single Phase)			
		0-100	0.1653	0.1788
		101-300	0.3007	0.3253
		301-500	0.3688	0.3989
		500 and above	0.4413	0.4774
3	LT -I Residential (Three Phase)			
		0-100	0.1623	0.1756
		101-300	0.2828	0.3059
		301-500	0.3609	0.3904
		500 and above	0.4316	0.4669
4	LT II : LT - Non - Residential or Commercial			
		0-20 kW	0.3845	0.4159
		20-50 kW	0.3875	0.4191
		above 50 kW	0.4080	0.4414
5	LT III (A) - LT Industrial	upto 20 kW	0.3198	0.3459
6	LT III (B) - LT Industrial	above 20 kW	0.3437	0.3718
7	LT IV : LT- Public Water Works	all units	0.3291	0.3560



S.No.	Consumer Categories	Slabs	ZFAC to be levied in billing month of	
			Mar'18 (FAC of Jan'18 w.e.f. 01 Apr'18)	Apr'18 (FAC of Feb'18 w.e.f. 01 Apr'18)
			Rs./kWh	Rs./kWh
8	LT V : LT- Advertisements and Hoardings	all units	0.4626	0.5004
9	LT VI: LT -Street Lights	all units	0.3228	0.3491
10	LT VII (A): LT -Temporary Supply Religious	all units	0.2828	0.3059
11	LT VII (B): LT -Temporary Supply Others	all units	0.4088	0.4422
12	LT VIII: LT - Crematorium & Burial Grounds	all units	0.2562	0.2771
13	LT IX (A) : LT -PS - Govt. Hospitals & EI	all units	0.2947	0.3188
14	LT IX (B) : LT -PS – Others	all units	0.3126	0.3382
15	LT X (A) : LT - Agriculture Pumpsets	all units	0.1878	0.2031
16	LT X (B) : LT - Agriculture Others	all units	0.2674	0.2893
(B)	High Tension – HT			
17	HT I: HT-Industry	all units	0.3590	0.3864
18	HT II : HT- Commercial	all units	0.3740	0.4045
19	HT III: HT-Group Housing Society	all units	0.3358	0.3633
20	HT IV : HT - Public Water Works	all units	0.3441	0.3722
21	HT V : HT – Railways	all units	0.3029	0.3277
22	HT VI (A) : HT - PS - Govt. Hospitals & EI	all units	0.3407	0.3685
23	HT VI (B) : HT - PS – Others	all units	0.3662	0.3961
24	HT VII - Temporary Supply	all units	0.3747	0.4054

