



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/MSEDCL/1279

Date: 01 Nov. 2018

To,
The Managing Director,
Maharashtra State Electricity Distribution Company Ltd.,
5th Floor, Prakashgad, Plot No. G-9
Bandra (East), Mumbai 400 051

Subject: Post facto approval of MSEDCL's Fuel Adjustment Charges (FAC) for the period of October, 2017 to December, 2017.

Reference: 1. MSEDCL's FAC submissions vide Letters dated 17 May, 2018 for post-facto approval of FAC for the period of October, 2017 to December, 2017.
2. Replies to data gaps received vide email dated 7 August, 2018

Sir,


Upon vetting the FAC calculations for the month of October, 2017 to December, 2017 as mentioned in the above reference, the Commission has accorded post facto approval to MSEDCL for levying FAC to its consumers as shown in the table below:

ZFAC	Oct, 2017	Nov, 2017	Dec, 2017
FAC allowed (Rs. Crore)	13.37	30.28	(232.27)

MSEDCL is directed to refund Rs.70.17 Crore along with interest in the next FAC billing cycle. This is on account of correction in adjustment factor and the FAC levy methodology adopted for October to December, 2017 as explained in para 5.3, 6.1, 7.1, 9.3, 9.4 and 9.5 of the Vetting Report.

The above approval of FAC is subject to the 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 October, 2017 to December, 2017.

**POST FACTO APPROVAL FOR FAC FOR THE MONTH OF
OCTOBER 2017 TO DECEMBER 2017**

Subject: Post facto approval of MSEDCL's Fuel Adjustment Charges (FAC) for the period of October, 2017 to December, 2017.

Reference: 1. MSEDCL's FAC submissions vide Letters dated 17 May, 2018 for post-facto approval of FAC for the period of October, 2017 to December, 2017.

2. Replies to data gaps received vide email dated 7 August, 2018

1. FAC submission by MSEDCL:

1.1 MSEDCL has submitted FAC submissions for the month of October, 2017 to December, 2017 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by MSEDCL, the Commission has accorded post facto approval for the FAC amount charged in the billing month of January, 2018 to March, 2018.

2. Background

2.1 On 3rd November, 2016, the Commission has issued Tariff Order for MSEDCL, (Case No.48 of 2016) for approval of True-up of FY 2014-15, provisional Truing-up for FY 2015-16 and Aggregate Revenue Requirement (ARR) and Tariff for FY 2016-17 and FY 2019-20. Revised Tariff has been made applicable from 1st November 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 1st March, 2017, the Commission accorded prior approval of the FAC for the month of November, 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 17 May, 2018. MSEDCL has filed FAC submissions for the month of October, 2017 to December, 2017 for post facto approval. The Commission has scrutinized the submissions provided by MSEDCL 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 MSEDCL in the FAC submission and as approved by the Commission are as shown in the table below.

Consumer Category	Approved by the Commission	Approved for the month	Actual sales (MU)		
			Oct-17	Nov-17	Dec-17
	(I)	(II=I/12)	(III)	(IV)	(V)
1. Metered Sales					
HT Category					
Industry General	24845.00	2070.42	2325.26	2454.49	2484.90
Industry Seasonal	89.00	7.42	4.13	12.40	17.71
Commercial	2406.00	200.50	166.14	148.13	141.56
Railway metro monorail	77.00	6.42	6.62	6.40	6.79
Public water works	1837.00	153.08	161.03	158.31	160.47
Agriculture pumpset	1100.00	91.67	39.81	28.96	34.90
Agriculture other	0.00	0.00	16.49	15.35	15.64
Group Housing Society	226.00	18.83	19.05	16.72	16.75
Temp Supply other	5.00	0.42	0.30	0.36	0.44
Public Service Govt	205.00	17.08	19.54	17.51	16.73
Public Service other	857.00	71.42	64.14	58.95	55.36
MSPGCL Aux Consumption	83.00	6.92	18.12	16.93	19.13
Other Adjustment			342.48	336.20	439.50
Sub Total	31730.00	2644.17	3183.09	3270.72	3409.87
LT Category					
BPL	77.00	6.42	4.81	4.64	4.37
Residential	20763.00	1730.25	1676.37	1536.00	1353.25
Non residential	4874.00	406.17	453.02	445.50	414.06
Public water works	716.00	59.67	57.61	60.05	59.70
AG metered pumpset	17230.00	1435.83	1246.95	1246.95	1659.81
AG metered other	115.00	9.58	9.82	10.93	10.10
Industry	9150.00	762.50	669.35	685.48	725.88
Street light	1965.00	163.75	147.83	152.71	158.54
Temporary supply	14.00	1.17	1.64	1.39	1.35
Advertisement and hording	3.00	0.25	0.35	0.37	0.39
Crematorium and burial ground	1.00	0.08	0.14	0.18	0.16
Public service	347.00	28.92	36.95	33.01	31.88
Prepaid	14.00	1.17	0.89	0.75	0.70
Sub Total	55269.00	4605.75	4305.74	4177.96	4420.19
Energy Sales outside the License Area					
Traded units			0.00	0.00	0.00
Sub Total			0.00	0.00	0.00



Consumer Category	Approved by the Commission	Approved for the month	Actual sales (MU)		
			Oct-17	Nov-17	Dec-17
	(I)	(II=I/12)	(III)	(IV)	(V)
Sub Total- Metered Sales	86999.00	7249.92	7488.83	7448.67	7830.06
2. Unmetered Sales					
Unmetered Hrs>1318	4729.00	394.08	754.19	754.19	754.19
Unmetered Hrs<1318	3027.00	252.25			
Sub Total- Unmetered Sales	7756.00	646.33	754.19	754.19	754.19
Grand Total (Metered+Unmetered)	94755.00	7896.25	8243.02	8202.86	8584.25

3.2 It was observed that the total sale for October to December, 2017 is 8243.02 MUs, 8202.86 MUs and 8584.25 MUs respectively which is higher than that of the MYT approved i.e., 7896.25 MUs. The major variation was observed in HT Industrial General, and LT Agriculture as shown in Table above.

4. Cost of Power Purchase

4.1 MSEDCL mainly procures power from following sources;

- a) MSPGCL
- b) Central Generating Station
- c) JSW (Ratnagiri) Energy Ltd.
- d) Adani Power Limited
- e) Mundra UMPP
- f) RattanIndia Power Limited
- g) EMCO Power
- h) Bilateral Procurement (Power Exchange, Traders, etc.)
- i) Renewable Energy Sources
- j) Infirm Power (MSPGCL units under commissioning, other infirm sources)

4.2 MSEDCL also buys power from other sources such as Sardar Sarovar and Pench Hydro project, renewable sources including co-generation, Wind power and Solar.

4.3 In addition to the above sources, in case of any shortfall from approved sources, when demand exceeds availability or for cost optimization, MSEDCL sources power from exchange/Traders or other sources at the market price through competitive bidding in accordance with the Guidelines of MoP.

4.4 The following table shows the variation in average power purchase cost (Rs/kWh) for the month of October, 2017 to December, 2017 as compared to average power purchase cost approved in Tariff Order dated 3rd November, 2016:



Particulars	Approved for Oct, 2017 in T.O dated 3 rd November, 2016			Actual for Oct, 2017		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
Thermal Power Plants	9203.00	3260.68	3.54	9095.08	3148.57	3.46
Must Run Sources	1331.00	415.85	3.12	861.99	451.28	5.24
Total	10534.00	3676.53	3.49	9957.07	3599.85	3.62

Particulars	Approved for Nov, 2017 in T.O dated 3 rd November, 2016			Actual for Nov, 2017		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
Thermal Power Plants	8095.00	2973.45	3.67	8915.44	3078.59	3.45
Must Run Sources	2093.00	865.17	4.13	1426.48	799.22	5.60
Total	10188.00	3838.62	3.77	10341.93	3877.81	3.75

Particulars	Approved for Dec, 2017 in T.O dated 3 rd November, 2016			Actual for Dec, 2017		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
Thermal Power Plants	7691.00	2850.41	3.71	8950.51	3054.29	3.41
Must Run Sources	2329.00	986.71	4.24	1672.85	995.43	5.95
Total	10020.00	3837.11	3.83	10623.37	4049.72	3.81



- 4.5 MSPGCL – The Commission has scrutinised the detailed bills submitted and observed that total energy purchased from MSPGCL’s Thermal and Gas Power Generating Stations during the month of October, November and December, 2017 are 3571.14 MUs, 3528.29 MUs and 3675.51 MUs respectively against the monthly MYT approved purchase of 4332 MUs, 3615 MUs and 3104 MUs respectively. The variable cost from these sources during the aforesaid period is Rs. 922.90 Crore, Rs. 913.86 Crore and Rs. 962.85 Crore respectively which has been worked out as per the energy charge approved by the Commission in its MYT Order.
- 4.6 The average power purchasing cost from all MSPGCL’s Thermal and Gas Power Generating Stations during the months of October, November and December, 2017 is Rs. 3.80/kWh, 3.81/kWh and Rs. 3.70/kWh which is lower as compared to the MYT approved monthly average power purchase cost of Rs. 4.01/kWh, Rs. 4.23/kWh and Rs. 4.51/kWh respectively. The reduction in average power purchase cost is mainly on account of reduction/disallowance in fixed charge payable as the cumulative availability of most of the plant during the respective period were lower than the MYT approved Target availability and negative adjustment towards fuel surcharge adjustment bills for the respective period. Further, during the month of October, 2017 only Nashik (Unit3-5) and Parli (Unit 6-7) have achieved the Target cumulative availability. In the month of November, 2017 only Nashik (Unit 3-5) achieved the Target cumulative availability whereas in the month of December, 2017 none of the plant was able to achieve cumulative Target availability.
- 4.7 NTPC – The total units purchased from NTPC’s stations during the months of October, November and December, 2017 are 2570.91 MUs, 2443.94 MUs and 2575.68 MUs respectively against the MYT approved monthly units of 2403 MUs, 2091 MUs and 2119 MUs respectively. The total power purchase cost including the fixed charges, RLDC charges, ED & Cess, incentives and other charges from NTPC’s stations during the months of October, November and December, 2017 are Rs. 701.53 Crore, Rs. 767.30 Crore and Rs. 778.45 Crore respectively. Accordingly, the average power purchase cost from NTPC Units during the aforesaid period is Rs. 2.73/kWh, Rs. 3.14/kWh and Rs. 3.02/kWh which is more as compared to MYT approved monthly rate of Rs. 2.78/kWh, Rs. 2.83/kWh and Rs. 2.45/kWh respectively. The increase in the average power purchase cost is mainly due to increase in variable cost on account of variable charge revision during the aforesaid period. Further, the average power purchase cost has also increased as MSEDCL has purchased almost 13% to 22% of the total power from NTPC new stations as mentioned above having the variable charges in the range of Rs. 2.70/kWh to Rs. 3.24/kWh. The approved variable charge of these new stations are approximately double than that of the existing old stations having the variable charge in the range of Rs. 1.04/kWh to 1.52/kWh. This has increased the average price of the entire portfolio of NTPC plants, thus impacting the APPC.
- 4.8 IPPs - MSEDCL has purchased power from Mundra CGPL UMPP and IPPs, viz., JSW, EMCO Power, India Bulls Power (RattanIndia) and Adani Power. The total power purchased from these sources are 2387.91 MUs, 2436.91 MUs and 2393.47 MUs



respectively against the monthly approved of 2468 MUs, 2389 MUs and 2468 MUs respectively during the months of October, November and December, 2017. The average power purchase cost from these stations is 3.63/kWh, Rs. 3.19/kWh and Rs. 3.37/kWh respectively during the aforesaid period as compared to monthly approved MYT rate of Rs. 3.48/kWh, Rs. 3.53/kWh and Rs. 3.48/kWh respectively. The variation in the power purchase rate is due to change in variable rate as the rates are linked to various factors such as variation in monthly exchange rates, CERC index for inland handling of fuel and for inland transportation of fuel. Further, the impact of 'change in law' for non-availability/shortfall in domestic coal has also been included by Adani Power and CGPL during the months of October, November and December, 2017 which has led to the variation the total power purchase cost and thus increased the APPC during the aforesaid period.

- 4.9 Traders – MSEDCL has purchased power from PTC India, JPL, Manikaran Power Limited, GMRETL, Dhariwal Infrastructure Limited, TPCTL and DB power Limited etc. The Commission has verified the quantum of energy purchase and associated charges from the detailed bills submitted and found to be in order. Further, the average power purchase cost from these sources during the months of October, November and December, 2017 is Rs. 3.95/kWh, 3.74/kWh and Rs. 3.54/kWh respectively. The Commission in its MYT Order has not considered any quantum and amount with regards to short term power purchase as the entire demand would have been considered to be met through projected sources of power and hence, the energy balance for each year of the 3rd Control Period has been considered as nil. However, the Commission had directed MSEDCL to procure short term power in case of any shortfall from approved sources or when demand exceeds availability through competitive bidding. Further, as the power from traders has been procured by MSEDCL through competitive bidding, the Commission has considered the respective actual quantum and the cost as submitted by MSEDCL.
- 4.10 Must Run – The sources of Must Run Stations include KAPP, TAPP 1&2, TAPP 3&4, SSP, Pench, Dodson I and Dodson II, Non-Conventional Energy except CPP and MSPGCL Hydro. MSEDCL has purchased 861.99 MUs, 1426.48 MUs and 1672.85 MUs respectively during the months of October, November and December, 2017 as compared to the monthly MYT approved energy purchase of 1331 MUs, 2093 MUs and 2329 MUs respectively. The average power purchase cost from these stations during the aforesaid period is Rs. 5.24/kWh, 5.60/kWh and Rs. 5.95/kWh as compared to MYT approved rate of Rs. 3.12/kWh, Rs. 4.13/kWh and Rs. 4.24/kWh. Respectively. The increase in the average power purchase cost during the month of October, November and December, 2017 is mainly on account of consideration of REC of worth Rs. 100 Crore, Rs. 150 Crore and Rs. 103 Crore respectively. This has resulted into increase in the power purchase cost being spread over lower net generation and hence, impacting the APPC.
- 4.11 Accordingly, after the scrutiny of the relevant document submitted, the Commission allows the average power purchase cost of **Rs. 3.62/kWh** for the month of October, 2017, **Rs. 3.75/kWh** for the month of November, 2017 and **Rs. 3.81/kWh** for the month of December, 2017 as shown in the table above.



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

- 5.1 The Commission has worked out the average power purchase cost for the month as shown in above table. The same has been compared with the average power purchase cost approved by the Commission in Tariff Order dated 3rd November 2016 and arrived at differential per unit rate at which ZFAC is to be passed on to the consumers.
- 5.2 The following table shows the ZFAC worked out by the Commission on account of difference in fuel and power purchase cost for the month of October, 2017 to December, 2017.

S. No.	Particulars	Units	Oct, 2017	Nov, 2017	Dec, 2017
1	Average power purchase cost approved by the Commission	Rs./kWh	3.49	3.77	3.83
2	Actual average power purchase cost	Rs./kWh	3.62	3.75	3.81
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.13	(0.02)	(0.02)
4	Net Power Purchase	MU	9957.07	10341.93	10623.37
5	Change in fuel and power purchase cost (=3 x 4/10)	Rs. Crore	124.68	(18.81)	(18.45)

- 5.3 The Commission in its previous vetting report had adopted the methodology of bifurcating the over-recovery/under-recovery amounts into Agriculture (AG) and non-Agriculture (non-AG) categories for computation of adjustment factor. Based on the same methodology, the Commission has bifurcated the stand alone month power purchase cost variation as computed above into the Agriculture and non-Agriculture categories. The Commission has considered the ratio of actual AG and non-AG sale for the respective months for which FAC is computed to bifurcate the power purchase cost variation. The power purchase cost variation for AG and non-AG consumers is shown in the Table below.

Particulars	Units	Oct'17			Nov'17			Dec'17		
		Total	Ag	Non-Ag	Total	Ag	Non-Ag	Total	Ag	Non-Ag
Category wise sales during the month	MUs	8217.49	2001.14	6216.35	8170.77	2001.14	6169.63	8524.09	2414.00	6110.09
Change in Fuel cost and power purchase cost attributable to Sales within the License Area (F)	Rs. Crore	124.63	30.35	94.28	(18.81)	(4.61)	(14.20)	(18.45)	(5.23)	(13.23)

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



6.1 MSEDCL has bifurcated the over-recovery/under-recovery amounts into Agriculture and non-Agriculture categories for computation of adjustment factor. The bifurcation has been done based on the FAC and actual sales of N-2 month. Further, MSEDCL has considered the FAC of N-2 month as per their computation. However, the Commission has recomputed the incremental cost allowed to be recovered based on the approved FAC of previous quarter and bifurcated the same as per actual sales of N-2 month as shown in the Table below. The incremental cost actually recovered has been considered as submitted by MSEDCL and accordingly, the adjustment factors have been computed

6.2 Accordingly, the adjustment factor for over recovery/under recovery (B) for the period of October, 2017 to December, 2017, is as below;

S. No.	Particulars	Units	Oct, 2017		Nov, 2017		Dec, 2017	
			Ag	Non-Ag	Ag	Non-Ag	Ag	Non-Ag
1.0	Sales in Month n-4	MUs	2247.62	5806.03	2247.62	5712.8	2001.14	6295.37
	Total Incremental cost allowed to be recovered in Month n-4*	Rs. Crore	(397.38)		(179.64)		(63.41)	
1.1	Incremental cost allowed to be recovered in Month n-4	Rs. Crore	(95.20)	(302.18)	(82.73)	(96.91)	48.79	(112.20)
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	(0.60)	(287.42)	(0.87)	(204.70)	261.25	(114.16)
1.3	Adjustment factor for (over-recovery)/under-recovery (=1.1 - 1.2)	Rs. Crore	(94.60)	(14.76)	(81.86)	107.79	(212.46)	1.96

*As against the approved value in Vetting Report, MSEDCL has taken different value of incremental cost allowed to be recovered as per their computations for October, 2017 to December, 2017. The same is now corrected in this vetting report by the Commission.

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

7.1 Carrying/Holding cost for under/over recovery has been granted at approval interest rate for the eligible amount. The Commission has computed the carrying cost separately on the adjustment factor as computed above for both Agriculture and Non-Agriculture categories.

7.2 The following Table shows the month wise interest rate and amount worked out as Carrying/Holding cost for under/over recovery for the month of October, 2017 to December, 2017.



S. No.	Particulars	Units	Oct, 2017		Nov, 2017		Dec, 2017	
			Ag Category	Non-Ag Category	Ag Category	Ag Category	Non-Ag Category	Ag Category
1	Adjustment factor for over-recovery/under-recovery	Rs. Crore	(94.60)	(14.76)	(81.86)	107.79	(212.46)	1.96
2	Applicable Interest rate	%	10.45	10.45	9.45	9.45	9.45	9.45
3	Carrying cost for over-recovery/under-recovery	Rs. Crore	(1.65)	(0.26)	(1.29)	1.70	(3.35)	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.

Sr No.	Particulars	Units	Approved in Tariff Order	Actual Upto		
				Oct-17	Nov-17	Dec-17
1	LT Sales	MU	64,294	37434.92	42367.05	47792.01
2	HT Sales	MU	25,575	22824.94	26095.66	29505.50
3	HT and Renewable Open Access Credit	MU	420	476.50	508.59	568.76
4	Sales to Open Access Consumers (Conventional)	MU	6,412	2506.89	2811.00	3190.33
5	Total Sales to Consumers	MU	96,701	55246.08	62840.71	70916.84
6	Distribution Loss	%	16.26%	13.90%	14.76%	14.92%



Sr No.	Particulars	Units	Approved in Tariff Order	Actual Upto		
				Oct-17	Nov-17	Dec-17
7	Distribution loss	MU	17,941	8921.87	10885.64	12435.31
8	Total Energy Available for Sale at 33 KV	MU	1,14,642	64167.95	73726.34	83352.16
9	Energy injected and drawn at 33KV	MU	458	285.82	315.62	366.27
10	Net Energy Available for sale at 33 KV	MU	1,14,184	63882.12	73410.72	82985.88
11	Sales at 66KV level	MU	203	86.54	96.69	106.13
12	Sales at 110 KV/132KV level	MU	3,148	2418.38	2790.57	3191.76
13	Sales at 220 KV/400 KV level	MU	2,991	1734.38	1980.94	2216.45
14	Net Energy requirement at T<D Periphery	MU	1,20,526	68121.43	78278.92	88500.23
15	Excess Distribution loss = [Actual Distribution loss - Distribution loss approved] x Net Energy Input	MU		-	-	-
16	Disallowance of FAC due to excess Distribution Loss	Rs. Crore		NIL	NIL	NIL

8.3 As per month wise FAC submission, the cumulative distribution loss is 13.90% for the month of October, 2017, 14.76% for the month of November, 2017 and 14.92% for the month of December, 2017 which are lower than the approved Distribution Loss of 16.26%. Hence, disallowance on account of excess distribution loss for the months of October, 2017 to December, 2017 have not been worked out.

9. Summary of Allowable ZFAC

9.1 The summary of the FAC amount as approved by the Commission for the month of October, 2017 to December, 2017 which is allowed to be recovered in the billing month of January, 2018 to March, 2018 is as shown in the Table below.

S. No.	Particulars	Units	Oct, 2017		Nov, 2017		Dec, 2017	
			Ag	Non-Ag	Ag	Non-Ag	Ag	Non-Ag
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	30.35	94.28	(4.61)	(14.20)	(5.23)	(13.23)
1.2	Carrying cost for over-	Rs. Crore	(1.65)	(0.26)	(1.29)	1.70	(3.35)	0.03

S. No.	Particulars	Units	Oct, 2017		Nov, 2017		Dec, 2017	
			Ag	Non-Ag	Ag	Non-Ag	Ag	Non-Ag
	recovery/under-recovery (C)							
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(94.60)	(14.76)	(81.86)	107.79	(212.46)	1.96
1.4	FBSM Impact for Sep 15 to Feb 16*		-	-	5.55	17.20	-	-
	ZFAC = F+C+B	Rs. Crore	(65.89)	79.26	(82.21)	112.49	(221.03)	(11.23)
	ZFAC = F+C+B November for AG Category						(82.21)	
	ZFAC = F+C+B October for AG Category						(65.89)	
	Total ZFAC (Quarterly) for AG Category						(369.13)	
2.0	Calculation of FAC Charge							
2.1	Energy Sales within the License Area	MU	2,001.14	6,216.35	2001.14	6169.63	2,414.0	6,110.09
	Energy Sales within the License Area to AG consumers during last quarter	MU	-	-	-	-	7,743.15	
2.2	Excess Distribution Loss	MU	-	-	-	-	-	
2.3	ZFAC per kWh	Rs./kWh	(0.33)	0.13	(0.41)	0.18	(0.48)	(0.02)
2.4	Cap at 20% of variable component of tariff	Rs./kWh	NA	NA	NA	NA	NA	NA
2.5	FAC Charge allowable (Minimum of 2.3 and 2.4)	Rs./kWh	NA	NA	NA	NA	NA	NA
3.0	Recovery of FAC							
3.1	Allowable FAC [(2.1 x 2.5)/10]	Rs. Crore	(65.89)	79.26	(82.21)	112.49	(369.13)	(11.23)
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	Rs. Crore	(65.89)	79.26	(82.21)	112.49	(369.13)	(11.23)



S. No.	Particulars	Units	Oct, 2017		Nov, 2017		Dec, 2017	
			Ag	Non-Ag	Ag	Non-Ag	Ag	Non-Ag
	and slab wise allowed to be recovered	e						
5.0	Carried forward FAC for recovery during future period (1.4-3.2-4)	Rs. Crore	-	-	-	-	-	-

**The FBSM impact has been bifurcated based on the ratio of Ag and Non-AG category sales.*

9.2 It can be seen from the above Table that standalone FAC for Non-Agriculture category during the months of October to December, 2017 is Rs. **79.26** Crore, Rs. **112.49** Crore and Rs. **(11.23)** Crore respectively. As the billing of the Non-Agriculture category has been done monthly, hence, based on total monthly energy sales, FAC per unit for Non-Agriculture category has been work out as Rs **0.13/kWh**, Rs **0.18/kWh** and Rs **(0.02)/kWh** for the months of October to December, 2017 respectively. MSEDCL has worked out the standalone FAC by considering the total change in cost and power purchase (F), total carrying cost for over recovery/ under recovery (C) and under recover/ over recovery with respect to Non-AG category. The Commission has computed the standalone FAC that has been levied by MSEDCL on the basis of actual sales provided as shown in the Table below:

Month	Units	MSEDCL's claim	Approved by the Commission
		Non-Ag	Non-Ag
October, 2017	Rs. Crore	58.34	79.26
November, 2017	Rs. Crore	55.55	112.49
December, 2017	Rs. Crore	(7.23)	(11.23)
Total	Rs. Crore	106.66	180.52

9.3 From the Table above MSEDCL has to recover Rs. **180.52** Crore cumulatively in the Q3 of FY 2017-18, however, it has recovered only Rs. **106.66** Crore. Hence, the Commission allowed MSEDCL to recover the remaining amount Rs. **73.86** Crore along with the interest in the next billing cycle.

9.4 The standalone FAC for Agriculture category during the months of October to December, 2017 is Rs. **(65.89)** Crore, Rs. **(82.21)** Crore and Rs. **(221.03)** Crore respectively. Based on total monthly energy sales for Agriculture category including un-metered sales, FAC per unit for Agriculture category has been work out as Rs **(0.33)/kWh**, Rs **(0.41)/kWh** and Rs **(0.29)/kWh** for the months of October to December, 2017 respectively. As the billing for Agriculture consumers are done on a quarterly basis, corresponding FAC for all the three months are levied in a last month for each quarter. Therefore, the Commission has considered the cumulative FAC and the cumulative sales during the respective quarter and accordingly computed the FAC per unit for Agriculture category as Rs. **(0.48)/ kWh** for the months of October to December, 2017. Further, as per MSEDCL methodology it is observed that, MSEDCL levy the FAC computed for Agriculture categories only in the

last month of quarter, i.e., in December, 2017. The FAC computed for the month of October and November, 2017 remained un-levied although it has been computed. The following the Table shows the FAC for Agriculture category during the months of October to December, 2017:

Month	Units	MSEDCL's claim	Approved by the Commission
		Ag	Ag
October, 2017	Rs. Crore	(50.76)	(65.89)
November, 2017	Rs. Crore	(21.92)	(82.21)
December, 2017	Rs. Crore	(225.10)	(221.03)
Total	Rs. Crore	(297.78)	(369.13)

9.5 From the Table above, MSEDCL has to refund total FAC of Rs. (396.13) Crore to Agriculture consumers, but as the billing for Agriculture consumers done in the month of December, i.e., last month of quarter, MSEDCL has refunded only Rs. 225.20 Crore. Therefore, the Commission directs MSEDCL to refund the differential of Rs. 144.03 Crore (Rs.369.13 Cr- 225.10 Cr) in the next billing cycle along with applicable interest.

9.6 Considering the recovery of Rs. 73.86 Crore with regards to Non-Agriculture category and refund of Rs. 144.03 Crore with regards to Agriculture category, the net impact of FAC stands at Rs. 70.17 Crore for Q3 of FY 2017-18.

9.7 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:

9.8 As the FAC per unit computed is already lower than the 20% cap specified in Regulation 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.

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 an under recovery of ZFAC in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the month of October, 2017 to December, 2017.

10.3 The following table shows per unit ZFAC to be charged to the consumers of BEST Undertaking for the billing month of January, 2018 to March, 2018.

Table A- Fuel Adjustment Charges for the Month of October, 2017 to December, 2017 to be levied in January, 2018 to March, 2018 respectively

Sr. No.	Categories	ZFAC to be levied in billing month of Jan'2018 (Rs./kWh)	ZFAC to be levied in billing month of Feb'2018 (Rs./kWh)	ZFAC to be levied in billing month of Mar'2018 (Rs./kWh)
	LT Category			
1	Domestic (LT-I)			
A	BPL (0-30 Units)	0.02	0.02	(0.00)
B	Consumption > 30 Units per month			
I	1-100 Units	0.05	0.06	(0.01)
Ii	101-300 Units	0.09	0.10	(0.01)
Iii	301-500 Units	0.12	0.14	(0.02)
Iv	500-1000 Units	0.14	0.15	(0.02)
V	Above 1000 Units	0.15	0.17	(0.02)



Sr. No.	Categories	ZFAC to be levied in billing month of Jan'2018 (Rs./kWh)	ZFAC to be levied in billing month of Feb'2018 (Rs./kWh)	ZFAC to be levied in billing month of Mar'2018 (Rs./kWh)
2	Non Domestic (LT-2)			
A	0-20 KW			
A	0-200 Units	0.10	0.11	(0.01)
b	Above 200 units	0.12	0.14	(0.02)
B	>20-50 KW	0.14	0.16	(0.02)
C	>50 KW	0.17	0.19	(0.02)
3	Public Water Works (LT-III)			
A	0-20 KW	0.04	0.04	(0.01)
B	20-40 KW	0.05	0.06	(0.01)
C	above 40 kw	0.07	0.08	(0.01)
4	Agriculture (LT-IV)			
A	Unmetered Tariff			
1	AG unmetered Pump set			
	Zone 1			
	A) 0-5 HP	(0.10)	(0.05)	(18.84)
	B) HP -7.5 HP	(0.10)	(0.05)	(20.52)
	C) Above 7.5 HP	(0.11)	(0.05)	(21.49)
2	Zone 2			
	A) 0-5 HP	(0.07)	(0.03)	(7.92)
	B) HP -7.5 HP	(0.07)	(0.03)	(7.50)
	C) Above 7.5 HP	(0.08)	(0.04)	(9.37)
B	Metered Tariff (Pumpsets)	(0.26)	(0.10)	(0.37)
C	Metered Tariff (Other)	0.05	0.06	(0.00)
5	LT Industries (LT-V)			
A	Power Loom			
i	0-20 KW	0.06	0.07	(0.01)
ii	Above 20 KW	0.08	0.09	(0.01)
B	General			
i	0-20 KW	0.07	0.08	(0.01)
ii	Above 20 KW	0.10	0.11	(0.01)
6	Street Light (LT-VI)			
A	Grampanchayat A, B & C Class Municipal Council	0.06	0.07	(0.01)
B	Municipal corporation Area	0.07	0.08	(0.01)
7	Temporary Connection (LT-VII)			
A	Temporary Connection (Religious)	0.05	0.06	(0.01)



Sr. No.	Categories	ZFAC to be levied in billing month of Jan'2018 (Rs./kWh)	ZFAC to be levied in billing month of Feb'2018 (Rs./kWh)	ZFAC to be levied in billing month of Mar'2018 (Rs./kWh)
B	Temporary Connection (Other Purposes)	0.15	0.17	(0.02)
8	Advertising and Hording (LT-VIII)	0.19	0.21	(0.03)
9	Crematorium & Burial (LT-IX)	0.05	0.06	(0.01)
10	Public Services (LT X)			
A	Government			
a	0-20 kw			
i	0-200 units	0.09	0.10	(0.01)
ii	> 200 units	0.08	0.09	(0.01)
b	>20 -50 kw	0.11	0.13	(0.02)
c	>50 kw	0.11	0.13	(0.02)
B	Others			
a	0-20 KW			
i	0-200 Units	0.07	0.08	(0.01)
ii	Above 200 units	0.10	0.11	(0.01)
b	>20-50 KW	0.11	0.12	(0.02)
c	>50 KW	0.11	0.13	(0.02)

Table B- Fuel Adjustment Charges for the Month of October, 2017 to December, 2017 to be levied in January, 2018 to March, 2018 respectively

Sr. No.	Categories	ZFAC to be levied in billing month of Jan'2018 (Rs./kWh)	ZFAC to be levied in billing month of Feb'2018 (Rs./kWh)	ZFAC to be levied in billing month of Mar'2018 (Rs./kWh)
	HT Category			
1	HT Category – EHV (66 kV & Above)			
A	HT I(A): HT - Industry (General)	0.09	0.10	(0.01)
B	HT I(B): HT - Industry (Seasonal)	0.12	0.14	(0.02)
C	HT II: HT – Commercial	0.14	0.16	(0.02)
D	HT III: HT - Railways/Metro/Monorail	0.00	0.00	(0.01)
E	HT IV: HT - Public Water Works (PWW)	0.07	0.08	(0.01)
F	HT V(A): HT - Agricultural – Pumpsets	0.04	0.04	(0.01)
G	HT V(B): Agricultural – Others	0.06	0.06	-
H	HT VI: HT - Group Housing Society	0.08	0.08	-



Sr. No.	Categories	ZFAC to be levied in billing month of Jan'2018 (Rs./kWh)	ZFAC to be levied in billing month of Feb'2018 (Rs./kWh)	ZFAC to be levied in billing month of Mar'2018 (Rs./kWh)
	(Residential)			
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.00	0.00	-
J	HT VIII(B): HT - Temporary Supply Others (TSO)	0.14	0.14	-
K	HT IX(A): HT - Public Services-Government	0.09	0.09	-
L	HT IX(B): HT - Public Services-Others	0.11	0.12	(0.02)
2	HT Category -33 kV			
A	HT I(A): HT - Industry (General)	0.09	0.10	(0.01)
B	HT I(B): HT - Industry (Seasonal)	0.12	0.14	(0.02)
C	HT II: HT - Commercial	0.14	0.15	(0.02)
D	HT III: HT - Railways/Metro/Monorail	0.09	0.09	(0.01)
E	HT IV: HT - Public Water Works (PWW)	0.07	0.07	(0.01)
F	HT V(A): HT - Agricultural - Pumpsets	0.04	0.04	(0.01)
G	HT V(B): Agricultural - Others	0.07	0.06	(0.01)
H	HT VI: HT - Group Housing Society (Residential)	0.08	0.08	(0.01)
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.00	0.00	-
J	HT VIII(B): HT - Temporary Supply Others (TSO)	0.13	0.13	(0.02)
K	HT IX(A): HT - Public Services-Government	0.09	0.10	(0.01)
L	HT IX(B): HT - Public Services-Others	0.11	0.12	(0.02)
3	HT Category -22 kV and 11 kV			
A	HT I(A): HT - Industry (General)	0.10	0.11	(0.01)
B	HT I(B): HT - Industry (Seasonal)	0.13	0.15	(0.02)
C	HT II: HT - Commercial	0.14	0.16	(0.02)
D	HT III: HT - Railways/Metro/Monorail	0.10	0.11	(0.01)
E	HT IV: HT - Public Water Works (PWW)	0.08	0.08	(0.01)
F	HT V(A): HT - Agricultural - Pumpsets	0.05	0.05	(0.01)
G	HT V(B): Agricultural - Others	0.06	0.06	(0.01)
H	HT VI: HT - Group Housing Society (Residential)	0.08	0.09	(0.01)
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.00	0.00	-
J	HT VIII(B): HT - Temporary Supply Others (TSO)	0.14	0.14	(0.02)
K	HT IX(A): HT - Public Services-Government	0.09	0.10	(0.01)
L	HT IX(B): HT - Public Services-Others	0.12	0.13	(0.02)



