



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/FY 2017-18/.....4192

Date: 13 September, 2017

To,
The General Manager,
The Brihanmumbai Electric Supply and Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192, Mumbai 400 001

Subject: Post facto approval of BEST Undertaking's Fuel Adjustment Charges (FAC) for the period of January, 2017 to March, 2017.

Reference: BEST Undertaking's submissions vide letter no. CER/MERC/80/2017 dated 1 August, 2017 for post-facto approval of FAC for the period from January, 2017 to March, 2017

Sir,

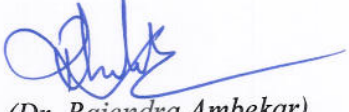
Upon vetting the FAC calculations for the months of January, 2017 to March, 2017 as mentioned in the above reference, the Commission has accorded post facto approval to BEST undertaking for charging FAC to its consumers as shown in the table below:

Month	Jan. 2017 (Rs. Crore)	Feb. 2017 (Rs. Crore)	Mar. 2017 (Rs. Crore)
FAC Allowed	18.35	15.76	(11.72)

The above approval of FAC is subject to the final True up of FY 2016-17 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, 2017 to March, 2017.

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Cc as enclosed:

Names and Addresses of Institutional Consumer Representatives

Prayas Energy Group, Amrita Clinic, Athawale Corner, Lakdipool-Karve Road Junction, Deccan Gymkhana, Karve Road, Pune 411 004.	The President, Mumbai Grahak Panchayat, Grahak Bhavan, Sant Dnyaneshwar Marg, Behind Cooper Hospital, Vile Parle (West), Mumbai 400 056.
The General Secretary, Thane Belapur Industries Association, Plot No.P-14, MIDC, Rabale Village, PO Ghansoli, Navi Mumbai 400 7001	The President, Vidarbha Industries Association, 1st floor, Udyog Bhawan, Civil Lines, Nagpur 440 001.
Maharashtra Chamber of Commerce, Industry & Agriculture, Oricon House, 6th Floor, 12 K. Dubash Marg, Fort, Mumbai- 400 001, (Nashik Branch) E-mail: maccia.nsk@gmail.com	Chamber of Marathwada Industries and Agriculture, Bajaj Bhavan, P-2, MIDC Area, Station Road, Aurangabad - 431 005



**POST FACTO APPROVAL FOR FAC CHARGES FOR THE MONTHS OF JANUARY,
2017 TO MARCH, 2017**

Subject: Post facto approval of BEST Undertaking's Fuel Adjustment Charges (FAC) for the period of January, 2017 to March, 2017.

Reference: BEST' Undertaking's submissions vide letter no. CER/MERC/80/2017 dated 1 August, 2017 for post-facto approval of FAC for the period from January, 2017 to March, 2017

1. FAC submission by BEST Undertaking:

1.1 BEST Undertaking has submitted FAC submissions for the months of January, 2017 to March, 2017 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by BEST Undertaking, the Commission has accorded post facto approval for the FAC amount to be charged in the billing months of January 2017 to March 2017.

2. Background

2.1 On 28 October, 2016, the Commission has issued Tariff Order for BEST Undertaking, (Case No. 33 of 2016) for truing-up of Aggregate Revenue Requirement (ARR) for FY 2012-13 to FY 2014-15, provisional truing-up of FY 2015-16 and ARR and Tariff for FY 2016-17 and 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 4 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 1 August, 2017, BEST Undertaking has filed FAC submissions for the months of January, 2017 to March, 2017 for post facto approval. The Commission has scrutinized the submissions provided by BEST Undertaking 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 BEST Undertaking 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 (Jan-17) (MU)	Actual (Feb-17) (MU)	Actual (Mar-17) (MU)
	(I)	(II=I/12)	(III)	(IV)	(V)
LT Category					
LT - I (A) Residential-BPL	0.24	0.02	0.01	0.02	0.01
LT - I (B) Residential	1,974.48	164.54	120.17	139.85	167.62
LT - II (A) Commercial	909.57	75.80	57.98	66.03	76.01
LT - II (B) Commercial	226.20	18.85	15.32	14.89	18.49
LT - II (C) Commercial	408.10	34.01	26.04	25.28	30.80
LT - III (A) Industrial	43.23	3.60	3.27	3.53	3.86
LT - III (B) Industrial	99.50	8.29	7.04	6.68	7.64
LT - IV PWW	1.81	0.15	0.55	0.51	0.56
LT - V Adv & Hoardings	1.76	0.15	0.14	0.14	0.15
LT - VI St. Lighting	28.10	2.34	2.73	2.47	2.60
LT - VII (A) Temp-Religious	2.69	0.22	0.02	0.03	0.00
LT - VII (B) Temp-Others	41.73	3.48	3.08	3.11	3.44
LT - VIII Crematorium	1.32	0.11	0.11	0.12	0.13
LT - IX (A) Public Service	33.30	2.78	3.78	3.81	4.47
LT - IX (B) Public Service Others	160.01	13.33	11.64	11.87	14.41
HT Category					
HT - I Industry	179.98	15.00	11.17	10.53	12.12
HT - II Commercial	344.87	28.74	22.47	20.89	22.94
HT - III Grp. Housing (Residential)	32.08	2.67	2.41	2.26	2.70
HT - IV PWW	30.71	2.56	2.79	2.54	2.81
HT-V Railways, Metro & Monorail	-	-	0.18	0.18	0.21
HT-VI (A) Public Service	11.29	0.94	1.81	1.68	2.08
HT-VI (B) Public Service-Others	129.13	10.76	11.74	10.85	14.27
HT-VII Temporary Supply	7.80	0.65	0.61	0.65	0.85
Total Energy Sale	4,667.90	388.99	305.07	327.90	388.17



4. Cost of Power Purchase

4.1 BEST Undertaking does not own or operate any generating stations. BEST Undertaking is procuring power from outside sources in order to fulfil the demand of its consumers. The following are the list of sources from which BEST Undertaking procures power to meet its demand.

- a) Purchases from Tata Power Company Ltd. (TPC-G)
- b) Renewable energy procurement(RPS)
- c) 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 month of January, 2017 to March, 2017 as compared to average power purchase cost approved in Tariff Order dated 28 October, 2016:

Particulars	Tariff Order Dated 28.10.2016			Actual for January, 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
TPC-G	3819	1599	4.19	201.49	92.98	4.61
RE Sources	174	197	11.32	24.90	22.06	8.86
Traders	1169	412	3.52	42.83	12.66	2.96
Other	-	-	-	10.40	3.71	3.56
Total	5163	2207	4.28	279.62	131.42	4.70

Particulars	Actual for February, 2017			Actual for March, 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
TPC-G	274.79	126.34	4.60	330.39	135.19	4.09
RE Sources	22.34	19.61	8.78	23.00	15.93	6.93
Traders	23.12	6.65	2.88	30.12	8.59	2.85
Other	10.58	3.34	3.16	18.80	5.97	3.18
Total	330.82	155.94	4.71	402.31	165.68	4.12



4.3 The Commission allows the average power purchase cost of **Rs. 4.70/kWh** for the month of January 2017, **Rs. 4.71/kWh** for the month of February 2017 and **Rs. 4.12/kWh** for the month of March 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 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 28 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, 2017 to March, 2017

S. No.	Particulars	Units	Jan. 2017	Feb. 2017	Mar. 2017
1	Average power purchase cost approved by the Commission	Rs./kWh	4.28	4.28	4.28
2	Actual average power purchase cost	Rs./kWh	4.70	4.71	4.12
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.42	0.44	(0.16)
4	Net Power Purchase	MU	279.62	330.82	402.31
5	Change in fuel and power purchase cost (=3 x 4/10)	Rs. Crore	11.86	14.50	(6.33)

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

6.1 The Commission vide its Report dated 5 June, 2017 has observed that BEST had computed adjustment factor for December, 2016 by considering FAC amount actually recovered in the billing month of January, 2017. Accordingly, the Commission had directed BEST vide its Report dated 5 June, 2017 to compute the adjustment factor for subsequent months strictly in line with the MERC MYT Regulations, 2015.

6.2 BEST has now submitted that it has carried out necessary adjustment of under /over-recovery in monthly FAC calculation for the month of April, 2017 which have been billed in July, 2017.

6.3 After adjustment for over-recovery/under recovery (B) for the period of January to March, 2017, the adjustment factor to be added / reduced is as below:



S. No.	Particulars	Units	Jan. 2017	Feb. 2017	Mar. 2017
1.1	Incremental cost allowed to be recovered in Month n-4	Rs. Crore	33.53	43.02	18.35
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	29.10	41.77	23.70
1.3	Carried forward for over-recovery/under-recovery due to 20%ceiling in previous month	Rs. Crore	2.10	-	-
1.4	Adjustment factor for over-recovery/under-recovery (1.2 - 1.1 + 1.3)	Rs. Crore	6.53	1.25	(5.35)

6.4 Direction relating to correct calculation of adjustment factor was issued on 5 June, 2017. Till that date BEST has levied FAC for the month of January to March, 2017 by considering FAC amount actually recovered in the billing month of February, 2017 to April, 2017 respectively. This was done by BEST for reducing the impact of carrying cost on the consumers. However, as stipulated in vetting Report dated 5 June, 2017, such calculation of adjustment factor is not in line with the Regulations. The Commission directs BEST to compute any under/ over-recovery due to this erroneous computation of adjustment factor and give effect of the same in the upcoming months' FAC calculations

6.5 BEST is directed to compute the adjustment factor for subsequent months strictly in line with the MERC (Multi Year Tariff) Regulations, 2015.

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, 2017 to March, 2017.

Month	Jan-2017	Feb-2017	Mar-2017
Adjustment Factor (Rs. Crore)	6.53	1.25	(5.35)
Applicable Interest Rate	10.75%	10.75%	10.75%
Carrying/ Holding cost for under/ over recovery (Rs. Crore)	0.06	0.01	(0.05)

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-17	Actual up to Feb-17	Actual up to Mar-17
1	Net Energy input at Distribution Voltages	MU	4,960.57	3,949.99	4,258.51	4,655.21
2	Energy sales at Distribution voltages	MU	4,667.90	3,685.59	4,013.49	4,401.66
3	Distribution Loss (=1-2)	MU	292.67	264.40	245.03	253.55
4	Distribution Loss as % of net energy input (=3/1)	%	5.90%	6.69%	5.75%	5.45%
5	Excess Distribution Loss = [Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	2.60	-	-
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	-	0.10	-	-

8.3 As seen from the above table, cumulative distribution loss for the month of January, 2017 is higher than the approved distribution loss of 5.90%. Accordingly, appropriate deductions have been made towards the excess distribution loss for the month of January, 2017.



9. Summary of Allowable Z_{FAC}

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

S. No.	Particulars	Units	Jan-17	Feb-17	Mar-17
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	11.86	14.50	(6.33)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	0.06	0.01	(0.05)
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	6.53	1.25	(5.35)
1.4	ZFAC = F+C+B	Rs. Crore	18.45	15.76	(11.72)
2.0	Calculation of FAC Charge				
2.1	Energy Sales within the License Area	MU	305.07	327.90	388.17
2.2	Excess Distribution Loss	MU	2.60	-	-
2.3	ZFAC per kWh	Rs./kWh	0.60	0.48	(0.30)
3.0	Recovery of FAC				
3.1	Allowable FAC [(2.1 x 2.5)/10]	Rs. Crore	18.45	15.76	(11.72)
3.2	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.5)/10]	Rs. Crore	0.10	-	-
4.0	Total FAC based on category wise and slab wise allowed to be recovered	Rs. Crore	18.35	15.76	(11.72)
4.1	Carried forward FAC for recovery during future period (3.1-3.2-4.0)	Rs. Crore	-	-	-

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;

$k = \text{Average Billing Rate} / \text{ACOS};$

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 Z_{FAC} in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the months of January, 2017 to March, 2017.

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 The following table shows per unit Z_{FAC} to be charged to the consumers of BEST Undertaking for the billing month of April, 2017 to June, 2017.

S. No.	Consumer Category	Slabs	ZFAC to be levied in billing month of Apr'17 (Rs./kWh)	ZFAC to be levied in billing month of May'17 (Rs./kWh)	ZFAC to be levied in billing month of Jun'17 (Rs./kWh)
(A)	LT Category				
1	LT - I (A) Residential-BPL	0 – 30	0.18	0.14	(0.08)
2	LT - I (B) Residential	0 – 100	0.26	0.20	(0.12)
		101 - 300	0.45	0.35	(0.21)
		301 - 500	0.63	0.49	(0.29)



S. No.	Consumer Category	Slabs	ZFAC to be levied in billing month of Apr'17 (Rs./kWh)	ZFAC to be levied in billing month of May'17 (Rs./kWh)	ZFAC to be levied in billing month of Jun'17 (Rs./kWh)
		> 501	0.76	0.59	(0.35)
3	LT - II (A) Commercial	0 – 500	0.73	0.57	(0.34)
		> 500	0.77	0.60	(0.35)
4	LT - II (B) Commercial	all units	0.75	0.58	(0.34)
5	LT - II (C) Commercial	all units	0.78	0.61	(0.36)
6	LT - III (A) Industrial	0 – 500	0.65	0.51	(0.30)
		> 500	0.70	0.55	(0.33)
7	LT - III (B) Industrial	> 20 KW	0.66	0.51	(0.30)
8	LT - IV PWW	all units	0.65	0.50	(0.30)
9	LT - V Adv & Hoardings	all units	1.08	0.84	(0.50)
10	LT - VI St. Lighting	all units	0.64	0.49	(0.29)
11	LT - VII (A) Temp-Religious	all units	0.37	0.28	(0.17)
12	LT - VII (B) Temp-Others	all units	0.81	0.63	(0.37)
13	LT - VIII Crematorium	all units	0.43	0.34	(0.20)
14	LT - IX (A) Public Service	all units	0.63	0.49	(0.29)
15	LT - IX (B) Public Service Others	all units	0.68	0.53	(0.31)
	(B) HT Category				
16	HT - I Industry	all units	0.68	0.53	(0.31)
17	HT - II Commercial	all units	0.75	0.58	(0.34)
18	HT - III Grp. Housing (Residential)	all units	0.53	0.41	(0.25)
19	HT - IV PWW	all units	0.64	0.50	(0.30)
20	HT-V Railways, Metro & Monorail	all units	0.56	0.44	(0.26)
21	HT-VI (A) Public Service	all units	0.63	0.49	(0.29)
22	HT-VI (B) Public Service- Others	all units	0.71	0.55	(0.33)
23	HT-VII Temporary Supply	all units	0.74	0.57	(0.34)

11. Time lag in levying FAC to the consumers:

11.1 The Commission vide its Report dated 5 June, 2017 has directed BEST to improve its billing system so that details required for computation of FAC on 'n-2' basis are made available. BEST has submitted that it has initiated the necessary steps in this direction. BEST is directed to inform the Commission in timely manner, about the progress made by BEST in improving its billing system.

