



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2018-2019/.....428

Date: 3 April, 2018

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 from October, 2017 to December, 2017.

Reference: BEST Undertaking's submission vide Letter No. 32 dated 21 March, 2018 for post-facto approval of FAC for the period from October, 2017 to December, 2017.

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 BEST Undertaking for charging FAC to its consumers as shown in the table below:

| Month | Oct, 2017 | Nov, 2017 | Dec, 2017 |
|-------------------------|-----------|-----------|-----------|
| FAC allowed (Rs. Crore) | 21.34 | 2.35 | 0.61 |

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.

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 Dynyaneshwar 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 FOR THE MONTH OF OCTOBER 2017 TO
DECEMBER 2017**

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

Reference: BEST Undertaking's submission vide Letter No. 32 dated 21 March, 2018 for post-facto approval of FAC for the period from October, 2017 to December, 2017.

1. FAC submission by BEST Undertaking:

1.1 BEST Undertaking 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 BEST Undertaking, the Commission has accorded post facto approval for the FAC amount to be charged in the billing month of January, 2018 to March, 2018.

2. Background

2.1 On 28 October, 2016, the Commission has issued Tariff Order for BEST Undertaking, (Case No.33of 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 1st 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 of 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 21 March, 2018. BEST Undertaking 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 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 (Oct -17) (MU) | Actual (Nov -17) (MU) | Actual (Dec -17) (MU) |
|-------------------------------------|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | (I) | (II=I/12) | (III) | (IV) | (V) |
| LT Category | | | | | |
| LT - I (A) Residential-BPL | 0.26 | 0.02 | 0.03 | 0.02 | 0.01 |
| LT - I (B) Residential | 2,009.24 | 167.44 | 172.30 | 152.20 | 125.62 |
| LT - II (A) Commercial | 926.66 | 77.22 | 74.60 | 71.85 | 61.40 |
| LT - II (B) Commercial | 227.27 | 18.94 | 18.30 | 17.34 | 15.71 |
| LT - II (C) Commercial | 407.19 | 33.93 | 31.32 | 30.29 | 27.31 |
| LT - III (A) Industrial | 43.37 | 3.61 | 3.49 | 3.63 | 3.24 |
| LT - III (B) Industrial | 100.10 | 8.34 | 7.65 | 7.60 | 7.43 |
| LT - IV PWW | 1.83 | 0.15 | 0.59 | 0.55 | 0.55 |
| LT - V Adv. & Hoardings | 1.84 | 0.15 | 0.14 | 0.14 | 0.13 |
| LT - VI St. Lighting | 28.10 | 2.34 | 2.36 | 2.42 | 2.56 |
| LT - VII (A) Temp-Religious | 3.06 | 0.26 | 0.02 | 0.02 | 0.01 |
| LT - VII (B) Temp-Others | 43.12 | 3.59 | 2.64 | 1.87 | 1.65 |
| LT - VIII Crematorium | 1.34 | 0.11 | 0.15 | 0.14 | 0.14 |
| LT - IX (A) Public Service | 37.51 | 3.13 | 4.94 | 4.49 | 4.10 |
| LT - IX (B) Public Service Others | 172.00 | 14.33 | 13.94 | 13.62 | 11.67 |
| HT Category | | | | | |
| HT - I Industry | 190.07 | 15.84 | 11.63 | 11.03 | 10.60 |
| HT - II Commercial | 354.31 | 29.53 | 22.98 | 21.74 | 20.00 |
| HT - III Grp. Housing (Residential) | 32.14 | 2.68 | 2.82 | 2.54 | 2.34 |
| HT - IV PWW | 32.43 | 2.70 | 3.22 | 2.79 | 3.03 |
| HT-V Railways, Metro & Monorail | - | - | 0.18 | 0.17 | 0.16 |
| HT-VI (A) Public Service | 11.60 | 0.97 | 2.26 | 1.96 | 1.80 |
| HT-VI (B) Public Service- Others | 132.66 | 11.06 | 14.97 | 13.18 | 11.85 |
| HT-VII Temporary Supply | 7.81 | 0.65 | 0.91 | 0.99 | 1.22 |
| Total Energy Sale | 4,763.91 | 396.99 | 391.43 | 360.60 | 312.55 |



4. Cost of Power Purchase

4.1 BEST Undertaking does not own or operate any generating stations. Accordingly, BEST Undertaking is required to procure 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 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 28 October, 2016:

| Particulars | Tariff Order Dated 28.10.2016 | | | 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 |
| TPC-G | 3,842.42 | 1,613.30 | 4.20 | 289.17 | 133.11 | 4.60 |
| RE Sources | 316.62 | 306.75 | 9.69 | 17.43 | 27.41 | 15.72 |
| Traders | 1,104.52 | 388.75 | 3.52 | 54.91 | 17.28 | 3.15 |
| Total Monthly Variations of prior period Accounted for Oct-2017 to Dec-2017* | - | - | - | 0.13 | 2.31 | 180.27 |
| Total | 5,263.56 | 2,308.80 | 4.39 | 361.63 | 180.11 | 4.98 |



| Particulars | Actual for Nov, 2017 | | | 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 |
| TPC-G | 293.43 | 127.86 | 4.36 | 277.84 | 121.55 | 4.37 |
| RE Sources | 17.33 | 16.94 | 9.77 | 19.14 | 18.09 | 9.45 |
| Traders | 28.97 | 9.33 | 3.22 | 45.15 | 13.74 | 3.04 |
| Total Monthly Variations of prior period Accounted for Oct-2017 to Dec-2017* | 9.76 | 1.93 | 1.98 | 18.00 | 4.82 | 2.68 |
| Total | 349.49 | 156.06 | 4.47 | 360.13 | 158.20 | 4.39 |

* "Total monthly variations of prior period accounted for October, 2017 to December, 2017" are the expenses claimed against the provisional FBSM bills, reimbursement charges, revision of energy bills and supplementary bills for prior period.

4.3 The Commission allows the average power purchase cost of **Rs. 4.98/kWh** for the month of October 2017, **Rs. 4.47/kWh** for the month of November, 2017 and **Rs. 4.39/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 28 October 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 | 4.39 | 4.39 | 4.39 |
| 2 | Actual average power purchase cost | Rs./kWh | 4.98 | 4.47 | 4.39 |



| S. No. | Particulars | Units | Oct, 2017 | Nov, 2017 | Dec, 2017 |
|--------|---|------------------|--------------|-------------|-------------|
| 3 | Change in average power purchase cost (=2 -1) | Rs./kWh | 0.59 | 0.08 | 0.01 |
| 4 | Net Power Purchase | MU | 361.63 | 349.49 | 360.13 |
| 5 | Change in fuel and power purchase cost (=3 x 4/10) | Rs. Crore | 21.49 | 2.76 | 0.23 |

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

6.1 Adjustment factor for over recovery/under recovery (B) for the period of October, 2017 to December, 2017, the adjustment factor to be added/reduced is as below:

| S. No. | Particulars | Units | Oct, 2017 | Nov, 2017 | Dec, 2017 |
|--------|---|------------------|---------------|---------------|-------------|
| 1.1 | Incremental cost allowed to be recovered in Month n-4 | Rs. Crore | (5.17) | (10.90) | 3.49 |
| 1.2 | Incremental cost in Month n-4 actually recovered in month n-2 | Rs. Crore | (5.02) | (10.49) | 3.11 |
| 1.3 | (over-recovery)/under-recovery (=1.1 - 1.2) | Rs. Crore | (0.15) | (0.41) | 0.38 |
| 2.0 | Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit for previous month | Rs. Crore | - | - | - |
| 3.0 | Adjustment factor for over-recovery/under-recovery (1.3+2.0) | Rs. Crore | (0.15) | (0.41) | 0.38 |

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

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

| S. No. | Particulars | Units | Oct, 2017 | Nov, 2017 | Dec, 2017 |
|--------|--|-----------|-----------|-----------|-----------|
| 1 | Adjustment factor for over-recovery/under-recovery | Rs. Crore | (0.15) | (0.41) | 0.38 |
| 2 | Applicable Interest rate* | % | 10.45% | 10.45% | 9.45% |
| 3 | Carrying cost for over-recovery/under-recovery | Rs. Crore | (0.0013) | (0.0036) | 0.0030 |

* The applicable interest rate has been considered to be 10.45% for the months of October, 2017 and November, 2017 based on applicable SBI base rate as on 1 October, 2017, i.e., 8.95% which is the rate prevailing at the beginning of the month plus 150 basis points. Further, for the month of December, 2017, as per Amendment to Regulation 2.1 (10) of MERC (MYT) (First Amendment) Regulations, 2017 the interest rate for December



2017 has been considered based on One year SBI MCLR as on 1st December 2017, i.e., 7.95 % plus 150 basis points.

7.2 In the FAC submission, BEST has considered the applicable interest rate as 9.45% for the month of November, 2017 based on notified one year SBI MCLR, i.e., 7.95 % plus 150 basis points. This was done considering the Regulation 2.1 (10) of MERC (MYT) (First Amendment) Regulations, 2017 issued by the Commission on 29 November, 2017. However, the Commission in line with the approved FAC Vetting Report of RInfra-D for Q3 dated on 19 March, 2018 applied the MCLR methodology from the month of December 2017 and the same would be adopted for Q3 FAC Vetting of all Licensees.

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 Oct-17 | Actual up to Nov-17 | Actual up to Dec-17 |
|-------|--|-------|--------------------------|---------------------|---------------------|---------------------|
| 1 | Net Energy input at Distribution Voltages | MU | 5,057.23 | 2,998.05 | 3,380.13 | 3,721.80 |
| 2 | Energy sales (metered) at Distribution voltages | MU | 4,763.91 | 2,834.88 | 3,195.49 | 3,508.03 |
| 3 | Distribution Loss (=1-2) | MU | 293.32 | 163.17 | 184.64 | 213.77 |
| 4 | Distribution Loss as % of net energy input (=3/1) | % | 5.80% | 5.44% | 5.46% | 5.74% |
| 5 | Excess Distribution Loss = [Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1) | MU | - | - | - | - |



| S.No. | Particulars | Units | Approved in Tariff Order | Actual up to Oct-17 | Actual up to Nov-17 | Actual up to Dec-17 |
|-------|--|------------------|--------------------------|---------------------|---------------------|---------------------|
| 6 | Disallowance of FAC due to excess Distribution Loss | Rs. Crore | - | - | - | - |

8.3 As seen from the above table, cumulative distribution loss is 5.44% for the month of October, 2017, 5.46% for November, 2017 and 5.74% for December, 2017 which are lesser than the approved Distribution Loss of 5.80%. Hence, disallowance on account of excess distribution loss for the months of October, 2017, November, 2017 and 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 |
|------------|---|------------------|--------------|-------------|-------------|
| 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 | 21.49 | 2.76 | 0.23 |
| 1.2 | Carrying cost for over-recovery/under-recovery (C) | Rs. Crore | (0.0013) | (0.0036) | 0.0030 |
| 1.3 | Adjustment factor for over-recovery/under-recovery (B) | Rs. Crore | (0.15) | (0.41) | 0.38 |
| 1.4 | ZFAC = F+C+B | Rs. Crore | 21.34 | 2.35 | 0.61 |
| 2.0 | Calculation of FAC Charge | | | | |
| 2.1 | Energy Sales within the License Area | MU | 391.43 | 360.60 | 312.55 |
| 2.2 | Excess Distribution Loss | MU | - | - | - |
| 2.3 | ZFAC per kWh | Rs./kWh | 0.55 | 0.07 | 0.02 |
| 2.4 | Cap at 20% of variable component of tariff | Rs./kWh | 1.27 | 1.27 | 1.27 |
| 2.5 | FAC Charge allowable (Minimum of 2.3 and 2.4) | Rs./kWh | 0.55 | 0.07 | 0.02 |
| 3.0 | Recovery of FAC | | | | |
| 3.1 | Allowable FAC [(2.1 x 2.5)/10] | Rs. Crore | 21.34 | 2.35 | 0.61 |
| 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 | 21.34 | 2.35 | 0.61 |
| 5.0 | Carried forward FAC for recovery during future period (1.4-3.2-4) | 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: —

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

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 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 variation in 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 variation in FAC in absolute terms is due to formula error of ZFAC 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 ZFAC be charged to the consumers of BEST Undertaking for the billing month of January, 2018 to March, 2018.



| S. No. | Consumer categories | Slab | ZFAC | ZFAC | ZFAC |
|------------------------|-------------------------------------|-----------|--|--|--|
| | | | be levied in billing month of Jan'2018 Rs./kWh | be levied in billing month of Feb'2018 Rs./kWh | be levied in billing month of Mar'2018 Rs./kWh |
| (A) LT Category | | | | | |
| 1 | LT - I (A) Residential-BPL | 0 - 30 | 0.17 | 0.02 | 0.01 |
| 2 | LT - I (B) Residential | 0 - 100 | 0.23 | 0.03 | 0.01 |
| | | 101 - 300 | 0.39 | 0.05 | 0.01 |
| | | 301 - 500 | 0.56 | 0.07 | 0.02 |
| | | > 501 | 0.68 | 0.08 | 0.02 |
| 3 | LT - II (A) Commercial | 0 - 500 | 0.64 | 0.08 | 0.02 |
| | | > 500 | 0.66 | 0.08 | 0.02 |
| 4 | LT - II (B) Commercial | all units | 0.64 | 0.08 | 0.02 |
| 5 | LT - II (C) Commercial | all units | 0.68 | 0.08 | 0.02 |
| 6 | LT - III (A) Industrial | 0 - 500 | 0.59 | 0.07 | 0.02 |
| | | > 500 | 0.62 | 0.07 | 0.02 |
| 7 | LT - III (B) Industrial | > 20 KW | 0.59 | 0.07 | 0.02 |
| 8 | LT - IV PWW | all units | 0.58 | 0.07 | 0.02 |
| 9 | LT - V Adv. & Hoardings | all units | 0.91 | 0.11 | 0.03 |
| 10 | LT - VI St. Lighting | all units | 0.58 | 0.07 | 0.02 |
| 11 | LT - VII (A) Temp-Religious | all units | 0.34 | 0.04 | 0.01 |
| 12 | LT - VII (B) Temp-Others | all units | 0.70 | 0.08 | 0.03 |
| 13 | LT - VIII Crematorium | all units | 0.39 | 0.05 | 0.01 |
| 14 | LT - IX (A) Public Service | all units | 0.57 | 0.07 | 0.02 |
| 15 | LT - IX (B) Public Service Others | all units | 0.62 | 0.07 | 0.02 |
| (B) HT Category | | | | | |
| 16 | HT - I Industry | all units | 0.60 | 0.07 | 0.02 |
| 17 | HT - II Commercial | all units | 0.65 | 0.08 | 0.02 |
| 18 | HT - III Trapshooting (Residential) | all units | 0.50 | 0.06 | 0.02 |
| 19 | HT - IV PWW | all units | 0.53 | 0.06 | 0.02 |
| 20 | HT-V Railways, Metro & Monorail | all units | 0.51 | 0.06 | 0.02 |
| 21 | HT-VI (A) Public Service | all units | 0.53 | 0.06 | 0.02 |
| 22 | HT-VI (B) Public Service-Others | all units | 0.62 | 0.07 | 0.02 |
| 23 | HT-VII Temporary Supply | all units | 0.65 | 0.08 | 0.02 |



