



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/BEST/ 20162017/01175

Date: 13 December, 2016

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 April, 2016 to June, 2016

Reference: BEST's submission vide letter dated 25 November, 2016 for post facto approval of FAC for the period from April, 2016 to June, 2016 (Quarter-I of FY 2016-17).

Sir,

Upon vetting the FAC calculations for the months of April, 2016 to June, 2016 submitted vide letters under reference, the Commission has accorded post facto approval to BEST for charging to its consumers the FAC amount (net of excess T&D loss), as detailed below:

Month	FAC allowed to be recovered / (Refunded) (Rs. Crore)
April 2016	(38.22)
May 2016	(34.09)
June 2016	(32.38)

The above approval of FAC amount is subject to the final True up of FY 2016-17 under MERC (Multi Year Tariff) Regulations, 2015.

Yours faithfully,


(Dr. Rajendra Ambekar)
Director (Tariff), MERC

Encl: Annexure: Detailed Vetting Report for the months of April, 2016 to June, 2016.

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 GrahakPanchayat, GrahakBhavan, SantDyanyaneshwarMarg, 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 400 701	The President, Vidarbha Industries Association, 1 st floor, UdyogBhawan, Civil Lines, Nagpur 440 001
Maharashtra Chamber of Commerce, Industry & Agriculture, Oricon House, 6 th Floor, 12k. DubashMarg, Fort, Mumbai- 400001 (Nashik Branch) Email: maccia.nsk@gmail.com	Chamber of Marathwada Industries and Agriculture, Bajaj Bhavan, P-2, MIDC Area, Station Road, Aurangabad – 431 005



Detailed Vetting Report
Date: 13 December, 2016

Post Facto approval of FAC Charges for the months of April, 2016 to June, 2016 submitted by BEST Undertaking

Subject: Post Facto approval of BEST Undertaking's Fuel Adjustment Charges (FAC) for the period of April, 2016 to June, 2016

Reference: BEST's submission vide letter dated 25 November, 2016 for post facto approval of FAC for the period from April, 2016 to June, 2016 (Quarter-I of FY 2016-17).

1. FAC submission by BEST:

- 1.1 MERC (Multi Year Tariff) Regulations, 2015 becomes applicable for tariff determination of 3rd Control Period of FY 2016-17 to FY 2019-20. However, Tariff Order under this MYT Regulations, 2015 applicable for FY 2016-17 has been issued only on 28 October, 2016 and made effective from 1 October, 2016. Therefore for the period of April to June, 2016, Tariff Order dated 28 August, 2013 was applicable.
- 1.2 Accordingly, BEST Undertaking in its submission has computed the FAC for the months of April, 2016 to June, 2016 in accordance with the MYT Order dated 28 August, 2013 in Case No. 26 of 2013 for approval of Truing Up of the Aggregate Revenue Requirement for FY 2010-11 and FY 2011-12 and Multi Year Tariff for the second Control Period, i.e., FY 2012-13 to FY 2015-16.
- 1.3 In terms of the MERC (MYT) Regulations, 2011 a Distribution Licensee is required to obtain post facto approval of the Commission on a quarterly basis for FAC charges. Accordingly, BEST Undertaking has submitted details of FAC chargeable from all consumers for first quarter of FY 2016-17, i.e., April, 2016 to June, 2016.

2. FAC Methodology

- 2.1 The methodology for arriving at FAC is as per MERC (MYT) Regulations, 2011 amended from time to time. The salient features for arriving at FAC for the above period are as under:
 - Actual Distribution losses have been computed based on metering arrangement.
 - Power purchase requirement for BEST Undertaking is considered from all sources of power usually purchased by the utility. The source include power from Tata Power



Company Ltd. (TPC-G), Renewable energy procurement (RPS), Bilateral contracts and decrements to the imbalance pool, Unscheduled Interchanges (Interstate UI)

- As submitted by BEST Undertaking, energy at the T⇌D interface in the 'Energy Balance' tabulation of the FAC submission, is arrived at as follows:

BEST Undertaking's Requirement (MU)	Formula	Apr 2016	May 2016	June 2016
Energy sales at Distribution voltages	(i)	398.65	433.55	401.87
Distribution Loss	(ii)	14.34	29.97	44.88
Net Energy input at Distribution Voltages	(iii) = (i) + (ii)	412.99	463.52	446.75
Transmission Loss	(iv)	55.34	(18.18)	(38.10)
Gross Energy input at Transmission Voltages	(v) = (iii) + (iv)	468.34	445.33	408.65

2.2 Regarding wide variation in transmission loss, BEST Undertaking has clarified that such variation is on account of non-availability of UI bills of said period. FBSM bills by MSLDC are lagging by 15-16 months. In the month of April, 2016, UI bills for prior period has been considered which increases the gross energy input at transmission voltage and hence transmission loss. Whereas, in the month of May and June, 2016 UI bills were not issued which reduces gross energy input for these months and hence negative Transmission loss.

2.3 The energy requirement met through the purchase of power from different sources is as under:

MU

Source of Purchase	Apr 2016	May 2016	June 2016
TPC-G	318.48	320.88	303.14
Renewable Energy based Generating Stations	19.70	14.57	18.70
Traders	71.31	90.31	82.92
Variation due to FBSM etc.	58.85	19.57	3.89
Grand Total	468.34	445.33	408.65

3. Variable Cost of Power Purchase of BEST Undertaking

3.1 BEST does not own or operate any generating stations. The entire power requirement for distribution to its consumers is procured by BEST through;

- Purchases from Tata Power Company Ltd. (TPC-G)
- Renewable energy procurement(RPS)
- Bilateral contracts and decrements to the imbalance pool.
- Unscheduled Interchanges (Interstate UI)



4. Change in Variable Cost of Power Purchase:

- 4.1 Change in variable cost of power purchase has been arrived at by multiplying power purchase (MU) with the change in weighted average cost (Rs/kWh) of power purchase.
- 4.2 The variable cost of power procurement approved by the Commission as per the MYT Order for the second Control Period (Case No. 26 of 2013 dated 28 August, 2013 for approval of Truing Up of the Aggregate Revenue Requirement for FY 2010-11 and FY 2011-12 and Multi Year Tariff for the second Control Period, i.e., FY 2012-13 to FY 2015-16), is Rs. 3.57/kWh. As explained in Tabulation below:

Source	Approved Annual Quantum (MU)	Variable Cost (Rs. Crore)	Rate Rs/kWh
TPC-G (Including Unit-8)*	5589.97	1847.91	3.31
RPS Power	589.19	339.93	5.77
Bilateral Purchase(as per SLDC)	223.06	98.32	4.41
Total Power Purchase	6402.22	2286.16	3.57

**Approved annual variable cost for purchases from TPC-G is derived by deducting the Approved annual Fixed cost Rs. 615.91 Crore and approved capacity charges for Hydro generating stations of Rs. 78.48 Crore from Total Annual cost Rs. 2542.30 Crore.*

- 4.3 BEST has submitted that it has incurred additional variable costs towards power procurement. The actual variable cost incurred by the BEST Undertaking for the Quarter-I of FY 2016-17 is as follows:

Sr. No	Parameter	Unit	Apr 2016	May 2016	June 2016
1	Weighted Average variable cost of power purchase considered by the Commission	Rs/kWh	3.57	3.57	3.57
2	Weighted Average Normative Actual variable cost power purchase for Month	Rs/kWh	2.77	2.83	2.84
3	Change in variable cost of power purchase	Rs/kWh	(0.80)	(0.74)	(0.73)
4	Net Power Purchase	MU	468.34	445.33	408.65
5	Change in variable cost of power purchase	Rs Crore	(37.62)	(32.86)	(29.74)



5. Carrying Cost/ Holding Cost for Under Recovery/ Over Recovery (“C”)

5.1 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 Order 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 Quarter-I of FY 2016-17 i.e., for the months of April, 2016 to June, 2016.

Particulars	April 2016	May 2016	June 2016
Applicable Interest Rate	14.05	14.05	14.05
Carrying Cost/ (Holding Cost) for under/ over recovery (Rs. Crore)	(0.01)	(0.01)	(0.03)

6. Adjustment for over recovery/ under recovery:

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

Month	Adjustment Factor (Rs. Crore)
April 2016	(0.59)
May 2016	(1.22)
June 2016	(2.61)

7. Distribution Loss:

7.1 The Commission has considered allowable Distribution Loss at 6.50% for the months of April, 2016 to June, 2016. The actual cumulative Distribution Losses and the corresponding disallowances on account of excess distribution losses are shown in the Table below:

Month	Cumulative Distribution Losses (%)	Disallowances due to excess Distribution Loss (Rs. Crore)
April 2016	3.47	0.00
May 2016	5.06	0.00
June 2016	6.74	0.00

7.2 As seen from the above table, Distribution Loss in the month of June, 2016 was higher than target. However, deductions on account of higher distribution losses for this month have not been considered as the FAC amount for the month is refundable.



8. Cap on Monthly FAC Charge

8.1 Applicability of Ceiling Limit of 20%

The relevant extract from the MERC (Multi Year Tariff) (Third Amendment) Regulations, 2014 is as below:

13.9 The formula for the calculation of the FAC component of Z-factor charges as given under:-

*.....
Provided that the monthly FAC charge 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.*

8.2 As per above Regulations, the ceiling based on 20% of the variable component of Tariff works out to Rs. 227.13 Paise/kWh.

9. The summary of FAC recoverable and carried forward for recovery in future is as follows:

Sr. No.	Parameter	Unit	Apr 16	May 16	Jun 16
1	Calculation of FAC (A)				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	(37.62)	(32.86)	(29.74)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.01)	(0.01)	(0.03)
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(0.59)	(1.22)	(2.61)
1.4	FAC (A) = F + C + B	Rs. Crore	(38.22)	(34.09)	(32.38)
2	Calculation of FAC_{kWh}				
2.1	Sales within License Area	MU	398.65	433.55	401.87
2.2	Excess Distribution Loss	MU	-	-	-
2.3	FAC Charge (FAC _{kWh}) without considering cap on monthly FAC Charge	Rs./kWh	(0.96)	(0.79)	(0.81)
2.4	Cap on monthly FAC Charge	Rs./kWh	2.271	2.271	2.271
2.5	FAC Charge (FAC_{kWh}) considering cap on monthly FAC Charge	Rs./kWh	(0.96)	(0.79)	(0.81)
3	FAC (A)				
3.1	FAC Charge to be recovered in May, 2016 to July 2016	Rs. Crore	(38.22)	(34.09)	(32.38)
3.2	FAC disallowed corresponding to excess Distribution Loss	Rs. Crore	-	-	-
3.3	Carried forward FAC for recovery during future period	Rs. Crore	0.00	0.00	0.00



10. Recovery of FAC:

10.1 At the end of June, 2016, FAC to be carried forward for next month is Nil.

10.2 The Commission approves the FAC computed for Quarter-I of FY 2016-17 as given in the Table above subject to Truing up of BEST Undertaking for FY 2016-17.

11. Slab wise and Category wise FAC for the month of April 2016 to June 2016 to be recovered in billing month of May 2016 to July 2016:

Category	Slabs	FAC to be recovered in billing month (Rs/kWh)		
		May 2016	June 2016	July 2016
LT Category				
BPL	0-30	(0.10)	(0.08)	(0.07)
LT-I	1-100	(0.33)	(0.27)	(0.25)
	101-300	(0.70)	(0.56)	(0.53)
	301-500	(0.94)	(0.75)	(0.71)
	>501	(1.14)	(0.91)	(0.86)
LT-II(a)	0-500	(0.96)	(0.77)	(0.72)
	>500	(1.28)	(1.02)	(0.96)
LT-II(b)	all units	(1.18)	(0.95)	(0.89)
LT-II(c)	all units	(1.22)	(0.98)	(0.92)
LT-III	0-500	(0.84)	(0.67)	(0.63)
	>500	(1.11)	(0.89)	(0.84)
LT-IV(a)	all units	(1.03)	(0.83)	(0.78)
LT-IV(b)	all units	(1.01)	(0.81)	(0.76)
LT-V	all units	(1.77)	(1.42)	(1.33)
LT-VI	all units	(0.98)	(0.79)	(0.74)
LT-VII(a)	all units	(0.52)	(0.42)	(0.39)
LT-VII(b)	all units	(1.37)	(1.10)	(1.04)
LT-VIII	all units	(0.53)	(0.42)	(0.40)
LT-IX(a)	all units	(1.00)	(0.80)	(0.76)
LT-IX(b)	all units	(1.04)	(0.83)	(0.78)
HT Category				
HT-I	all units	(0.98)	(0.79)	(0.74)
HT-II	all units	(1.06)	(0.85)	(0.80)
HT-III	all units	(0.72)	(0.58)	(0.54)
HT-IV	all units	(1.29)	(1.03)	(0.97)
HT-V	all units	(0.97)	(0.78)	(0.73)

