



# महाराष्ट्र विद्युत नियामक आयोग

## Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/RInfra-D/20162017/01350

Date: 13 January, 2017

To,  
**The Director,**  
Reliance Infrastructure Limited,  
Devidas Lane, Off SVP Road,  
Near Devidas Telephone Exchange,  
Borivali (W), Mumbai 400 092

**Subject:** Prior approval of Fuel Adjustment Charge (FAC) submission of RInfra-D for the month of October 2016.

**Reference:** a) RInfra-D's FAC submission for month of Oct, 2016 vide letter dated 9 January, 2017.

Sir,

Upon vetting the FAC calculations for the month of October 2016 as mentioned in the above reference, the Commission has accorded prior approval to RInfra for refunding FAC to its consumers as shown in the table below:

Month		Z <sub>FAC</sub> Amount (Rs. Crore)
Standalone Z <sub>FAC</sub> for October, 2016	A	(23.29)
1 <sup>st</sup> Instalment of refundable part of recalculated FAC for the period of April to September, 2016*	B	(29.81)
<b>Net Z<sub>FAC</sub> allowed for October, 2016</b>	<b>c=a+b</b>	<b>(53.10)</b>

\*The Commission allowed RInfra-D to refund over-recovered FAC of Rs. 170.41 crore (recalculated for the period of April to September, 2016 based on Tariff Order dated 21 October, 2016) in six equal instalments starting from October, 2016 along with holding cost.

RInfra-D is hereby allowed to refund the above Z<sub>FAC</sub> to its consumers in the billing month of January 2017.

Yours faithfully,

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

**Encl:** Annexure A: Detailed Vetting Report for the month of October 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, SantDynyanshwarMarg, 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 <sup>st</sup> floor, UdyogBhawan, Civil Lines, Nagpur 440 001
Maharashtra Chamber of Commerce, Industry & Agriculture, Oricon House, 6 <sup>th</sup> Floor, 12k. DubashMarg, Fort, Mumbai- 400001 (Nashik Branch) Email: <a href="mailto:maccia.nsk@gmail.com">maccia.nsk@gmail.com</a>	Chamber of Marathwada Industries and Agriculture, Bajaj Bhavan, P-2, MIDC Area, Station Road, Aurangabad – 431 005



**PRIOR APPROVAL FOR FAC FOR THE MONTH OF OCTOBER 2016**

**Subject:** Prior approval of Fuel Adjustment Charge (FAC) submission for RInfra-D for the month of October 2016.

**Reference:** RInfra-D's FAC submission for month of Oct, 2016 vide letter dated 9 January, 2017.

**1. FAC submission by RInfra-D:**

1.1 RInfra-D has submitted FAC submissions for the month of October 2016 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by RInfra-D, the Commission has accorded prior approval for the FAC amount of October, 2016 to be charged in the billing month of January 2017.

**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 True-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 In this Tariff Order, the Commission has stipulated methodology of levying FAC as follows:

*"1. Fuel Adjustment Cost will be applicable to all consumers and will be charged over the above tariffs, on the basis of the FAC formula specified by the Commission, and computed on a monthly basis. The FAC for the month of October, 2016 shall be levied after prior approval of the Commission, in accordance with the first proviso to Regulation 10.2 of the MYT Regulations, 2015."*

2.3 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.



2.4 Accordingly, vide its letter dated 9 January, 2017 RInfra-D has filed FAC submission for the month of October, 2016 for prior 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)	Approved (MU)	Actual (Oct-16) (MU)
	(I)	(II=I/4)	(III)
<b>LT Category</b>			
<b>BPL</b>	0.02	0.01	0.01
<b>LT -I Residential (Single Phase)</b>			
0-100	1646.18	411.55	137.41
101-300	1070.32	267.58	87.63
301-500	186.98	46.75	11.81
500 and above	70.49	17.62	3.32
<b>LT -I Residential (Three Phase)</b>			
0-100	222.77	55.69	19.38
101-300	334.48	83.62	28.50
301-500	177.74	44.44	13.92
500 and above	338.75	84.69	26.67
<b>LT II Commercial</b>			
0-20 kW	1669.85	417.46	142.94
>20-50 kW	219.41	54.85	18.09
>50 kW	468.58	117.15	39.80
LT III - LT Industrial Upto 20 kW	159.62	39.91	13.54
LT III - LT Industrial Above 20 kW	381.62	95.41	33.87
LT IV – Public Water Works	2.94	0.74	0.00
LT-V : LT- Advertisements and Hoardings	3.61	0.90	0.31
LT VI: LT -Street Lights	64.16	16.04	5.84
LT-VII (A): LT -Temporary Supply Religious	2.08	0.52	0.36
LT-VII (B): LT -Temporary Supply Others	82.41	20.60	4.70
LT VIII: LT - Crematorium & Burial Grounds	1.04	0.26	0.09
LT IX: LT -Agriculture	0.09	0.02	0.00



Consumer Category	Approved by the Commission (MU)	Approved (MU)	Actual (Oct-16) (MU)
	(I)	(II=I/4)	(III)
LT X: LT -Public Service (A)	20.00	5.00	1.77
LT X: LT -Public Service (B)	67.02	16.76	6.81
<b>HT Category</b>			
HT I (Industrial)	309.45	77.36	25.57
HT II (Commercial.)	544.52	136.13	38.00
HT III (Group Housing Soc.)	47.60	11.90	3.33
HT IV (Temporary Supply)	12.26	3.07	1.10
HT - Railways	15.96	3.99	2.28
HT - Public Services (A)	9.40	2.35	0.56
HT - Public Services (B)	95.63	23.91	7.60
HT – Public Water Works	6.45	1.61	0.60
<b>Total Energy Sale</b>	<b>8231.07</b>	<b>2057.89</b>	<b>675.83</b>

#### 4. Cost of Power Purchase

- 4.1 RInfra-D purchases majority of its power from RInfra-G. Further, RInfra-D also procures power from other sources in order to fulfil the demand of its consumers. The following are the list of sources from which RInfra-D 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.
  - MSEDCL
- 4.2 It was observed that RInfra-D in its FAC submission for October, 2016 has not considered the approved power purchase cost towards solar (Rs. 112.22 crore) and non-solar REC (Rs. 9.43 crore) while computing the approved average power purchase cost for FY 2016-17. However, the Commission has considered these amounts towards solar and non-solar REC procurement for FY 2016-17 as the same has been approved in the Tariff Order for FY 2016-17.
- 4.3 The following table shows the variation in average power purchase cost (Rs/kWh) for the month of October, 2016 as compared to average power purchase cost approved in Tariff Order dated 21 October, 2016:



Particulars	Tariff Order Dated 21.10.2016			Actual for October, 2016		
	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	1537.29	4.04	287.86	115.11	4.00
RE Sources	275.00	296.54	10.78	16.10	11.10	6.89
VIPL-G	4059.71	1795.60	4.42	333.44	148.58	4.46
Bilateral/ Traders	1410.66	442.91	3.14	57.10	17.03	2.98
Others	-	55.53	-	81.48	20.43	2.51
<b>Total</b>	<b>9546.02</b>	<b>4127.87</b>	<b>4.32</b>	<b>775.97</b>	<b>312.25</b>	<b>4.02</b>

4.4 The Commission allows the average power purchase cost of Rs. 4.02/kWh for the month of October 2016 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 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 month of October, 2016:

S. No.	Particulars	Units	Amount
1	Average power purchase cost approved by the Commission	Rs./kWh	4.32
2	Actual average power purchase cost	Rs./kWh	4.02
3	Change in average power purchase cost (=2 -1)	Rs./kWh	(0.30)
4	Net Power Purchase	MU	775.97
5	<b>Change in fuel and power purchase cost (=3 x 4/10)</b>	<b>Rs. Crore</b>	<b>(23.29)</b>



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

6.1 The Commission is in the process of providing prior approval of FAC for the first month after issuance of Tariff Order and hence there would not be any adjustment factor for previous months that is to be considered while computing the allowable FAC.

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

7.1 As explained in the above paragraph in absence of any adjustment factor for previous month, there is no carrying cost which is to be allowed in FAC for the month of October 2016.

**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  $Z_{FAC}$  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  $Z_{FAC}$  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  $Z_{FAC}$  corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total  $Z_{FAC}$  recoverable”*

8.2 In its Tariff Order dated 21 October, 2016, the Commission has set Distribution Loss target of 9.11% for FY 2016-17. It is pertinent to not that such Distribution Loss target is for distribution system of RInfra which is also used by TPC-D for supplying to its changeover consumers. Therefore, this distribution loss target is not relevant for the purpose of calculating FAC which is based on the variation in power purchase cost for supplying to RInfra’s own consumers.

8.3 Distribution Loss level considered in the Tariff Order dated 21 December, 2016 for arriving at the power purchase requirement of RInfra’s own consumers is tabulated below. The following table also 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-16
1	Net Energy input at Distribution Voltages for own sales*	MU	9172.24	5438.71
2	Own Energy sales at Distribution voltages	MU	8231.07	4905.72
3	Distribution Loss (3 - 4)	MU	941.17	533.00
4	Distribution Loss as % of net energy input (3/1)	%	10.26%	9.80%
5	Excess Distribution Loss =[Actual Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	-
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	-	-

*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 (2258.85MU)" from the approved "total energy input at T<>D (11431.09MU)"*

- 8.4 As seen from the above table, cumulative Distribution Loss up to the month of October 2016 is 9.80% which is lower than the approved Distribution Loss of 10.26%. Accordingly, there is no deduction on account of excess distribution loss for month of October, 2016.

#### 9. Recalculation of FAC for the period April to September 2016:

- 9.1 In its vetting report dated 26 December, 2016 for the month of July to September, 2016, the Commission has directed RInfra-D as follows:

*"Since, FAC for the period of April 2016 to September 2016 has been calculated based on the power purchase cost approved for FY 2015-16 in the prevailing Tariff Order dated 26 June, 2015, RInfra is directed to recalculate FAC for this period after considering the power purchase cost approved for FY 2016-17 in Tariff Order dated 21 October, 2016. RInfra shall adjust the resultant FAC amount which remains to be recovered / refunded in next FAC billing process."*

- 9.2 In compliance of above, RInfra-D vide letter dated 9 January, 2017 submitted recomputed FAC for the month of April to September, 2016 after comparing actual power purchase expenses with approved expenses for FY 2016-17 in Tariff Order dated 21 October, 2016. As per this submission FAC of Rs 109.04 crore is to be refunded to the consumers for this period. RInfra-D has proposed to refund this amount in six equal instalments.





9.3 The Commission has scrutinised submission of RInfra-D and found that FAC of Rs 170.41 crore is to be refunded to the consumers for the period of April to September, 2016. The Commissions directs RInfra-D to refund Rs 170.41 crore to its consumers in six equal instalments with holding cost, as it pertains to the period of six months.

9.4 The Commission has considered Rs. 28.40 Crore (1/6<sup>th</sup>) of the total amount to be adjusted in FAC of October 2016 along with holding cost of Rs. 1.41 crore totalling to Rs. 29.81 crore.

## 10. Summary of Allowable $Z_{FAC}$

10.1 The summary of the FAC amount as approved by the Commission for the month of October 2016 which is allowed to be recovered in the billing month of January is as shown in the Table below.

S. No.	Particulars	Units	Oct-16
<b>1.0</b>	<b>Calculation of <math>Z_{FAC}</math></b>		
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	(23.29)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	0.00
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	0.00
<b>1.4</b>	<b><math>Z_{FAC} = F+C+B</math></b>	<b>Rs. Crore</b>	<b>(23.29)</b>
1.5	1 <sup>st</sup> instalment of recalculated net FAC amount of Rs. 170.41 crore for April to Sept-2016 (with Holding cost) to be refunded	Rs. Crore	(29.81)
<b>1.6</b>	<b>Net <math>Z_{FAC}</math> for month of October, 2016</b>	<b>Rs. Crore</b>	<b>(53.10)</b>
<b>2.0</b>	<b>Calculation of <math>Z_{FAC}</math> Charge</b>		
2.1	Energy Sales within the License Area	MU	675.83
2.2	Excess Distribution Loss	MU	0.00
2.3	$Z_{FAC}$ per kWh	Rs./kWh	(0.79)
<b>3.0</b>	<b>Recovery of <math>Z_{FAC}</math></b>		
3.1	Allowable $Z_{FAC}$	Rs. Crore	(53.10)
3.2	FAC disallowed corresponding to excess Distribution Loss	Rs. Crore	0.00
<b>4.0</b>	<b>Total <math>Z_{FAC}</math> based on category wise and slab wise allowed to be recovered</b>	<b>Rs. Crore</b>	<b>(53.10)</b>



## 11. Recovery from Consumers:

11.1 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  $Z_{FAC}$  per kWh for a particular Tariff category/sub-category/consumption slab shall be computed as per the following formula:—*

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

*Where:*

$Z_{FAC\ Cat}$  =  $Z_{FAC}$  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  $Z_{FAC}$  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....”*

11.2 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 month of October 2016.

11.3 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

11.4 The following table shows per unit  $Z_{FAC}$  to be charged to the consumers of RInfra-D for the billing month of January 2017.



S.No.	Consumer Category	Slabs	Z <sub>FAC</sub> to be levied in billing month of January, 2017 (Rs/kWh)
<b>(A)</b>	<b>LT Category</b>		
1	LT - I (A) Residential-BPL	0 – 30	(0.42)
2	LT - I (B) Residential (Single Phase)	0 – 100	(0.32)
		101 - 300	(0.70)
		301 - 500	(0.80)
		> 501	(0.95)
	LT - I (B) Residential (Three Phase)	0 – 100	(0.32)
		101 - 300	(0.66)
		301 - 500	(0.79)
		> 501	(0.93)
3	LT - II (A) Commercial	all units	(0.86)
4	LT - II (B) Commercial	all units	(0.91)
5	LT - II (C) Commercial	all units	(0.96)
6	LT - III (A) Industrial	Upto 20kW	(0.77)
7	LT - III (B) Industrial	Above 20kW	(0.81)
8	LT - IV Public Water Works	all units	(0.70)
9	LT - V Advertisement & Hoardings	all units	(1.13)
10	LT - VI Streetlights	all units	(0.74)
11	LT - VII (A) Temporary Supply-Religious	all units	(0.63)
12	LT - VII (B) Temporary Supply-Others	all units	(0.96)
13	LT - VIII Crematorium and Burial Grounds	all units	(0.60)
14	LT - IX (A) Public Service – Govt. Hospital & Educational Institutes	all units	(0.70)
15	LT - IX (B) Public Service- Others	all units	(0.76)
16	LT – X (A) Agriculture – pumpsets	all units	(0.39)
17	LT – X (A) Agriculture – others	all units	(0.58)
<b>(B)</b>	<b>HT Category</b>		
18	HT - I Industry	all units	(0.84)
19	HT - II Commercial	all units	(0.89)
20	HT - III Group Housing Society (Residential)	all units	(0.75)
21	HT - IV Public Water Works	all units	(0.72)
22	HT-V Railways, Metro & Monorail	all units	(0.66)
23	HT-VI (A) Public Service – Govt. Hospitals & Educational Institutes	all units	(0.78)
24	HT-VI (B) Public Service-Others	all units	(0.87)
25	HT-VII Temporary Supply	all units	(0.90)

