



# महाराष्ट्र विद्युत नियामक आयोग

## Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/20172018/0369

Date: 19 March, 2018

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

**Subject:** Post facto approval of RInfra-D Fuel Adjustment Charges (FAC) for the period of October, 2017 to December, 2017.

**Reference:** RInfra-D's FAC submission vide letter dated 22 February, 2018 for post-facto approval of FAC for the period from October, 2017 to December, 2017.

Sir,

Upon vetting the FAC calculations for the months of October, 2017 to December, 2017 as mentioned in the above reference, the Commission has accorded post facto approval to RInfra-D undertaking for charging FAC to its consumers as shown in the table below:

Month	October 2017	November 2017	December 2017
Z <sub>FAC</sub> allowed for recovery (Rs. Crore)	10.40	23.15	26.49

The above approval of FAC is subject to 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.

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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: <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



**POST FACTO APPROVAL FOR FAC CHARGES FOR THE MONTHS OF  
OCTOBER, 2017 TO DECEMBER, 2017**

**Subject:** Post facto approval of RInfra-D Fuel Adjustment Charges (FAC) for the period of October, 2017 to December, 2017.

**Reference:** RInfra-D's FAC submission vide letter dated 22 February, 2018 for post-facto approval of FAC for the period from October, 2017 to December, 2017.

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

1.1 RInfra-D has submitted FAC submissions for the months of October, 2017 to December, 2017 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by RInfra-D, the Commission has accorded post facto approval for the FAC amount to be charged in the billing months of December, 2017 to February, 2018.

**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 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 13 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 22 February, 2018, RInfra-D has filed FAC submissions for the months of October, 2017 to December, 2017 for post facto 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)	Monthly Approved (MU)	Actual Sales		
			Oct-17	Nov-17	Dec-17
			MU	MU	MU
			(I)	(II=I/12)	(III)
<b>Low Tension - LT</b>					
LT I - BPL	0.02	0.00	0.00	0.00	0.00
<b>LT -I Residential (Single Phase)</b>					
0-100	1712.64	142.72	139.10	134.72	126.86
101-300	1110.85	92.57	100.87	80.98	59.07
301-500	194.23	16.19	17.32	10.73	5.11
500 and above	73.25	6.10	5.70	3.09	1.32
<b>LT -I Residential (Three Phase)</b>					
0-100	235.14	19.60	20.34	20.49	20.42
101-300	352.72	29.39	31.37	29.84	26.70
301-500	185.53	15.46	17.40	14.68	10.83
500 and above	352.08	29.34	33.58	29.00	23.90
<b>LT II-Commercial</b>					
LT II (a) - 0-20 kW	1720.60	143.38	151.89	145.69	131.81
LT II (a) TOD Option	0.00	0.00	0.01	0.01	0.01
LT II (b) - 20-50 kW	221.98	18.50	19.92	18.83	17.32
LT II (c) - above 50 kW	462.16	38.51	46.39	43.59	40.02
LT III - LT Industrial upto 20 kW	163.16	13.60	14.02	14.31	14.52
LT III(A) - LT Industrial upto 20 kW TOD Option	0.00	0.00	0.00	0.00	0.00
LT III(B) - LT Industrial above 20 kW	379.10	31.59	34.23	33.84	32.25
LT IV - Public Water Works	3.23	0.27	1.13	1.07	1.07
LT-V : LT- Advertisements and Hoardings	3.74	0.31	0.28	0.29	0.29
LT VI: LT -Street Lights	66.43	5.54	4.97	5.01	5.57
LT-VII (A): LT -Temporary Supply Religious	2.23	0.19	0.25	0.16	0.13
LT-VII (B): LT -Temporary Supply Others	81.48	6.79	1.08	1.36	1.26
LT VIII: LT - Crematorium & Burial Grounds	1.10	0.09	0.10	0.09	0.10
LT IX: LT -Public Service (A)	20.49	1.71	1.90	1.81	1.64
LT IX: LT -Public Service (B)	68.67	5.72	8.27	8.16	6.88
LT X (A) : LT - Agriculture Pumpsets	0.11	0.01	0.00	0.00	0.00
LT X (B) : LT -Others	0.00	0.00	0.02	0.01	0.01



Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales		
			Oct-17	Nov-17	Dec-17
			MU	MU	MU
			(I)	(II=I/12)	(III)
<b>HT Category</b>					
HT 1 (Industrial)	363.22	30.27	31.11	28.67	25.03
HT 2 (Commercial.)	543.88	45.32	43.19	35.24	32.88
HT 3 (Group Housing Soc.)	50.93	4.24	3.61	3.07	2.86
HT 4 (Temporary Supply)	13.30	1.11	0.14	0.22	0.25
HT - Railways	15.96	1.33	2.50	2.33	2.30
HT - Public Services (A)	9.20	0.77	0.63	0.57	0.51
HT - Public Services (B)	95.06	7.92	8.79	6.78	5.67
HT - Public Water works	7.09	0.59	0.63	0.57	0.59
<b>TOTAL</b>	<b>8509.17</b>	<b>709.10</b>	<b>740.75</b>	<b>675.22</b>	<b>597.18</b>

#### 4. Cost of Power Purchase

4.1 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 The following tables show the variation in average power purchase cost (Rs/kWh) for the months of October, 2017 to December, 2017 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, 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
RInfra-G	3800.65	1566.90	4.12	242.30	112.31	4.64
RE Sources	275.15	345.43	12.55	11.26	8.81	7.83
VIPL-G	4059.71	1788.08	4.40	323.56	154.06	4.76
Bilateral/Traders	1700.62	533.95	3.14	175.86	85.02	4.83
Others	-	-	-	98.94	18.32	1.85
<b>Total</b>	<b>9836.13</b>	<b>4234.36</b>	<b>4.30</b>	<b>851.92</b>	<b>378.53</b>	<b>4.44</b>



Particulars	Actual for November, 2017			Actual for December, 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
RInfra-G	282.07	127.64	4.53	254.58	117.98	4.63
RE Sources	10.70	8.06	7.54	13.87	9.55	6.89
VIPL-G	333.78	158.12	4.74	328.67	164.92	5.02
Bilateral/Traders	73.15	32.63	4.46	15.22	6.16	4.04
Others	42.42	13.33	3.14	52.16	11.25	2.16
<b>Total</b>	<b>742.12</b>	<b>339.78</b>	<b>4.58</b>	<b>664.51</b>	<b>309.87</b>	<b>4.66</b>

4.3 The Commission allows the average power purchase cost of **Rs. 4.44/kWh** for the month of October, 2017, **Rs. 4.58/kWh** for the month of November, 2017 and **Rs. 4.66/kWh** for the month of December, 2017 as shown in the tables 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 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 months 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	4.30	4.30	4.30
2	Actual average power purchase cost	Rs./kWh	4.44	4.58	4.66
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.14	0.27	0.36
4	Net Power Purchase	MU	851.92	742.12	664.51
5	<b>Change in fuel and power purchase cost (=3 x 4/10)</b>	<b>Rs. Crore</b>	<b>11.79</b>	<b>20.30</b>	<b>23.80</b>



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

6.1 After adjustment for over-recovery/under recovery (B), 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	(19.29)	19.77	10.40
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	(17.93)	16.97	7.75
1.3	Over-recovery/under-recovery (1.2 - 1.1)	Rs. Crore	(1.36)	2.80	2.65
1.4	Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit	Rs. Crore	0.00	0.00	0.00
1.5	Adjustment factor for over-recovery/under-recovery (1.3+1.4)	Rs. Crore	(1.36)	2.80	2.65

## 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 October, 2017 to December, 2017.

Month	October 2017	November 2017	December 2017
Adjustment Factor (Rs. Crore)	(1.36)	2.80	2.65
Applicable Interest Rate*	10.45%	10.45%	9.45%
Carrying/ Holding cost for under/ over recovery (Rs. Crore)	(0.02)	0.05	0.04

\* 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% plus 150 basis points. Further, for the month of December, 2017, as per Regulation 2.1 (10) of MERC (MYT) (First Amendment) Regulations, 2017, the interest rate has been considered based on One year SBI MCLR as on 1<sup>st</sup> December 2017, i.e., 7.95 % plus 150 basis points.

## 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	Nov-17	Dec-17
1	Net Energy Input at Distribution Voltages for own sales*	MU	9450.99	5772.61	6494.34	7,144.18
2	Own Energy sales at Distribution voltages	MU	8509.17	5227.17	5902.39	6,499.58
3	Distribution Loss (1 - 2)	MU	941.82	545.44	591.94	644.60
4	Distribution Loss as % of net energy input (3/1)	%	9.97%	9.45%	9.11%	9.02%
5	Excess Distribution Loss = [Actual Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	0	0	0
6	<b>Disallowance of FAC due to excess Distribution Loss</b>	<b>Rs. Crore</b>	-	0	0	0

\*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 (2331.86 MU)” from the approved “total energy input at T<>D (11782.85 MU)”

8.3 As seen from the above table, cumulative distribution loss for the months of October, 2017 to December, 2017 is lower than the approved distribution loss of 9.97%. Accordingly, no deduction has been made on account of excess distribution loss for these months.



## 9. Summary of Allowable Z<sub>FAC</sub>

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 December, 2017 to February, 2018 is as shown in the Table below.

S. No.	Particulars	Units	Oct 2017	Nov 2017	Dec 2017
<b>1.0</b>	<b>Calculation of ZFAC</b>				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	11.79	20.30	23.80
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.02)	0.05	0.04
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(1.36)	2.80	2.65
<b>1.4</b>	<b>ZFAC = F+C+B</b>	<b>Rs. Crore</b>	<b>10.40</b>	<b>23.15</b>	<b>26.49</b>
<b>2.0</b>	<b>Calculation of FAC Charge</b>				
2.1	Energy Sales within the License Area	MU	740.75	675.22	597.18
2.2	Excess Distribution Loss	MU	-	-	-
2.3	ZFAC per kWh	Rs./kWh	0.14	0.34	0.44
<b>3.0</b>	<b>Recovery of FAC</b>				
3.1	Allowable FAC [(2.1 x 2.3)/10]	Rs. Crore	10.40	23.15	26.49
3.2	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.3)/10]	Rs. Crore	-	-	-
<b>4.0</b>	<b>Total FAC based on category wise and slab wise allowed to be recovered</b>	<b>Rs. Crore</b>	<b>10.40</b>	<b>23.15</b>	<b>26.49</b>
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 = 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 a variation of Z<sub>FAC</sub> in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the months of October, 2017 to December, 2017.

10.3 The variation in FAC in absolute terms is due to formula error of Z<sub>FAC</sub> 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<sub>FAC</sub> to be charged to the consumers of RInfra-D for the billing month of December, 2017 to February, 2018.

S.No.	Consumer Categories	Slabs	ZFAC be levied in billing month of		
			Dec'17	Jan'18	Feb'18
			Rs./kWh	Rs./kWh	Rs./kWh
(A)	<b>LT Category</b>				
1	LT I - Below Poverty Line	0-30	0.0755	0.1845	0.2386
2	LT -I Residential (Single Phase)				
		0-100	0.0623	0.1521	0.1968
		101-300	0.1268	0.3098	0.4007
		301-500	0.1472	0.3598	0.4654



S.No.	Consumer Categories	Slabs	ZFAC be levied in billing month of		
			Dec'17	Jan'18	Feb'18
			Rs./kWh	Rs./kWh	Rs./kWh
		500 and above	0.1750	0.4278	0.5533
3	LT -I Residential (Three Phase)				
		0-100	0.0614	0.1500	0.1939
		101-300	0.1198	0.2929	0.3788
		301-500	0.1445	0.3532	0.4568
		500 and above	0.1714	0.4190	0.5419
4	LT II : LT - Non - Residential or Commercial				
		0-20 kW	0.1547	0.3782	0.4891
		20-50 kW	0.1562	0.3819	0.4939
		above 50 kW	0.1644	0.4017	0.5196
5	LT III (A) - LT Industrial	upto 20 kW	0.1314	0.3212	0.4155
6	LT III (B) - LT Industrial	above 20 kW	0.1423	0.3477	0.4497
7	LT IV : LT- Public Water Works	all units	0.1290	0.3153	0.4078
8	LT V : LT- Advertisements and Hoardings	all units	0.1926	0.4708	0.6089
9	LT VI: LT -Street Lights	all units	0.1325	0.3238	0.4188
10	LT VII (A): LT -Temporary Supply Religious	all units	0.1149	0.2808	0.3632
11	LT VII (B): LT -Temporary Supply Others	all units	0.1647	0.4024	0.5205
12	LT VIII: LT - Crematorium & Burial Grounds	all units	0.1075	0.2628	0.3399
13	LT IX (A) : LT -PS - Govt. Hospitals & EI	all units	0.1245	0.3043	0.3936
14	LT IX (B) : LT -PS – Others	all units	0.1286	0.3142	0.4064
15	LT X (A) : LT - Agriculture Pumpsets	all units	0.0732	0.1790	0.2315
16	LT X (B) : LT - Agriculture Others	all units	0.1053	0.2573	0.3328
(B)	<b>High Tension – HT</b>				
17	HT I: HT-Industry	all units	0.1474	0.3602	0.4659
18	HT II : HT- Commercial	all units	0.1556	0.3804	0.4920
19	HT III: HT-Group Housing Society	all units	0.1356	0.3315	0.4288
20	HT IV : HT - Public Water Works	all units	0.1438	0.3514	0.4545
21	HT V : HT - Railways	all units	0.1202	0.2937	0.3798
22	HT VI (A) : HT - PS - Govt. Hospitals & EI	all units	0.1385	0.3385	0.4378
23	HT VI (B) : HT - PS - Others	all units	0.1523	0.3723	0.4815
24	HT VII - Temporary Supply	all units	0.1558	0.3808	0.4925

