

# महाराष्ट्र विद्युत नियामक आयोग

# **Maharashtra Electricity Regulatory Commission**

Ref. No. MERC/FAC/20172018/506\

Date: 2 January, 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

July, 2017 to September, 2017.

Reference:

RInfra-D's FAC submission vide letter dated 2 December, 2017 for post-facto

approval of FAC for the period from July, 2017 to September, 2017.

Sir,

Upon vetting the FAC calculations for the months of July, 2017 to September, 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	Jul 2017	Aug 2017	Sept 2017
Z <sub>FAC</sub> allowed for recovery (Rs. Crore)	(22.71)	(19.29)	19.77

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 July, 2017 to September, 2017.

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## Maharasitta Electricity Regulatory Commission

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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 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 FACCHARGES FOR THE MONTHS OF JULY, 2017 TO SEPTEMBER, 2017

Subject: Post facto approval of RInfra-D Fuel Adjustment Charges (FAC) for the period

of July, 2017 to September, 2017.

RInfra-D's FAC submission vide letter dated 2 December, 2017 for post-facto

approval of FAC for the period from July, 2017 to September, 2017.

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

1.1 RInfra-D has submitted FAC submissions for the months of July, 2017 to September, 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 September, 2017 to November, 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 Truing-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 2 December, 2017, RInfra-D has filed FAC submissions for the months of July, 2017to September, 2017for 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.

	Approved by	Monthly	A	ctual Sales	
Consumer Category	the Commission (MU)	Approved (MU)	Jul-17	Aug-17	Sep-17
			MU	MU	MU
	(I)	(II=I/12)	(III)	(IV)	(V)
Low Tension - LT		(A.A.)			
LT I - BPL	0.02	0.00	0.00	0.00	0.00
LT -I Residential (Single Phase)		30.60		(8)	Service LT Y
0-100	1712.64	142.72	138.03	140.31	138.36
101-300	1110.85	92.57	95.78	98.64	98.65
301-500	194.23	16.19	14.55	14.89	16.03
500 and above	73.25	6.10	4.48	4.58	5.03
LT -I Residential (Three Phase)	120.20	18.848		ommercial	HT 2YC
0-100	235.14	19.60	20.02	20.38	20.11
101-300	352.72	29.39	30.15	30.70	30.82
301-500	185.53	15.46	15.62	15.86	16.50
500 and above	352.08	29.34	30.51	31.73	31.83
LT II-Commercial			(4)	aivaeZ aide	9-31
LT II (a) - 0-20 kW	1720.60	143.38	147.65	151.23	150.08
LT II (a) TOD Option	0.00	0.00	0.02	0.01	0.0
LT II (b) - 20-50 kW	221.98	18.50	19.72	18.94	19.17
LT II (c) - above 50 kW	462.16	38.51	45.61	44.71	45.15
LT III - LT Industrial upto 20 kW	163.16	13.60	13.81	14.93	14.99
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	34.61	33.72	34.17
LT IV - Public Water Works	3.23	0.27	1.16	1.15	1.00
LT-V : LT- Advertisements and Hoardings	3.74	0.31	0.26	0.26	0.2
LT VI: LT -Street Lights	66.43	5.54	4.33	4.69	4.84
LT-VII (A): LT - Temporary Supply Religious	2.23	0.19	0.06	0.71	0.4



	Approved by	Monthly	A	ctual Sales	
Consumer Category	the Commission (MU)	Approved (MU)	Jul-17 MU	Aug-17 MU	Sep-17 MU
	(I)	(II=I/12)	(III)	(IV)	(V)
LT-VII (B): LT - Temporary Supply Others	81.48	6.79	1.13	1.33	1.11
LT VIII: LT - Crematorium & Burial Grounds	1.10	0.09	0.09	0.09	0.10
LT IX: LT -Public Service (A)	20.49	1.71	2.02	1.86	2.00
LT IX: LT -Public Service (B)	68.67	5.72	9.07	8.38	8.71
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	0.01	0.01	0.01
HT Category					
HT 1 (Industrial)	363.22	30.27	28.55	27.92	29.33
HT 2 (Commercial.)	543.88	45.32	41.42	39.73	39.00
HT 3 (Group Housing Soc.)	50.93	4.24	3.56	3.45	3.46
HT 4 (Temporary Supply)	13.30	1.11	0.12	0.17	0.19
HT - Railways	15.96	1.33	2.56	4.60	2.50
HT - Public Services (A)	9.20	0.77	0.64	0.61	0.62
HT - Public Services (B)	95.06	7.92	6.02	7.13	7.38
HT - Public Water works	7.09	0.59	0.76	0.74	0.68
TOTAL	8509.17	709.10	712.31	723.48	722.57

#### 4. Cost of Power Purchase

- 4.1 The following are the list of sources from which RInfra-D procures power to meet its demand
  - a) Purchases from RInfra-G (DTPS)
  - b) Purchase from other generating stations such as VIPL
  - c) Renewable energy procurement(RPS)
  - d) Bilateral contracts and decrements to the imbalance pool.
  - e) MSEDCL
- 4.2 The following tables show the variation in average power purchase cost (Rs/kWh) for the months of July, 2017 to September, 2017 as compared to average power purchase cost approved in Tariff Order dated 21 October, 2016:



	Tariff Ord	er Dated 2	1.10.2016	Actual for July, 2017			
Particulars	Net Purchase Cost		Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchas e Cost	
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh	
RInfra-G	3800.65	1566.90	4.12	280.68	120.65	4.30	
RE Sources	275.15	345.43	12.55	56.50	31.44	5.57	
VIPL-G	4059.71	1788.08	4.40	158.95	78.39	4.93	
Bilateral/Traders	1700.62	533.95	3.14	179.64	54.33	3.02	
Others	-	-	-	140.11	44.26	3.16	
Total	9836.13	4234.36	4.30	815.88	329.07	4.03	

	Actual	for Augus	t, 2017	Actual for September, 2017			
Particulars	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	281.18	122.14	4.34	252.44	115.84	4.59	
RE Sources	36.08	21.04	5.83	18.78	12.44	6.63	
VIPL-G	186.40	84.79	4.55	243.51	109.99	4.52	
Bilateral/Traders	196.91	72.91	3.70	231.35	110.14	4.76	
Others	108.42	30.99	2.86	78.29	28.07	3.59	
Total	808.99	331.86	4.10	824.37	376.48	4.57	

4.3 The Commission allows the average power purchase cost of **Rs. 4.03/kWh** for the month of July, 2017, **Rs. 4.10/kWh** for the month of August, 2017 and **Rs. 4.57/kWh** for the month of September, 2017as 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<sub>FAC</sub> is to be passed on to the consumers.
- 5.2 The following table shows the Z<sub>FAC</sub> worked out by the Commission on account of difference in fuel and power purchase cost for the months of July, 2017 to September, 2017.

S. No.	Particulars	Units	Jul 2017	Aug 2017	Sept 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	4.03	4.10	4.57
3	Change in average power purchase cost (=2 -1)	Rs./kWh	(0.27)	(0.20)	0.26
4	Net Power Purchase	MU	815.88	808.99	824.37
5	Change in fuel and power purchase cost (=3 x 4/10)	Rs. Crore	(22.16)	(16.40)	21.59

#### 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	Jul 2017	Aug 2017	Sept 2017
1.1	Incremental cost allowed to be recovered in Month n-4	Rs. Crore	(2.67)	(19.62)	(22.71)
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	(2.12)	(16.78)	(20.92)
1.3	Over-recovery/under-recovery (1.2 - 1.1)	Rs. Crore	(0.54)	(2.84)	(1.79)
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	(0.54)	(2.84)	(1.79)

#### 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 July, 2017 to September, 2017.

Month	July 2017	August 2017	September 2017
Adjustment Factor (Rs. Crore)	(0.54)	(2.84)	(1.79)
Applicable Interest Rate*	10.50%	10.50%	10.50%



Carrying/ Holding cost for under/ over	(0.01)	(0.05)	(0.02)
recovery (Rs. Crore)	(0.01)	(0.05)	(0.03)

<sup>\*</sup> The applicable interest rate has been considered to be 10.50% based on applicable SBI base rate as on 1 July, 2017, i.e., 9.00%which is the rate prevailing at the beginning of the month plus 150 basis point.

#### 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			
				Jul-17	Aug-17	Sept-17	
1	Net Energy Input at Distribution Voltages for own sales*	MU	9450.99	792.52	785.94	804.51	
2	Own Energy sales at Distribution voltages	MU	8509.17	712.31	723.48	722.57	
3	Distribution Loss (1 - 2)	MU	941.82	80.21	62.47	81.94	
4	Distribution Loss as % of net energy input (3/1)	%	9.97%	9.55%	9.24%	9.40%	



S. No.	Particulars	Units			Actual up to		
			Order	Jul-17	Aug-17	Sept-17	
5	Excess Distribution Loss =[Actual Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	ani Shirit <b>a</b> nga	0	0	0	
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	nd s. I mi	0	0	0	

<sup>\*</sup>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 July,2017 to September,2017 is lower than the approved distribution loss of 9.97%. Accordingly, no deductions have been made on account of excess distribution loss for the month of July,2017 to September,2017

#### 9. Summary of Allowable ZFAC

9.1 The summary of the FAC amount as approved by the Commission for the month of July, 2017 to September, 2017which is allowed to be recovered in the billing month of September, 2017 to November, 2017 is as shown in the Table below.

S. No.	Particulars	Units	July 2017	August 2017	September 2017
1.0	Calculation of ZFAC				
1.1	Change in cost of generation and power purchase attributable to Sales within the Licence Area (F)	Rs. Crore	(22.16)	(16.40)	21.59
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.01)	(0.05)	(0.03)
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(0.54)	(2.84)	(1.79)
1.4	ZFAC = F+C+B	Rs. Crore	(22.71)	(19.29)	19.77
2.0	Calculation of FAC Charge		Ti ma Linii		
2.1	Energy Sales within the License Area	MU	712.31	723.48	722.57
2.2	Excess Distribution Loss	MU	0.00	0.00	0.00
2.3	ZFAC per kWh	Rs./kWh	(0.32)	(0.27)	0.27
3.0	Recovery of FAC				
3.1	Allowable FAC [(2.1 x 2.3)/10]	Rs. Crore	(22.71)	(19.29)	19.77

S. No.	Particulars	Units	July 2017	August 2017	September 2017	
3.2	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.3)/10]	Rs. Crore	0.00 0.00		0.00	
4.0	Total FAC based on category wise and slab wise allowed to be recovered	Rs. Crore	(22.71)	(19.29)	19.77	
4.1	Carried forward FAC for recovery during future period (3.1-3.2-4.0)	Rs. Crore	0.00	0.00	0.00	

#### 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:—

 $ZFAC\ Cat\ (Rs/kWh) = [ZFAC\ /\ (Metered\ sales\ +\ Unmetered\ consumption\ estimates\ +\ Excess\ distribution\ losses)]\ *\ k\ *\ 10,$  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 July, 2017 to September, 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  $Z_{FAC}$  computed for the month of July to September, 2017 and levied to the consumers of RInfra-D in the billing month of September, 2017 to November, 2017.

#### FAC for Billing Month of September 2017 to November 2017

S.No	Consumer Categories	Slabs	ZFAC for the billing month of			
			Sept'17 (Rs./kWh)	Oct'17 (Rs./kWh)	Nov'17 (Rs./kWh)	
(A)	LT Category					
1	LT I - BPL	0-30	(0.1715)	(0.1435)	0.1472	
2	LT -I Residential (Single Phase)	0-100	(0.1415)	(0.1183)	0.1214	
		101-300	(0.2880)	(0.2410)	0.2472	
		301-500	(0.3345)	(0.2798)	0.2871	
		500 and above	(0.3977)	(0.3327)	0.3413	
3	LT -I Residential (Three Phase)	0-100	(0.1394)	(0.1166)	0.1196	
	seems are 18918 and a seem of the seems	101-300	(0.2723)	(0.2278)	0.2337	
		301-500	(0.3284)	(0.2747)	0.2818	
	A Neda management to see	500 and above	(0.3895)	(0.3259)	0.3343	
4	LT- II Commercial	0-20 kW	(0.3516)	(0.2941)	0.3018	
		20-50 kW	(0.3550)	(0.2970)	0.3047	
		above 50 kW	(0.3735)	(0.3124)	0.3205	
5	LT III (A) - Industrial	upto 20 kW	(0.2987)	(0.2498)	0.2563	
6	LT III (B) - Industrial	above 20 kW	(0.3232)	(0.2704)	0.2774	
7	LT IV : Public Water Works	all units	(0.2932)	(0.2453)	0.2516	
8	LT V : Advertisements and Hoardings	all units	(0.4377)	(0.3662)	0.3757	
9	LT VI: Street Lights	all units	(0.3010)	(0.2518)	0.2584	
10	LT VII (A): Temporary Supply Religious	all units	(0.2611)	(0.2184)	0.2241	

S.No	Consumer Categories Slabs ZFAC for the bi			r the billing	illing month of	
			Sept'17 (Rs./kWh)	Oct'17 (Rs./kWh)	Nov'17 (Rs./kWh)	
11	LT VII (B): Temporary Supply Others	all units	(0.3741)	(0.3130)	0.3211	
12	LT VIII: Crematorium & Burial Grounds	all units	(0.2443)	(0.2044)	0.2097	
13	LT IX - Public Service (A)	all units	(0.2829)	(0.2367)	0.2428	
14	LT IX - Public Service (B)	all units	(0.2921)	(0.2444)	0.2507	
15	LT X (A) : Agriculture Pumpsets	all units	(0.1664)	(0.1392)	0.1428	
16	LT X (B) : Agriculture Others	all units	(0.2392)	(0.2001)	0.2053	
(B)	High Category					
17	HT I: Industry	all units	(0.3349)	(0.2801)	0.2874	
18	HT II : Commercial	all units	(0.3536)	(0.2959)	0.3035	
19	HT III: Group Housing Society	all units	(0.3082)	(0.2578)	0.2645	
20	HT VI - Temporary Supply	all units	(0.3540)	(0.2961)	0.3038	
21	HT : Railways	all units	(0.2730)	(0.2284)	0.2343	
22	HT: Public Services (A)	all units	(0.3147)	(0.2633)	0.2701	
23	HT: Public Services (B)	all units	(0.3461)	(0.2896)	0.2970	
24	HT: Public Water Works	all units	(0.3267)	(0.2733)	0.2804	



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