



# महाराष्ट्र विद्युत नियामक आयोग

## Maharashtra Electricity Regulatory Commission

No: MERC/FAC/2011-12/ 02234

Date: 04 January, 2013

To,

The Director,  
Reliance Infrastructure Limited,  
Reliance Energy Centre,  
Santacruz (East), Mumbai 400 0055.

**Subject:** Approval of Reliance Infrastructure Ltd Fuel Adjustment Charges (FAC) for the period *January 2012 to March 2012*. (QIV – F.Y. 2011- 2012) .

**Reference:** a) Reliance Infrastructure's submission vide letter dated 1<sup>st</sup> August, 2012 for Post facto approval of FAC for the period *January 2012 to March 2012*. (QIV – F.Y. 2011- 2012).  
b) Subsequent clarifications received from R Infra by E\_Mail.

Sir,

With reference to your submission referred to above, in pursuance of directions in the Tariff Order dated 29<sup>th</sup> July 2011, I am directed to forward herewith the decision of the Commission (refer Annexure) for further necessary action.

**The Commission has post facto approved FAC amount as tabulated below:**

Sr. No.	Month	FAC Amount	Remarks
1	January 2012	13.4554 crores	To be Recovered from the Consumers.
2	February 2012	11.2243 crores	To be Recovered from the Consumers.
3	March 2012	0.7774 crores	To be Recovered from the Consumers.

The carried forward amount for recovery at future date is *NIL*.

The details are tabulated in the enclosed Annexure.

Yours faithfully

(Kuldip N. Khawarey)  
Secretary, MERC

**Encl:** Detailed Vetting Report for QIV- F.Y. 2011-2012.

1 of 10

**Names and Addresses of Consumer Representatives authorized as per Section 94 (3) of the Electricity Act 2003**

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, 1 <sup>st</sup> floor, Udyog Bhawan, Civil Lines, Nagpur 440 001.

ANNEXURE

Detailed Vetting Report

Date: 04 January, 2013

**Subject:** Approval of Reliance Infrastructure Limited Fuel Adjustment Charges (FAC) for the period *January 2012 to March 2012 (QIV – F.Y. 2011-2012)* .

**Reference:** a) Reliance Infrastructure's submission vide letter dated 1<sup>st</sup> August, 2012 for post facto approval of FAC for the period *January 2012 to March 2012 (QIV – F.Y. 2011-2012)*.  
b) Subsequent clarifications received from R Infra by E-Mail.

1. The Commission has issued Tariff Order on 29<sup>th</sup> July 2011 in case No 72 of 2010 in the matter of Reliance Infrastructure Limited Distribution Business' (R Infra –D) Petition for Truing Up for the FY 2008-09, Annual Performance Review for the FY 2009-10 and Tariff Determination for the FY 2010-11.

The Commission has issued Tariff Order on 29<sup>th</sup> July 2011 in case No 72 of 2010 in the matter of Reliance Infrastructure Limited Distribution Business' (R Infra –D) Petition for Truing Up for the FY 2008-09, Annual Performance Review for the FY 2009-10 and Tariff Determination for the FY 2010-11. The Commission has issued Tariff Order on 29<sup>th</sup> September 2010 for R Infra G (Case 99 of 2009) , vide which the generation tariff for the utility for FY 11 has been determined, The said tariff order is applicable with effect from September 2010. In the said T O, the Commission has directed that:

*The rate of energy charge (ex bus) for the FY 2010-11 has been approved for DTPS, based on approved operational parameters and assumed fuel price for the FY 2010-11. Any variations in the fuel prices shall be dealt with FAC Mechanism.*

Accordingly, vide its submission of 1<sup>st</sup> August, 2012 Reliance Infra –D has computed the FAC for the month of January, February and March 2012 as directed, and detailed methodology as per MERC (Terms and Conditions of Tariff) Regulations, 2005.

The relevant parameters approved in the said APR Order for computation of FAC are enclosed at Appendix-1.

2. R Infra-D meets its power requirement through procurement from the following sources:
  - a) Procurement from R Infra –G (DTPS),
  - b) RPS Power,
  - c) Bilateral Purchases (as per SLDC),
  - d) UI purchases (as per SLDC),

**Note :**

- i) There is no procurement of energy from RE sources in QIV FY12 as R Infra has purchased REC.



- ii) R Infra-D has submitted affidavit verifying the application and the energy balance statements issued by SLDC.
- iii) Supporting documents from R Infra-G such as certified copies “Coal related expense” have also been enclosed.

3. **Validation of Fuel Adjustment Cost for January, February and March 2012**

The Commission has assessed FAC charge of R Infra-D for the said period based on the FAC formula approved in the Tariff Regulations.

4. **Change in Variable Cost of own generation and power purchase (C):**

Due to change in variable (fuel) cost of generation and power purchase, the actual weighted average variable (fuel) cost of generation and power purchase has varied increased by Rs. 0.547, 0.139 and 0.008 per kWh in January, February and March, 2012 respectively. Considering the normative actual variable (fuel) cost of generation for DTPS and actual power purchase from other sources, the rate of variable charge for power purchase is Rs. 3.996, 3.588 and 3.457 per kWh for months January, February and March, 2012 respectively, as against Approved rate of Rs. 3.449 per kWh for these months.

Change in variable (fuel) cost of own generation and power purchase, has been arrived at by multiplying the total quantum of gross generation and power purchase with the change in weighted average cost of generation and power purchase.

5. **Assessment of Variable (Fuel) Cost of own generation (R Infra-G)**

The Commission has assessed the variable cost of own generation (R Infra -G) taking into consideration change in fuel mix, actual fuel price and normative heat rate, which are Rs. 2.968, 2.815 and 2.838 per kWh for months January, February and March 2012 respectively as against Rs. 1.814 per kWh considered in the APR Order of R Infra-D for FY 2010-11.

It is to be noted here that the “Normative actual” cost of generation is higher than the “actual” cost of generation due to efficient generation parameters of Dahanu thermal units. This is approved.

The total normative variable cost of own (R Infra G) generation amounts to:

	January 2012	February 2012	March 2012
Normative V. C. (In Lacs)	10015.37	9278.38	10045.24
Net Generation (In MUs)	337.46	329.62	353.98

6. **Actual Fuel Price**

The Commission has assessed fuel price in terms of heat content (Rs./Mkcal) by considering actual fuel price based on the audited statement of fuel cost submitted by R Infra. The Commission has considered calorific value of the coal basket as fired coal at DTPS based on the certificate issued by independent verification agency.



R Infra has incurred Coal related expenses of Rs 15.96 Lakhs, Rs. 7.13 Lakhs and Rs. (140.42) Lakhs for the months January, February and March 2012. These are approved.

7. **Heat Rate**

R-Infra has considered the approved heat rate viz. 2500 kcal/kWH, as per the APR Order for FY 2010- 11 for computing normative actual variable (fuel) cost of generation for assessment of FAC, which is allowed.

8. **Disallowance of FAC corresponding to excess auxiliary consumption**

The Auxiliary consumption at DTGS is reported as 7.446%, 7.329% and 7.413% in January, February & March 2012 respectively against the approved value of 8.5 % (excl. of FGD). Hence there is no disallowance on account of excess auxiliary consumption. The Auxiliary Consumption of FGD is taken at the normative value of 4.750 MU for the months January, February and March 2012.

9. **Disallowance of FAC corresponding to excess Transit Loss**

Excess Transit Loss is computed based on the normative transit loss approved in the APR Order. Fuel adjustment cost corresponding to excess Transit Loss has been disallowed and is computed by multiplying the excess transit loss with the washed coal consumption rate per metric ton (MT). The FAC disallowed corresponding to excess Transit Loss has been worked out as Rs. 82.05 Lakhs, Rs. 44.26 Lakhs and Rs. 46.49 Lakhs for the months January, February & March 2012 respectively.

10. **Change in variable cost of power purchase:**

10.1 Total variable cost of power purchase from all sources for January, February & March 2012 is summarized as under:

Month	Procurement of Energy		Normative Actual Cost		Normative Rate of Power Purchase		Average Rate (Rs/kWh)
	From R Infra- G (MUs)	From others (MUs)	From R Infra- G (Rs lakhs)	From others (Rs lakhs)	From R Infra- G (Rs./kWh)	From others (Rs./kWh)	
January 2012	337.46	113.11	10015.37	8072.17	2.968	7.137	3.996
February 2012	329.62	153.35	9278.38	8095.13	2.815	5.279	3.588
March 2012	353.98	224.29	10045.24	3424.39	2.838	4.454	3.457

**Note:**

R Infra-D has submitted the data for the power purchase cost certified by cost accountant.

10.2 **Variable cost of Power purchase from Renewable sources:**



R Infra has not procured energy from Renewable sources in QIV FY12. It has purchased REC to satisfy its RPS obligations.

**11. Working Capital Interest (I)**

Month	Variable Cost as per Order (per month)	Actual variable cost (Norm)	Variance between Actual Variable cost and "Order" variable cost	Rate of IWC	IWC (Rs Lakh)
January 2012	25358.856	18005.49	-7353.63	13%	(79.66)
February 2012	25358.856	17329.26	-8029.60	13%	(86.99)
March 2012	25358.856	19988.75	-5370.10	13%	(58.18)

**Note 1:** The Interest Rate 13% is as per approval of the Commission in the APR Order

**Note 2:** Interest on working capital has been granted at the approved Interest rate for the eligible amount viz. the difference between the Normative Actual variable cost of Power procurement and the Order cost of power procurement, for the respective month.

**12. Adjustment for Over Recovery/Under Recovery (B)**

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

(Rs. Lakh)

Month	Adjustment Factor
January 2012	(1038.69)
February 2012	539.88
March 2012	94.24

**13. FAC (Total Fuel Adjustment Cost)**

Total fuel cost and power purchase adjustment (FAC) has been computed by summing up the change in costs (C), Working Capital Interest (I), and adjustment for over recovery / under recovery (B). The Commission has considered energy sales based on audited submissions of R Infra-D.

**14. Excess Distribution Loss**

The Commission had considered allowable Distribution loss at 10.25% for the months January, February & March 2012 respectively. The actual Distribution Losses are:

Month	Distribution Losses
January 2012	3.95%
February 2012	6.611%
March 2012	10.44%



Hence there has been no disallowance from the FAC of the months of January 2012, February 2012. For the month of March 2012 Rs. 0.17 lakhs has been disallowed on account of excess Distribution Loss.

15. **FAC per unit**

FAC per unit has been computed by considering Total Fuel Adjustment Cost, Energy Sales submitted by R Infra-D and excess distribution loss assessed by the Commission.

16. **Cap on Monthly FAC Charge**

As per the Tariff Order the ceiling, based on 10% of the variable component of Tariff, works out to 64.20 paise/kWh average. However, 10% cap as [per respective tariff category and energy slab, will be applicable.

17. **Recovery of FAC**

The Commission has assessed FAC to be recovered in the month of January, February & March 2012 as Rs. 1345.54 Lakhs, Rs. 1122.43 Lakhs, and Rs. 77.74 Lakhs respectively.

18. **Summary of Results**

The summary of the Total Fuel Cost and Power Purchase Cost Adjustment (FAC), FAC Charge per unit (FAC/kwh) and FAC to be recovered considering the cap on monthly FAC charge for January, February & March 2012 is given in the table below:



## SUMMARY TABLE

Sr. No.	Parameter	Unit	Value		
			Jan 2012	Feb 2012	Mar 2012
(A)	(B)	(C)	(D)	(D)	(D)
<b>1.0</b>	<b>Calculation of FAC (A)</b>				
1.1	Disallowance of change in variable cost of generation corresponding to excess auxiliary consumption	Rs Lakh	-	-	-
1.2	Change in weighted average variable cost of generation and power purchase after accounting for disallowance of change in variable cost corresponding to excess auxiliary consumption	Rs Lakh	2,463.89	669.54	41.85
1.3	Apportionment of change in variable cost of generation and power purchase to License Area (C)	Rs Lakh	2,463.89	669.54	41.85
1.4	Working Capital Interest (I)	Rs Lakh	(79.66)	(86.99)	(58.18)
1.5	Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	(1,038.69)	539.88	94.24
<b>1.6</b>	<b>FAC (A) = C + I + B</b>	Rs Lakh	1,345.54	1,122.43	77.91
<b>2.0</b>	<b>Calculation of FAC<sub>kWh</sub></b>				
2.1	Sale within License Area	MU	413.268	431.420	495.483
2.2	Excess Distribution Loss	MU	-	-	1.103
2.3	FAC Charge (FAC <sub>kWh</sub> ) without considering cap on monthly FAC Charge	Paise/kWh	32.56	26.02	1.57
2.4	Cap on monthly FAC Charge	Paise/kWh	64.20	64.20	64.20
<b>2.5</b>	<b>FAC Charge (FAC<sub>kWh</sub>) considering cap on monthly FAC Charge</b>	Paise/kWh	32.56	26.02	1.57
<b>3.0</b>	<b>FAC (A)</b>				
3.1	FAC (A) considering cap on Monthly FAC Charge	Rs Lakh	1,345.54	1,122.43	77.74
3.2	FAC (A) disallowed corresponding to excess Distribution loss	Rs Lakh	-	-	0.17
3.3	Carried forward FAC (A) for recovery during future period	Rs Lakh	0.00	-	0.00





Consumer Categories	Jan-12			Feb-12			Mar-12		
	Qty (Mus)	Rate	Rs. in Lakhs	Qty (Mus)	Rate	Rs. in Lakhs	Qty (Mus)	Rate	Rs. in Lakhs
<b>Low Tension - LT</b>									
<b>LT I : LT - Residential</b>									
LT I - Below Poverty Line	0.003	(0.0364)	(0.00)	0.004	(0.0364)	(0.00)	0.004	0.0164	0.00
<b>LT - I Residential (Single Phase)</b>									
0-100	136.440	(0.2692)	(368.79)	141.157	(0.2692)	(378.31)	152.246	0.1216	183.46
101-300	47.128	(0.5056)	(238.28)	54.067	(0.5056)	(273.36)	77.704	0.2285	177.55
301-500	2.521	(0.8330)	(21.00)	3.255	(0.8330)	(27.12)	7.271	0.3764	27.37
500 and above	0.621	(0.9648)	(5.99)	1.183	(0.9648)	(11.41)	2.281	0.4360	9.94
<b>LT - I Residential Three phase</b>									
0-100	16.748	(0.2692)	(45.32)	16.843	(0.2692)	(45.12)	16.879	0.1216	19.87
101-300	20.638	(0.5056)	(104.35)	21.362	(0.5056)	(108.01)	23.422	0.2285	53.52
301-500	7.126	(0.8330)	(59.36)	7.669	(0.8330)	(63.88)	9.963	0.3764	37.50
500 and above	12.281	(0.9648)	(118.48)	12.819	(0.9648)	(123.68)	15.877	0.4360	69.22
<b>LT II : LT - Non - Residential or Commercial</b>									
<b>LT II (a) - 0-20 kW</b>	85.615	(0.7230)	(617.45)	88.812	(0.7230)	(640.61)	99.082	0.3267	319.21
<b>LT II (a) TOD Option</b>	-	(0.7230)	-	-	(0.7230)	-	0.001	0.3267	0.00
09 to 12	-	(0.7684)	-	-	(0.7684)	-	0.000	0.3472	0.00
18 to 22	-	(0.8139)	-	-	(0.8139)	-	0.000	0.3679	0.00
22 to 06	-	(0.6547)	-	-	(0.6547)	-	0.000	0.2958	0.00
<b>LT II (b) - 20-50 kW</b>	4.226	(0.9330)	(40.15)	4.451	(0.9330)	(41.45)	5.254	0.4216	23.07
09 to 12	1.697	(0.9785)	(16.60)	1.797	(0.9785)	(17.58)	2.168	0.4421	9.59
18 to 22	1.631	(1.0239)	(16.70)	1.651	(1.0239)	(16.91)	1.895	0.4627	8.77
22 to 06	1.470	(0.8648)	(12.71)	1.466	(0.8648)	(12.67)	1.626	0.3908	6.36
<b>LT II (c) - above 50 kW</b>	7.205	(0.9921)	(75.58)	7.621	(0.9921)	(75.56)	8.663	0.4483	46.74
09 to 12	2.931	(1.0375)	(30.41)	3.088	(1.0375)	(32.03)	3.581	0.4688	16.79
18 to 22	2.924	(1.0831)	(31.67)	2.943	(1.0831)	(31.87)	3.265	0.4894	15.98
22 to 06	3.059	(0.9239)	(28.26)	3.021	(0.9239)	(27.91)	3.288	0.4175	13.73
<b>LT III - LT Industrial upto 20 kW</b>	9.732	(0.7057)	(65.23)	10.576	(0.7057)	(74.72)	9.980	0.3189	31.79
<b>LT III - LT Industrial upto 20 kW TOD Option</b>	-	(0.7057)	-	-	(0.7057)	-	-	0.3189	-
09 to 12	-	(0.7511)	-	-	(0.7511)	-	-	0.3394	-
18 to 22	-	(0.7966)	-	-	(0.7966)	-	-	0.3600	-
22 to 06	-	(0.6374)	-	-	(0.6374)	-	-	0.288	-
<b>LT IV - LT Industrial above 20 kW</b>	6.532	(0.6738)	(44.08)	6.637	(0.6738)	(44.63)	7.267	0.3045	21.81
09 to 12	2.519	(0.7193)	(18.12)	2.573	(0.7193)	(18.51)	2.841	0.3250	9.23
18 to 22	2.374	(0.7648)	(18.16)	2.372	(0.7648)	(18.14)	2.567	0.3456	8.87
22 to 06	2.886	(0.6056)	(17.48)	2.804	(0.6056)	(16.98)	3.073	0.2737	8.41
<b>LT-V : LT- Advertisements and Hoardings</b>	0.264	(1.6059)	(4.24)	0.266	(1.6059)	(4.27)	0.259	0.7257	1.85
<b>LT VI: LT -Street Lights</b>	5.321	(0.7557)	(40.21)	4.915	(0.7557)	(37.14)	4.858	0.3415	16.59
<b>LT-VII (A): LT -Temporary Supply Religious</b>	0.054	(0.3465)	(0.13)	0.010	(0.3465)	(0.03)	0.006	0.1566	(0.01)
<b>LT-VII (B): LT -Temporary Supply Others</b>	7.866	(1.4377)	(109.91)	7.627	(1.4377)	(108.64)	7.989	0.5496	41.49
<b>LT VIII: LT - Crematorium &amp; Burial Grounds</b>	0.077	(0.3465)	(0.27)	0.073	(0.3465)	(0.25)	0.077	0.1566	0.12
<b>LT IX: LT -Agriculture</b>	0.003	(0.0727)	(0.00)	0.004	(0.0727)	(0.00)	0.004	0.0329	0.00



Consumer Categories	Jan-12			Feb-12			Mar-12		
	Qty (Mus)	Rate	Rs. in Lakhs	Qty (Mus)	Rate	Rs. in Lakhs	Qty (Mus)	Rate	Rs. in Lakhs
<b>High Tension - HT</b>									
HT I: HT-Industry	2.622	(0.6875)	(18.02)	2.558	(0.6875)	(17.59)	2.725	0.3106	8.32
09 to 12	0.957	(0.7329)	(7.01)	0.948	(0.7329)	(6.95)	1.028	0.3312	3.40
18 to 22	1.078	(0.7784)	(8.39)	1.039	(0.7784)	(8.09)	1.064	0.3517	3.74
22 to 06	1.757	(0.6193)	(10.88)	1.690	(0.6193)	(10.47)	1.783	0.2798	4.99
HTII : HT- Commercial	5.605	(0.7648)	(42.87)	5.339	(0.7648)	(40.83)	5.918	0.3456	20.45
09 to 12	2.025	(0.8102)	(16.41)	1.952	(0.8102)	(15.82)	2.197	0.3661	8.04
18 to 22	2.281	(0.8557)	(19.52)	2.082	(0.8557)	(17.81)	2.279	0.3867	8.81
22 to 06	3.223	(0.6966)	(22.45)	2.870	(0.6966)	(19.99)	3.008	0.3148	9.47
HT III: HT-Group Housing Society	1.551	(0.4692)	(7.28)	1.600	(0.4692)	(7.23)	1.752	0.2120	3.72
HTIV : HT - Temporary Supply	0.276	(1.0003)	(2.76)	0.277	(1.0003)	(2.77)	0.338	0.4520	1.53
<b>Total</b>	<b>41322.268</b>		<b>(2,304.55)</b>	<b>41,371.420</b>		<b>(2,398.38)</b>	<b>41,464.483</b>		<b>1,251.30</b>

APPENDIX-1

**RELIANCE INDUSTRIES LIMITED**

**APPROVAL OF FUEL ADJUSTMENT CHARGES (FAC) FOR THE MONTHS  
JANUARY, FEBRUARY & MARCH 2012**

Form No	Particulars	Unit	Norms
1	Intra State Transmission Loss	%	4.85 %
2	Distribution Loss	%	10.25%
3	Auxiliary Consumption	%	8.50%
4	Transit Loss (For Coal)	%	0.80%
5	Heat Rate	Kcal/kWh	2500
6	Secondary Oil Consumption	MI/kWh	2
7	FGD Consumption	MU/yr	57

