

**The Sr. Ex.Vice President (A&F),**  
 Reliance Infrastructure Ltd,  
 Reliance Energy Centre,  
 Santacruz (E),  
 Mumbai-400 055

**Subject: Post Facto Approval of Fuel Adjustment Charges (FAC) levied by Reliance Infrastructure Limited- Distribution business (RInfra-D) for the period April 2008 to June 2008.**

**Ref: RInfra-D Application dated August 25, 2008 for post facto approval of FAC.**

Sir,

With reference to your application dated August 25, 2008 in pursuance of directions in the Annual Performance Review (APR) Order dated June 4, 2008, and subsequent correspondence on the above subject, the Commission has carried out the detailed vetting of FAC amount for the months of April 2008 to June 2008, the summary of which is as under:

<b>Particulars</b>	<b>Unit</b>	<b>April 08</b>	<b>May 08</b>	<b>June 08</b>
FAC (C+I+B)	Rs. Lakh	7,801.43	15,549.14	23,653.26
FAC Charge /(Refund) without considering cap on monthly FAC Charge	<i>Paise/kWh</i>	<i>108.37</i>	<i>204.35</i>	<i>330.01</i>
FAC cap	<i>Paise/kWh</i>	<i>54.50</i>	<i>54.50</i>	<i>54.50</i>
FAC Charge /(Refund) considering cap on monthly FAC Charge	<i>Paise/kWh</i>	<i>54.50</i>	<i>54.50</i>	<i>54.50</i>
FAC amount considering cap on monthly FAC Charge	Rs. Lakh	3,923.39	4,145.09	3,906.20
FAC amount disallowed corresponding to excess Distribution loss	Rs. Lakh	-	1.93	-
Carried Forward FAC amount for recovery during future period	Rs. Lakh	3,878.04	11,402.12	19,747.06

I am directed to forward herewith the detailed vetting and post facto approval of the Commission on FAC charges for the months from April to June, 2008.

With Regards,

Yours faithfully,

(P.B.Patil)  
Secretary, MERC

Encl: Annexure

- cc: Prayas (Energy Group), - Consumer Rep.  
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- Mumbai Grahak Panchayat, - Consumer Rep.  
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## ANNEXURE

### **Accompaniment of the letter Ref No. MERC/R-Infra/Case No. 65 and 66 of 2008/FAC/2008-09/December 10, 2008**

**Re:** Vetting of the Fuel Adjustment Cost (FAC) charges claimed by RInfra-D for April 2008 to June 2008

1. RInfra-D, vide its submission dated August 25, 2008, has computed the FAC for the month of April 2008 to June 2008 in accordance with the Order dated June 4, 2008 in the matter of Annual Performance Review for (APR) for FY 2007-08 and Tariff Determination for FY 2008-09 (herein after 'APR Order') passed by the Commission and detailed methodology as per as per MERC (Terms and Conditions of Tariff) Regulations, 2005. The relevant parameters approved in the APR Order for computation of FAC are enclosed at Appendix-1
2. In terms of the aforesaid Regulation a Distribution Licensee is required to obtain post facto approval of the Commission on a quarterly basis for the FAC charges. Accordingly, RInfra-D has submitted details of FAC chargeable from all consumers for the months of April 2008 to June 2008 covering first quarter of FY 2008-09.
3. RInfra-D has submitted affidavit verifying the application. RInfra-D has also submitted independent certification agency's report in support of fuel calorific value as received basis of as fired coal at Dahanu Thermal Power Station (DTPS) for the month of April 2008 to June 2008.
4. Validation of Fuel Adjustment Cost for April 2008 to June 2008:

The Commission has assessed FAC charge of RInfra-D for the period April 2008 to June 2008 based on the FAC formula approved in the Tariff Regulations. The methodology adopted for vetting the FAC computations is as follows:

#### Change in Variable Cost of own generation and power purchase (C):

Due to increase in variable (fuel) cost of generation and power purchase, the actual weighted average variable (fuel) cost of generation and power purchase has increased by Rs.0.93/kWh, Rs.1.29/kWh and Rs.1.39 / kWh in April 2008, May 2008 and June 2008 respectively. Considering the normative variable (fuel) cost of generation for DTPS and actual power purchase from other sources, the variable charge for power is Rs.4.238/Kwh, Rs.4.598/Kwh & Rs.4.695/Kwh for April, May and June 2008 respectively as against Rs.3.307/Kwh considered in the APR Order. 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.

#### Assessment of Variable (Fuel) Cost of own generation (RInfra-G)

The Commission has assessed the variable cost of own generation (RInfra -G) taking into consideration change in fuel mix, actual fuel price and normative heat rate and are Rs.1.708/kWh, Rs.1.819/kWh and Rs.1.802/kWh for April, May & June 2008 respectively as against Rs.1.664/kWh considered in the Tariff Order dated 4th June 2008. The total variable cost of own generation is assessed at Rs.5,889.99 Lakh, Rs.6,210.42 Lakh and Rs.6,207.02 Lakh for April, May and June 2008 respectively.

#### Change in Fuel Mix

RInfra-G has used blending ratio of raw coal: washed coal: imported coal as 1%:77%:22% during April 2008, 0%:75%:25% during May 2008 and 0%:73%:27% during June 08 as against ratio of 7%:73%:20% for the FY 2008-09 considered in the APR Order. The Commission has accepted the change in fuel mix effected by RInfra-G for April, May and June 2008.

#### 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 RInfra-G. The Commission has considered calorific value of the coal basket as fired coal at DTPS based on the certificate issued by independent verification agency.

RInfra-G has incurred Coal related expenses of Rs.25.72 Lakh for April 2008, Rs.324.35 Lakh for May 2008 and Rs.40.86 Lakh for June 2008 and submitted the details and relevant documents justifying the expenses. The Commission has allowed these expenses as fuel cost expenses in the respective months.

#### Heat Rate

The R-Infra has considered the approved heat rate (2500 kcal/kWh) as per the APR Order for FY 2008-09 for computing variable (fuel) cost of generation for assessment of FAC, which is allowed.

#### Disallowance of FAC corresponding to excess auxiliary consumption

The FAC of Rs.0.49 Lakh, Rs.5.26 Lakh, Rs.4.27 Lakh has been disallowed in April, May and June 2008 respectively corresponding to excess auxiliary consumption as actual auxiliary consumption for the months of April, May and June 2008 is above the normative level of 8.50% as per Tariff Order.

#### 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.53.80 Lakh for April 2008, Rs.11.85 Lakh for May 2008 and Rs.51.81 Lakh for June 2008.

Change in variable cost of power purchase:

Total variable cost of power purchase for April, May and June 2008 is summarized as under:

**Table: Variable Cost of Power Purchase**

Month	Units MU	Power Purchase variable cost	FAC	(Rs. Lakh)
				Total variable cost of Power Purchase
April 08	494.317	27,749.02	1,949.65	29,698.67
May 08	566.070	32,805.01	2,632.65	35,437.66
June 08	482.529	29,184.14	3,404.00	32,588.14

RInfra-D has submitted the data for the power purchase cost certified by cost accountant along with the power purchase bills from TPC-G. TPC-G has charged FAC @ Rs.0.704/Kwh, Rs.0.917/Kwh, Rs.1.389/Kwh to R-InfraD in its invoices for April, May and June 2008 respectively.

Working Capital Interest (I)

RInfra-D has not claimed any working capital interest and accordingly the Commission has not considered the same for determining the Fuel Adjustment Cost for April to June 2008.

Adjustment for Over Recovery/Under Recovery (B)

In the computation of FAC for April 2008, no under recovery of FAC has been considered.

In the computation of FAC for May 2008 Rs. 3,878.04 Lakh of FAC has been carried forward attributed to application of ceiling limit for the month of April 2008. Thus, RInfra-D has computed adjustment factor (B) as Rs. 3,878.04 Lakh of under recovery of FAC.

In the computation of FAC for June 2008, RInfra-D has proposed to adjust Rs.3,106.37 Lakh of FAC recovered in June 2008 against the FAC charge of Rs.3,923.39 Lakh in April 2008 resulting in an under recovery of Rs.817.02 Lakh of FAC pertaining to the month of April 2008. Also Rs. 11,404.05 Lakh of FAC has been carried forward attributed to application of ceiling limit for the month of May 2008. Thus, RInfra-D has computed adjustment factor (B) as Rs. 12,221.07 Lakh of under recovery of FAC.

FAC (Total Fuel Adjustment Cost) and Sales

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 RInfra-D.

#### Excess Distribution Loss

The Commission had considered allowable Distribution loss at 10.75%. Actual Distribution Loss for April 2008 is 10.64%, for May 2008 is 10.79% and for June 2008 is 8.81%. For April, and June 2008 the distribution loss is within the approved level of 10.75%, however, for the month of May, there has been 0.05% distribution loss higher than the approved loss.

#### FAC per unit

FAC per unit has been computed by considering Total Fuel Adjustment Cost, Energy Sales submitted by RInfra-D and excess distribution loss assessed by the Commission. The FAC charge per unit is assessed at 108.37 paise/kWh, 204.35 paise/kWh and 330.01 paise/kWh for April, May and June 2008 respectively.

#### Cap on Monthly FAC Charge

The ceiling based on 10% of the variable component of Tariff works out to 54.50 paise/kWh considering the revenue from energy charges and consumption for FY 2008-09 as considered in the APR Order.

#### FAC Charge considering monthly cap on FAC Charge

FAC charge considering Cap is assessed at 54.50 paise/kWh for the months, viz., April 2008, May 2008 and June 2008 respectively.

#### Recovery of FAC:

The Commission has assessed FAC to be recovered in the month of April, May and June 2008 as Rs.3,923.39 Lakh, Rs.4,145.09 Lakh and Rs.3,906.20 Lakh respectively. The FAC disallowed corresponding to excess T&D Loss is Rs. nil, Rs. 1.93 Lakh and Rs. nil for April, May and June 2008 respectively. The carried forward FAC for recovery during future period is Rs. 3,878.04 Lakh, Rs. 11,402.12 Lakh and Rs. 19,747.06 Lakh for the months, April 2008, May 2008 and June 2008 respectively.

### **5. 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 April, May, June 2008 is given in the table below:

Sr · No.	Parameter	Unit	R- Infra-D Subm	Commis sion	R-Infra Subm	Commis sion	R-Infra Subm	Commis sion
			April 2008		May 2008		June 2008	
<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	0.49	0.49	5.26	5.26	4.27	4.27
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	7,801.43	7,801.43	11,671.10	11,671.10	11,434.12	11,434.12
1.3	Apportionment of change in variable cost of generation and power purchase to License Area (C)	Rs Lakh	7,801.43	7,801.43	11,671.10	11,671.10	11,434.12	11,434.12
1.4	Working Capital Interest (I)	Rs Lakh	-	-	-	-	-	-
1.5	Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	-	-	3,878.04	3,878.04	12,221.07	12,219.14
<b>1.6</b>	<b>FAC (A) = C + I + B</b>	Rs Lakh	7,801.43	7,801.43	15,549.14	15,549.14	23,655.19	23,655.19
<b>2.0</b>	<b>Calculation of FAC<sub>kwh</sub></b>							
2.1	Sale within License Area	MU	719.889	719.889	760.567	760.567	716.734	716.734
2.2	Excess Distribution Loss	MU	-	-	-	0.354	-	-
2.3	FAC Charge (FAC <sub>kwh</sub> ) without considering	Paise/	108.37	108.37	204.44	204.35	330.04	330.01

	cap on monthly FAC Charge	kwh						
2.4	Cap on monthly FAC Charge	Paise/kwh	54.50	54.50	54.50	54.50	54.50	54.50
2.5	<b>FAC Charge (FAC<sub>kwh</sub>) considering cap on monthly FAC Charge</b>	Paise/kwh	54.50	54.50	54.50	54.50	54.50	54.50
3.0	<b>FAC (A)</b>							
3.1	FAC (A) considering cap on Monthly FAC Charge	Rs Lakh	3,923.39	3,923.39	4,145.09	4,145.09	3,906.20	3,906.20
3.2	FAC (A) disallowed corresponding to excess Distribution loss	Rs Lakh	-	-	-	1.93	-	-
3.3	Carried forward FAC (A) for recovery during future period	Rs Lakh	3,878.04	3,878.04	11,404.05	11,402.12	19,748.99	19,747.06



## APPENDIX-1

### Reliance Infrastructure Ltd

### Approval of Fuel Adjustment Charges (FAC) for April 2008 to June 2008.

<b>1. Cap on monthly FAC charge :</b>	<b>Rs. Crore</b>
Energy Charge, Standby & Expensive Power Charge (for the year Apr'08 to Mar'09)	(A) 4,587.00
Sales (Energy units – MU)	(B) 8,424
Energy Charge per unit	(A) / (B) *10 Rs. 5.450
<b>10 % Cap on Fuel Adjustment Charges</b>	<b>54.50 paise</b>

### 2. Summary of Old norms vs. New norms :

		<b>Old Norms</b>	<b>New Norms</b>
<b>Form No.</b>	<b>Particulars</b>	<b>(FY 07-08)</b>	<b>(FY 08-09)</b>
1.4	Intra State Transmission Loss	4.85%	4.85%
1.4	Distribution Loss	12.10% *	10.75%
1.5	Auxiliary Consumption	8.50%	8.50%
2.5	Transit Loss (for Coal)	0.80%	0.80%
3.1	Heat Rate	2,500	2,500
3.2	Secondary Oil Consumption	2.00	2.00

\* As per Appellate Tribunal of Electricity in it's judgement dated December 11, 2007

### 3. Intra State Transmission Loss :

Intra state transmission loss has been worked out @ 4.85 % of Net Energy Input at transmission voltages as approved by the MERC vide it's Tariff Order dated June 4, 2008.

### 4. Distribution Loss :

The Commission has considered allowable distribution loss at 10.75%.

### 5. Auxiliary Consumption :

No changes have been made in the calculation procedure/method of Auxiliary Consumption. However, revised rate of 8.50%, as per latest Tariff Order, has been considered for calculating disallowance, if any, on a/c of auxiliary consumption.

**6. Transit Loss :**

From current quarter onwards the impact of excess of Transit Loss (over and above the norm of 0.80%) has been calculated separately and deducted from the value of actual total coal consumption.

**7. Base Variable Cost :**

Following base variable cost has been considered for the computation of FAC.

<b>Sr no</b>	<b>Particulars</b>	<b>Unit</b>	<b>Base variable cost in APR Order</b>
1	Variable cost (Own generation)	Rs. / kwh	1.66
2	Avg. variable charge (TPC-G)	Rs. / kwh	3.33
3	Avg. variable rate (TPC-D & other sources)	Rs. / kwh	5.50
	Weighted Average Base Cost	Rs. / kwh	3.31

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