

**BEFORE THE KERALA STATE ELECTRICITY REGULATORY
COMMISSION**

IN THE MATTER OF: Proposals to introduce Fuel Price Adjustment Charges on all consumers including Bulk Consumers/ Other Licensees to recover the additional financial liability incurred over approved level on Generation and Power Purchase during the period from April-2014 to June-2014

PETITIONER: Kerala State Electricity Board Limited
Vydyuthi Bhavanam, Pattom,
Thiruvananthapuram - 695 004

The petitioner named above respectfully submits as under:

1. Hon'ble Commission vide the notification No. KSERC/2009/XVII dated 8th January 2010 had notified the KSERC (Fuel surcharge formula) Regulations, 2009. As per the regulation, KSEBL is eligible to recover the additional liability on account of the actual fuel cost variation over the approved level through fuel surcharge at the rate as approved by the Hon'ble Commission. Hon'ble Commission vide the order dated 14th August-2014 in Petition No. 9 of 2014 in the matter of ARR, ERC and Tariff Order for KSEBL for the financial year 2014-15 has directed that, 'KSEBL shall submit the petitions for approving the fuel surcharge as per the provisions of the relevant regulations in a time bound manner. This petition is being prepared based on the provisions in the KSERC (Fuel surcharge formula) Regulations, 2009. However, there was some delay in filing the petition from the part of KSEBL, mainly due to delay in collecting the data required for finalizing the petition. Hence, the delay in filing the petitions may kindly be condoned. Hereafter, KSEBL shall file the petitions within the time frame specified in the KSERC (Fuel surcharge formula) Regulations, 2009.
2. Hon'ble Commission vide the order dated 14th August-2014 in petition No. OP No. 9 of 2014 in the matter of ARR, ERC and Tariff Order for KSEBL-2014-15 has approved the cost of power purchase for the year 2014-15 at Rs 6205.29 crore and the fuel cost of the liquid fuel stations BDPP and KDPP together at Rs 276.15 crore. However, there was substantial difference in the actual variable cost of generation and power purchase over the approved level on account of the increase in price of coal/ lignite and liquid fuels LSHS and Naphtha. A comparison of the variable cost approved and the actuals are given in the Table below.

Table-1. Comparison of variable cost approved and Actuls.

Sl No.	Source	Variable cost			
		Approved (Rs/ kWh)	Actuals (Rs/ kWh)		
			Apr-14	May-14	Jun-14
1	NTPC-RSTPS	2.14	2.43	2.56	2.36
2	IGSTPS(Jhajjar)	3.57	3.81	3.90	4.02
3	Talcher Stage-II	1.54	1.58	1.49	1.52
4	Simhadri TPS Stage II	2.09	2.58	2.71	2.67
5	NLC-Stage-1	2.14	2.23	2.21	2.22
6	NLC-Stage-II	1.99	2.23	2.21	2.22
7	NLC Expansion	2.14	2.09	2.12	2.09
8	Vallur STPS	2.15	2.01	2.08	1.94
9	BDPP	10.84			
10	KDPP	11.31	11.16	11.04	10.99

3. As per the provisions of the fuel surcharge formula regulations, KSEB has been filing the details of additional liability incurred for procuring energy from approved sources due to the variations in the prices of fuel during the period from April-2014 to June-2014. The additional liability incurred during the period from July-2014 to September-2014 shall be filed before the Hon'ble Commission separately. Accordingly, the details of additional liability incurred by KSEB for procuring energy from NTPC- Talcher-I, Ramagundam, Simhadri, NLC-II Stage-1, NLC-II Stage-2, NLC-II Expansion, IGSTPS (Jhajjar), Vallur STPS and KDPP are submitted here with for the approval of the Hon'ble Commission.

(i) NTPC- Talcher-II STPS

4. The month wise details of the energy procured from NTPC's Talcher-II STPS and the actual and approved variable cost incurred during the period from April-2014 to June-2014 is detailed below.

Table-2. Details of additional liability from Talcher-II STPS

Month	Power Purchase			Variable cost		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	255.92	284.32	255.92	1.54	1.58	1.07	0.96
May-14	264.45	294.32	264.45	1.54	1.49	-1.38	-1.24
Jun-14	255.92	218.01	218.01	1.54	1.52	-0.33	-0.33
Total	776.30	796.65	738.39	1.54	1.53	-0.64	-0.60

(ii) NTPC- Ramagundam-STPS

5. The details of the actual and approved variable cost of generation from Ramagundam STPS and the additional liability incurred etc, during the period between April-2014 to June-2014 is detailed below.

Table-3. Details of additional liability from Ramagundam- STPS

Month	Power Purchase			Variable cost		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	193.91	229.14	193.91	2.14	2.43	6.70	5.67
May-14	200.38	212.43	200.38	2.14	2.56	8.87	8.37
Jun-14	193.91	196.60	193.91	2.14	2.36	4.42	4.36
Total	588.20	638.17	588.20	2.14	2.45	19.99	18.40

(iii) NLC-TPS-II Stage-1

6. The additional liability incurred for purchasing power from NLC-II stage-1 station due to the variation in variable cost of generation during the period between April-2014 to June-2014 is detailed below.

Table-4. Details of additional liability - NLC- TPS-II Stage-1 (630 MW)

Month	Power Purchase			Variable cost		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	31.93	43.03	31.93	2.14	2.23	0.40	0.30
May-14	33.00	43.26	33.00	2.14	2.21	0.31	0.24
Jun-14	31.93	40.64	31.93	2.14	2.22	0.32	0.26
Total	96.86	126.94	96.86	2.14	2.22	1.04	0.79

(iv) NLC-TPS-II Stage-2

7. The details of the additional liability incurred for procuring power from NLC-TPS-II stage-2 during the period from April-2014 to June-2014 is detailed below.

Table-5. Details of additional liability - NLC- TPS-II Stage-2 (840 MW)

Month	Power Purchase			Variable cost		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	45.48	59.89	45.48	1.99	2.23	1.45	1.10
May-14	46.99	58.39	46.99	1.99	2.21	1.30	1.04
Jun-14	45.48	54.63	45.48	1.99	2.22	1.26	1.05
Total	137.95	172.91	137.95	1.99	2.22	4.01	3.19

(v) NLC-TPS-1 Expansion

8. The additional liability incurred for purchasing power from NLC TPS-1 Expansion over the approved level for the period from April-2014 to June-2014 is detailed below.

Table-6. Details of additional liability admissible from NLC-TPS-1 Expansion

Month	Power Purchase			Variable cost		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	35.86	44.57	35.86	2.14	2.09	-0.23	-0.18
May-14	37.06	46.92	37.06	2.14	2.12	-0.10	-0.08
Jun-14	35.86	45.55	35.86	2.14	2.09	-0.23	-0.18
Total	108.78	137.03	108.78	2.14	2.10	-0.56	-0.45

(vi) **IGSTPS- Jhajjar**

9. The details of the approved and actual generation, approved and actual variable cost and the additional liability incurred for procuring power from Indira Gandhi Super Thermal Power Station- Jhajjar is detailed below.

Table-7. Details of additional liability from IGSTPS- Jhajjar

Month	Power Purchase			Variable cost		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	50.95	43.20	43.20	3.57	3.81	1.05	1.05
May-14	52.65	50.83	50.83	3.57	3.90	1.69	1.69
Jun-14	50.95	74.18	50.95	3.57	4.02	3.30	2.27
Total	154.55	168.20	144.97	3.57	3.93	6.03	5.00

(vii) **Simhadri TPS- Stage-II**

10. The details of the additional liability incurred for procuring power from Simhadri TPS- Stage-II during the period from April-2014 to June-2014 is detailed below.

Table-8. Details of additional liability from Simhadri TPS- Stage-II

Month	Power Purchase			Variable cost		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	50.13	72.07	50.13	2.09	2.58	3.54	2.46
May-14	51.80	74.19	51.80	2.09	2.71	4.61	3.22
Jun-14	50.13	67.02	50.13	2.09	2.67	3.88	2.90
Total	152.05	213.27	152.05	2.09	2.65	12.03	8.58

(viii) Vallur STPS

11. The details of the approved and actual variable cost, and the additional liability incurred for the purchase of power from Vallur STPS is detailed below.

Table-10. Details of additional liability from Vallur STPS

Month	Power Purchase			Rate		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	19.86	21.61	19.86	2.15	2.01	-0.31	-0.28
May-14	20.52	20.37	20.37	2.15	2.08	-0.15	-0.15
Jun-14	19.86	17.76	17.76	2.15	1.94	-0.37	-0.37
Total	60.23	59.74	57.98	2.15	2.01	-0.83	-0.81

(ix) Energy schedule from KDPP

12. Considering the energy demand in the Northern Part of the State, KSEBL is constrained to schedule power from KDPP. The additional liability incurred for procuring power from KDPP is detailed below.

Table-11 Details of variable cost of generation at KDPP

Month	Generation			Rate		Addl Liability	
	Approved	Actuals	Admissible for FPA	Approved	Actuals	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Apr-14	29.25	32.56	29.25	11.31	11.16	-0.49	-0.44
May-14	30.23	33.47	30.23	11.31	11.04	-0.89	-0.81
Jun-14	14.63	22.34	14.63	11.31	10.99	-0.71	-0.46
Total	74.10	88.38	74.10	11.31	11.07	-2.09	-1.71

13. Other issues:

- (i) Variation in energy demand over approved level.**

The actual and approved energy demand in the State during the months of April-2014, May-2014 and June-2014 is detailed below.

Table-12. Variation in energy demand over approved level

Month	Energy demand		(% of increase over approval)
	Approved	Actuals	
	(MU/day)	(MU/day)	
Apr-14	61.34	63.15	2.87
May-14	58.88	61.25	3.87
Jun-14	51.65	57.10	9.54

The increasing trend in energy consumption over the approved level has been continuing till date. Further, due to the transmission constraints prevailing between NEW Grid & SR as well as the transmission constraints between S1-S2 corridor, KSEBL could not procure the power tied up through traders and generators on short-term and medium-term basis. KSEBL may

submit the detailed appraisal on the increasing trend in energy demand over approved level including the various strategies to meet the demand before the Hon'ble Commission separately.

(ii) Energy procurement from RGCCPP- Kayamkulam and BSES during the period from April-2014 to June-2014.

Due to the excessive variable cost of liquid fuel stations, KSEBL has not proposed to schedule power from RGCCPP- Kayamkulam and BSES during the months of April, May and June-2014. However, due to the increase in demand and also due to the transmission constraints for procuring power from outside the State, KSEBL has constrained to procure power from liquid fuel stations RGCCPP- Kayamkulam and BSES for meeting the demand of the State. The details are given below.

Table-12. Variation in energy demand over approved level

Month	Energy scheduled from RGCCPP- Kayamkulam & BSES	Sale outside the State to TANGEDCO	Net Generation	Variable cost	Addl liability
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs. Cr)
Apr-14	311.34	311.68	-0.34	12.50	-0.43
May-14	94.72	57.46	37.26	12.64	47.09
Jun-14	110.32		110.32	12.43	137.10
Total	516.38		147.23		183.75

As detailed above, KSEBL had incurred an additional liability of about Rs 183.75 crore for scheduling power from RGCCPP Kayamkulam and BSES during the period from April-2014 to June-2014. However, KSERC (Fuel surcharge formula) Regulations, 2009 do not have provisions to claim such liability on quarterly basis.

(iii) Energy procurement from Short-term market including traders.

The details of the energy procurement from short-term market including traders, deviation settlement, energy exchanges etc are detailed below.

Table-13. Details of power procurement from short-term market

Source	Apr-14				May-14				Jun-14			
	Approved		Actual		Approved		Actual		Approved		Actual	
	Quantum	Wg. Avg rate	Quantum	Rate	Quantum	Wg. Avg rate	Quantum	Rate	Quantum	Wg. Avg rate	Quantum	Rate
	(MU)	(Rs/kWh)	(MU)	(Rs/kWh)	(MU)	(Rs/kWh)	(MU)	(Rs/kWh)	(MU)	(Rs/kWh)	(MU)	(Rs/kWh)
Deviation settlement/ UI			39.84	2.86			50.09	2.36			66.98	3.28
IEX			0.00	0.00			0.00	0.00			11.06	4.65
PXIL	333.76	5.73	0.00	0.00	359.04	5.71	0.00	0.00	262.42	5.65	0.14	3.82
Short-term purchase			278.63	5.69			257.76	5.22			196.19	5.41
Total			318.47	5.34			307.84	4.76			274.37	4.86

However, the KSERC (Fuel Surcharge Formula) Regulations, 2009 does not permit to claim the additional liability incurred for procuring energy through short term markets as above.

14. Summary of the Additional financial liability incurred during the period from April-2014 to June-2014.

The summary of the additional financial liability incurred for procuring energy from different sources for the period from April-2014 to June-2014 is given below.

Table-14. Summary of the additional liability incurred during the period from April-2014 to June-2014 on account of variation in fuel cost.

Source	Energy procurement			Per unit cost		Add liability	
	Approved quantity	Actual	Admissible as per regulation	Approved	Actual	Actual	Admissible as per regulation
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
Talcher-II	776.30	796.65	738.39	1.54	1.53	-0.64	-0.60
Ramagundam- II&III	588.20	638.17	588.20	2.14	2.45	19.99	18.40
NLC-II Stage-1	96.86	126.94	96.86	2.14	2.22	1.04	0.79
NLC-II Stage-2	137.95	172.91	137.95	1.99	2.22	4.01	3.19
NLC- Exp- Stage-1	108.78	137.03	108.78	2.14	2.10	-0.56	-0.45
Jhajjar	154.55	168.20	144.97	3.57	3.93	6.03	5.00
Simhadri	152.05	213.27	152.05	2.09	2.65	12.03	8.58
Vallur STPS	60.23	59.74	57.98	2.15	2.01	-0.83	-0.81
KDPP	74.10	88.38	74.10	11.31	11.07	-2.09	-1.71
Total	2149.02	2401.30	2099.29			38.97	32.39

15. KSEB kindly request before the Hon'ble Commission to approve the additional liability admissible as per the KSERC (Fuel Surcharge Formula) Regulations, 2009 as detailed above for the period from April-2014 to June-2014 and allowed to recover the same from all consumers including bulk consumers as fuel surcharge.

Prayer

KSEB humbly prayed before the Hon'ble Commission that,

- (a) The fuel surcharge for the period from April-2014 to June-2014 for procuring/ generating energy from various thermal sources as detailed in the petition may kindly be approved.
- (b) The fuel surcharge approved may be allowed to recover from consumers including bulk consumers as per the KSERC(Fuel Surcharge Formula) Regulations, 2009 with immediate effect.

Chief Engineer (Commercial & Tariff)

Format-1

Details of Energy Billed for retail sale from April-2014 to June-2014
(Provisional)

1	Energy sales with in the State	Actuals
(a)	Total energy sales to LT, HT and EHT consumers (excl. sales to bulk consumers/ other Licensees) (MU)	4551.20
(b)	Sale to bulk consumers/ other licensees (MU)	140.64
(c)	Total energy sales (MU)	4691.84
2	Energy Input (Excluding External losses) (MU)	5506.25
3	T & D Losses (Internal) (%)	14.79

Format- 2 (a)
Monthwise Details of Generation from BDPP & KDPP

Month	Energy Generation (MU)	Aux. Consumption (MU)	Net Generation (MU)	Station Heat Rate (kCal/ kWh)	Calorific value of fuel (Kcal/ kg)	Quantity of fuel used			Price of fuel			
				LSHS	LSHS	Diesel (litre)	LSHS (MT)	Lube Oil (Litre)	Diesel (Rs/ Litre)	LSHS (Rs/MT)	Lube Oil (Rs/ Litre)	
Apr-14												
BDPP	0.00	0.04	-0.04	0.00	10000.00	0.00	0.00	0.00	57.83	54002.50	140.45	
KDPP	33.29	0.73	32.56	2125.91	10239.00	2099.00	6912.68	17879.95	57.46	52172.21	143.01	
May-14												
BDPP	0.28	0.06	0.22	2327.48	10000.00	23193.00	46.13	1139.00	57.83	54002.50	140.45	
KDPP	34.21	0.74	33.47	2126.90	10239.00	5112.00	7106.83	18477.98	57.46	51592.16	146.24	
Jun-14												
BDPP	0.00	0.04	-0.04	0.00	10000.00	0.00	0.00	0.00	57.83	54002.50	140.45	
KDPP	22.87	0.53	22.34	2106.59	10239.00	6037.00	4705.31	15806.59	55.66	51641.96	145.76	

Format-3						
Month Wise Details of Purchase of Energy						
Source	Energy Purchase (MU)		Variable Cost (Rs/kWh)		Total variable cost (Rs.Cr)	
	Actual	Approved	Actual	Approved	Actual	Approved
Apr-14						
(i) Talcher-II STPS	284.32	255.92	1.58	1.54	44.92	39.41
(ii) NTPC-RSTPS	229.14	193.91	2.43	2.14	55.68	41.50
(iii) NLC-TPS-II Stage-1	43.03	31.93	2.23	2.14	9.60	6.83
(iv) NLC-TPS-II Stage-2	59.89	45.48	2.23	1.99	13.36	9.05
(v) NLC-TPS-1 Expansion	44.57	35.86	2.09	2.14	9.31	7.67
(vi) Jhajjar	43.20	50.95	3.81	3.57	16.46	18.19
(vii) NTPC -Simhadri	72.07	50.13	2.58	2.09	18.59	10.48
(viii)Vallur STPS	21.61	19.86	2.01	2.15	4.34	4.27
May-14						
(i) Talcher-II STPS	294.32	264.45	1.49	1.54	43.85	40.73
(ii) NTPC-RSTPS	212.43	200.38	2.56	2.14	54.38	42.88
(iii) NLC-TPS-II Stage-1	43.26	33.00	2.21	2.14	9.56	7.06
(iv) NLC-TPS-II Stage-2	58.39	46.99	2.21	1.99	12.90	9.35
(v) NLC-TPS-1 Expansion	46.92	37.06	2.12	2.14	9.95	7.93
(vi) Jhajjar	50.83	52.65	3.90	3.57	19.82	18.80
(vii) NTPC -Simhadri	74.19	51.80	2.71	2.09	20.10	10.83
(viii)Vallur STPS	20.37	20.52	2.08	2.15	4.24	4.41
Jun-14						
(i) Talcher-II STPS	218.01	255.92	1.52	1.54	33.14	39.41
(ii) NTPC-RSTPS	196.60	193.91	2.36	2.14	46.40	41.50
(iii) NLC-TPS-II Stage-1	40.64	31.93	2.22	2.14	9.02	6.83
(iv) NLC-TPS-II Stage-2	54.63	45.48	2.22	1.99	12.13	9.05
(v) NLC-TPS-1 Expansion	45.55	35.86	2.09	2.14	9.52	7.67
(vi) Jhajjar	74.18	50.95	4.02	3.57	29.82	18.19
(vii) NTPC -Simhadri	67.018	50.13	2.67	2.09	17.89	10.48
(viii)Vallur STPS	17.76	19.86	1.94	2.15	3.45	4.27

796.65 776.30

Format-4

Sourcewise Energy Input from April-2014 to June-2014							
Sl No	Particulars	Apr-14		May-14		Jun-14	
		Actual	KSERC order	Actual	KSERC order	Actual	KSERC order
		(MU)	(MU)	(MU)	(MU)	(MU)	(MU)
1	Hydro						
	(a) Gross Gen	666.51	681.04	648.32	607.44	492.52	464.19
	(b) Less Aux consumption	3.33	3.41	3.24	3.04	2.46	2.32
	(c) Net Hydro Gen	663.18	677.63	645.08	604.41	490.06	461.87
2	KSEB thermal						
	(a) BDPP	0.00	0.00	0.28	0.00	0.00	0.00
	(b) KDPP	33.29	30.00	34.21	31.00	22.87	15.00
	(c) Subtotal	33.29	30.00	34.50	31.00	22.87	15.00
	(d) Less Aux consumption	0.83	0.75	0.86	0.78	0.57	0.38
	(e) Net BDPP+KDPP	32.46	29.25	33.63	30.23	22.30	14.63
3	CGS (Import)	899.09	810.24	889.97	837.25	821.48	810.24
4	IPPs						
	(a) RGCCPP	213.36	0.00	82.06	0.00	110.32	0.00
	(b) BSES	97.98	0.00	12.66	0.00	0.00	0.00
	(c) KPCL	0.00	0.00	0.00	0.00	0.00	0.00
	(d) Wind	1.73	2.88	5.70	8.66	13.34	14.06
	(e) Ullumkal	1.81	2.89	1.61	2.85	1.05	2.44
	(f)MP Steel	2.24	3.40	1.99	3.40	2.97	3.40
	(g)Iruttukkanam	0.11	0.19	0.35	0.42	1.16	1.25
	(h) Iruttukkanam-II	0.12	0.06	0.21	0.13	0.80	0.38
	(i) Philips Carbon	2.17	0.00	1.31	0.00	0.00	0.00
	(j) Karikkayam	2.26	5.70	2.27	5.61	1.43	4.81
	(i) Subtotal	321.77	15.11	108.14	21.06	131.07	26.35
6	Purchase through traders/ excahnge (net)	318.47	333.76	307.84	359.04	274.37	262.42
7	Energy sale	311.68	0.00	57.46			
8	SWAP sale						