BEFORE THE KERALA STATE ELECTRICITY REGULATORY COMMISSION

IN THE MATTER OF:	Petition for making suitable amendments in the KSERC (Fuel surcharge formula) Regulations, 2009 (Notification No. KSERC/2009/XVII dated 8th January-2010.
PETITIONER:	Kerala State Electricity Board Vydyuthi Bhavanam, Pattom, Thiruvananthapuram – 695 004

The petitioner named above respectfully submits as under:

1. KSEB as the sole Generator and Power Procurer of all consumers including bulk consumers and other licensees in the State is directly concerned with the Fuel Surcharge Formula, Regulation, 2009 (Notification No. KSERC/2009/XVII dated 8th January-2010). However, a certified copy is yet to be communicated to the Board and on hearing about the regulation during the public hearing held on 27th January-2010, a copy of the Regulation was downloaded from the website of the KSERC. KSEB request that a certified copy of the regulation may kindly be provided.

2. In response to the notification of the draft regulation, KSEB vide its letter No. KSEB/TRAC/Fuel Regulations /C/669 dated 16-10-2009 has submitted the detailed comments as well as other issues need to be addressed before finalizing the regulations. KSEB's comments dated 16-10-2009 is marked as Annexure-1. During the public hearing held on 2nd December, 2009 KSEB had once gain presented our views. KSEB had requested before the Hon'ble Commission to kindly consider the following additional issues to be included in the Fuel Surcharge Formula regulation.

   (1) Additional liability likely to incurred due to Hydro-thermal mix variation.
   (2) Cost of additional power purchase from alternate sources due to non-availability of energy from approved sources.
   (3) Additional liability likely to be incurred due to procuring energy from cheaper sources by backing down/ reducing energy from approved costlier sources.
   (4) Additional liability on power purchase to meet the excess energy demand over the approved level etc.

3. But, surprisingly Hon'ble Commission had not considered any of the suggestions brought to the attention of the Commission vide this office letter dated 16-10-2009 and raised during the public hearing held on 2-12-2009. As a utility engaged in Generation, Transmission and Distribution for the last 50 years and also in view of the fact that the regulations are of serious concern to KSEB as the sole Generator and Power Procurer of the State, KSEB has a right to be informed of the reasons for not considering the issues raised by it. In this regard, Hon'ble Commission may kindly verify the procedures followed by Central Commission and other State Commissions while finalizing important regulations like Fuel Surcharge Formula having long lasting financial consequences to KSEB.

4. If the Fuel Surcharge Formula regulation is implemented as it is, it will totally upset KSEB's effort on optimizing the 'Generation and Power Purchase schedule and Cost' due to the following reasons.

   (1) As per the regulations, the Fuel Price Adjustment is allowed for the variation in cost on the approved quantity of power purchase or actuals, which ever is less. It is presumed in the formula $Fp= Q_{pur} X (Price_{Act} - Price_{App})$, Q_{pur} stands for actual quantity purchased from all sources including alternate cheaper sources other than the approved ones. Other wise KSEB will not be left with the option to procure energy from alternate cheaper sources other than the approved sources of Liquid Fuel Stations. It may please be noted that, as and when energy from alternate sources such as Power Exchange, UI, Bilateral Trader market, day ahead market etc. are available at lesser rate. KSEB has been taking efforts to procure energy from such sources to the maximum extent possible by reducing/ backing down energy from costlier approved sources. If the intention of the Commission is not to allow this freedom to KSEB, we hereby request that the formula may be amplified to include purchase from any source cheaper than the approved source.

   (2) In the ARR& ERC for the year 2009-10, as Hon'ble Commission has approved to schedule an average 3MU per day @ Rs 4.75 per unit from RGCCPP, 2.90 MU per day @ Rs 4.75 per unit from BSES, 0.37 per unit @ Rs 4.85 per unit from KPCL, 0.50 MU per day @Rs 4.85 per unit from BDPP, 1.20MU per day @ Rs 4.85 per unit from KDPP. But due to the price hike of liquid fuels, the present variable cost of RGCCPP is about Rs 7.60 per unit, BSES is Rs 7.30 per unit, KPCL is Rs 7.59 per unit, BDPP is Rs 7.52 per unit and that of KDPP is Rs 7.25 per unit. Considering the exorbitant price hike of liquid fuels stations, KSEB has been trying to reduce/ backing down the energy from these sources to the possible extent.

(3) As directed by the Central Commission, UI is not treated as a source of power and accordingly UI is not included in the power procurement plan. However, as and when frequency is above 49.80 Hz, utilities are allowed to over draw energy from the Grid as UI by replacing costlier sources. But, overdrawals from Grid through UI at frequency less than 49.50Hz invite severe penalty from CERC. Since, UI rate is directly linked to system frequency, in any case it could not be treated as a source of power. Accordingly, KSEB has not proposed energy drawal from UI during the year 2009-10. For the year 2009-10 up to 29th Jan-2010, KSEB had drawn 358 MU as UI at an average rate of Rs 2.62 per unit.

(4) Similarly, KSEB has been scheduling power from energy exchanges as and when energy is available at competitive prices. But the energy rates in the power exchanges is highly fluctuating during a day depending on the hourly variation of the demand and supply. Also the availability of power through power exchange is not an assured source. The corridor availability is an added constraint. Hence, the energy through power exchange could not be treated as a firm source of power. However, during the year KSEB was able to draw about 370 MU through PXI & IEX at an average rate of about Rs 3.95 per unit.

(5) After the emergence of short term market, energy is available from day ahead markets and also through bilateral markets at competitive rates. KSEB had procured about 43 MU during the current year at rates less than the then prevailing rates of liquid fuel stations.

(6) By availing energy from cheaper sources as above, KSEB was able to reduce the energy drawal from the BSES, KPCL, KDPP and BDPP to a greate extent by replacing the energy through UI, Power exchange and Trader market.

The details of energy approved and actual drawal from BSES since Aug-09 is given below.

Month	Approved quantity	Actual	Reduction	Approved rate	Actual rate
	(MU)	(MU)	(MU)	(Rs/ kWh)	(Rs/ kWh)
Aug-09	89.90	69.77	20.13	4.75	6.85
Sep-09	87.00	5.42	81.58	4.75	7.09
Oct-09	89.90	1.21	88.69	4.75	7.09
Nov-09	87.00	13.75	73.25	4.75	7.10
Dec-09	89.90	19.86	70.04	4.75	7.16
Jan-10	89.90	9.69	80.21	4.75	7.34
Total	533.60	119.70	413.90		

Hon'ble Commission may please note that, KSEB has not scheduled 405.20 MU from the approved level due to its high cost and replaced the same with comparatively cheaper sources as explained above from UI, Exchange and traders. Considering the high cost of BSES power, KSEB decided not to schedule energy from this station except during contingencies during Feb and Mar-10.

Further, KSEB has not scheduled 18.12MU from KPCL and 93.18MU from KDPP from the approved level due to its high cost and replaced the same with energy from the cheaper sources.

By these conscious and prudent efforts, KSEB has earned a net saving of about Rs 110.00 crore during the year upto January-2010.

(7) It appears from the present regulation that the intention is not to encourage the efforts of KSEB in replacing the costlier approved sources with less costly alternate sources, because only if KSEB schedules energy from the approved sources upto the approved quantity, the additional liability is a pass through. This is totally against the spirit of scheduling of Generation and Power Purchase based on merit order principles. It is also against the basic intention of the need of a Fuel Surcharge formula.

(8) The regulation also is not addressing the issue of additional liability likely to be incurred on power purchase due to increase in energy demand over the approved level. This may force KSEB to impose demand restrictions and load shedding to restrict energy consumption within the approved level. Hence, Hon'ble Commission may kindly give direction to impose power restrictions/ load shedding as and when the energy consumption exceeds the approved level in the ARR. In case no such direction is given, KSEB is at liberty to schedule excess generation/ power purchase from available sources beyond the approved level, which is to be compensated in the Fuel Surcharge Formula.

(9) Hon'ble Commission may kindly note that, Fuel Surcharge formula regulation is not the first of its kind in the Country. Almost all the SERC's in the country has already notified similar regulation to insulate the distribution utilities from the risk of price variation of thermal sources. In the States where hydel is predominant and vagaries of monsoon greatly affects the financial position of distribution utilities, the risk of hydel is also built in to the Fuel Surcharge formula regulation of such States. But Hon'ble Commission has not addressed the issue in the right spirit.

(10) Hence, KSEB request before the Hon'ble Commission to kindly look to these issues and suitably amend the regulations on Fuel Surcharge Formula dated 8-1-2010. KSEB further request that, necessary direction may please be issued on whether KSEB shall continue to its dedicated efforts to schedule energy from less costly sources than the approved sources. If so KSEB request that, the additional liability incurred for scheduling energy such alternate sources shall also made as pass through.

Prayer

KSEB request before the Hon'ble Commission that:

(1) Make suitable amendments in the KSERC (Fuel Surcharge Formula) Regulations, 2009 (KSERC/2009/XVII dated 8th January, 2010) considering the submission raised by KSEB vide the letter dated 16-10-2009 and during the public hearing held on 2-12-2009.

(2) Hon'ble Commission may kindly issue necessary amendments to the Fuel Surcharge Formula clearly incorporating the following:

(a) The definition of Q_{pur} may be replaced by following sentence.
Q_{pur} = Actual quantity of energy purchased from all sources including the sources cheaper than that of approved sources or approved quantity which ever is less.

(b) The fuel surcharge formula may be modified as
$F= F_o + F_p + B + F_d$
Where $F_d = Q_d$ x Price $_{Act}$
Q_d = Actual quantity of power purchased by KSEB to meet the excess demand over approved level.

Chief Engineer (Commercial & Tariff)

KERALA STATE ELECTRICITY BOARD

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KSEB/TRAC/Fuel Regulations /C 14-10-2009

To

The Secretary,
Kerala State Electricity Regulatory Commission,
KPFC Bhavanam, Vellayambalam
Thiruvananthapuram

Sir,

Sub: KSERC Fuel Price Adjustment Formula Regulation, 2009 –reg.
Ref: KSERC/ Fuel Regulations/2009/ 812 dated 17th September-2009

I am directed by the KSE Board to submit the following comments/ additional points on the subject draft regulation for the kind consideration of the Hon'ble Commission.

1. Hydro Thermal Mix variation.

Hon'ble Commission, in the draft regulation stated that, "Any variation on account of change in hydro thermal mix need be considered **at the end of the financial year** after prudence check. Further under para-12 of the draft regulation, it is stated as under.

Quote

> "The distribution licensee may file separately the additional cost due to change in hydro thermal mix on account of excess / reduction in rainfall and subsequent excess / shortfall in purchase of energy within 30 days of the close of the financial year"

Unquote

But, KSEB strongly feel that, variation in hydro-thermal mix and additional power purchase to meet the reduction in hydro generation should be included in the Fuel Price Adjustment formula (FPA). The reasons are given below.

(1) As on 31-03-2009, KSEB has about 1886MW of hydel capacity in the State. The approved energy availability from hydel for the year 2009-10 was 6685MU. i.e., About 50% of the energy requirement of the State is being met from KSEB's own hydel stations.

(2) The Hydel availability in the state is highly dependent on the vagaries of monsoon. Hon'ble Commission may be aware of the fact that, during the past there was up to 40% reduction in hydel availability from the expected averages. Just 10% reduction in hydel availability than expected may lead to a reduction in hydel generation of about 700MU per annum. For purchasing energy to fill up such shortfall from open market at the present rate of Rs 7.00 per unit may cause an additional financial liability of Rs 490 crore for a single year. The likely additional financial liability would be much more, if the failure of monsoon is severe as happened in 2002-03, 2003-04 and 2008-09. Hon'ble Commission may be aware that, a utility like KSEB can not bear such huge sum nor could postpone the recovery of such additional liability till the next or subsequent financial years. Moreover, passing on the entire burden at the beginning of the following financial year together with the revenue gap due to other factors will cause 'Tariff shock" to the consumers.

(3) Kerala has two distinct monsoons- The first monsoon starts from 1st of June and extends up to the end of September. The second monsoon become active during the months of October and November. About 65% of the total inflow is received from 1st monsoon and 20% from second monsoon months and the balance from remaining months.

(4) The first monsoon is highly fluctuating and the overall hydel availability of the State generally dependent on the strength of 1st monsoon. The variation of second monsoon is usually marginal. Hon'ble Commission may please note that, by the end of September (end of first monsoon) the hydel availability of the State can be reasonably estimated.

(5) Hence, KSEB request that, Hon'ble Commission may kindly allow to submit the review of hydel availability and additional power purchase required to meet the shortfall in hydel due to variation in hydel-thermal mix by end of September every year. If the reduction in hydel availability is more than 5% of the approved level, Hon'ble Commission may permit

KSEB to pass on the consequent cost of additional purchase to the consumers in the form of FPA as suggested below.

$Fg = (H_{app} - H_{act}) \times VC_m$

Where

Fg= Fuel cost for procuring additional power purchase for meeting the reduction in hydel generation.

H_{app} - Approved Hydel Generation in MU up to 31st September

H_{act} - Actual Hydro Generation in MU up to 31st September

VC_m - Average of the marginal cost of power purchase to meet the Shortfall in hydel generation.

Note. Fg- may be allowed to pass on to the consumer only if $(H_{app} - H_{act})$ is more than 5% of the H_{app}

(6) Hence KSEB request that, if the reduction of hydel availability is **<u>more than 5% of the approved quantity</u>** up to September, Hon'ble Commission may kindly allow to pass on the cost of additional purchase due to reduction in hydel to the consumers in the form of Fuel Price Adjustment from 1st of October every year as per the formula suggested above.

(7) Hon'ble Commission may please note that, since hydel being renewable sources, KSEB has been giving more thrust for developing hydel projects and about 500 MW of hydel projects are at various stages of implementation. But, under the proposed FPA formula, the risk of hydel variation not addressed and KSEB has to bear the risk due to shortfall in monsoon till the end of the financial year. Whereas in the case of thermal power, the risk due to variation in fuel price is addressed to a greater extent. This will end up as a discouragement for hydel development.

2. Cost of Additional Power Purchase over the approved level.

KSERC has proposed FPA only for the approved quantity of power purchase from the thermal sources. But it may be noted that, in addition to the additional power purchase on account of the reduction in hydel generation, KSEB may be resorting to additional power purchase from other sources not approved in the

ARR such as traders/UI and Power exchange etc on account of the following reasons.

(1) Non availability of the quantity approved by the Commission:

The figures approved in the ARR are estimates based on the past trends, prudent utility practices and as per the prevailing tariff norms. But most often, the actual availability may be much less than the quantity approved in the ARR. For example, during the month of July, August and September-2009, the availability from Central Generating Stations (CGS) were considerably lesser than the quantity approved in the ARR, as detailed below.

Energy availability from CGS

Month	KSERC approval (MU)	Actual (MU)	Shortfall (MU)	% of reduction
Jul-09	611.51	528.35	83.16	13.60
Aug-09	629.09	544.04	85.05	13.52
Sep-09	608.79	566.83	41.96	6.89
Total	1849.39	1639.22	210.17	11.36

Hon'ble Commission may please note that, the variable cost of energy from CGS approved was as less than Rs 1.30 per unit. But, in order to compensate the reduction in availability from CGS, KSEB had to purchase energy at a rate above Rs 6.00 per unit. This has resulted in additional financial liability on KSEB over the amount approved. Hence KSEB may request that, the additional liability for purchasing the short fall from the approved quantity in the ARR be kindly allowed to pass on to the consumers through the FPA formula, as proposed below.

$$Fp_{(short)} = \sum_{1}^{n} (Qp_{(app)} - Qp_{(act)}) (Vc_{(app)} - Vc_{(act)})$$

where $Fp_{(short)}$ - additional financial liability for procuring the shortfall in approved quantity from thermal sources.

$Qp_{(app)}$- Quantity of power purchase approved from various thermal sources

$Qp_{(act)}$ – Actual availability of energy availability from each thermal sources.

$Vc_{(app)}$) – Approved variable cost of each sources

$Vc_{(act)}$ – Actual cost of power purchase to meet the shortfall in each source

(2) Hon'ble Commission may be aware of the fact that, most often (even for small durations) energy through power exchange, day ahead market and UI are available at a lesser rate than the energy rate of approved sources such as Naphtha and LSHS based plants like RGCCPP-Kayamkulam, BSES, KPCL, BDPP and KDPP. Hence, as and when energy through power exchange, UI and traders are available at fewer rates than that of liquid fuel stations, KSEB shall reduce the power procurement from such sources and resort to equal quantum of power purchase from other comparatively cheaper sources. But the proposed FPA formula does not contain any provision to pass on the additional liability incurred for procuring energy from such alternate cheaper sources at a rate above the approved rate of liquid fuel station (but less than the actual rate of energy from liquid fuel stations). Hence KSEB request that, the issue may be addressed in the form of FPA as below.

$$Fp_{(others)} = \sum_{1}^{n} (Qp_{(other)})\,(Vc_{(app)} - Vc_{(act)})$$

where

$Fp_{(others)}$ - additional financial liability for procuring energy from cheaper sources other than approved sources.

$Qp_{(other-}$ Quantity of power purchase from other sources by reducing power purchase from liquid fuel stations/ other costly sources

$Vc_{(app)}$ – Approved variable cost of liquid fuel station

$Vc_{(act)}$ – Actual cost of power purchase of other alternate sources.

(3) Additional power purchase to meet the excess energy demand over approved level:

Hon'ble Commission may kindly note that, the energy demand in the State is highly sensitive to climatic changes. Most often, KSEB is forced to resort to additional power purchase from costly sources to meet the increase in energy demand over the approved level. Hence KSEB request that, the additional liability on account of such excess power purchase may also be allowed to be passed to the consumers through the FPA formula proposed, for which suitable modifications are as proposed below.

$Fp_{(excess)} = Q_{(excess)} \times (V_{(excess)} - (R_{avg} \times (1-L)))$

Where

$Fp_{(excess)}$ - additional liability for procuring additional energy to meet energy demand over approved level.

$V_{(excess)}$- Purchase rate of excess energy

R_{avg} - Average revenue realization per unit in the ARR approved

L - Approved T&D losses

3. Additional Comments on the Formula Proposed

(1) Changes in the Fuel Cost for the energy from own stations.

In the FPA formula proposed, Hon'ble Commission has linked the changes in the fuel cost of KSEB's own stations, BDPP and KDPP, with the quantity of fuel used. In this connection Hon. Commission may kindly note that this method may not be practical due to the following reasons.

(a) Hon'ble Commission is yet to notify operating norms for KSEB's own thermal stations- BDPP and KDPP.
(b) At BDPP and KDPP, in addition to LSHS, diesel also is being used for startup. The quantity of diesel required at BDPP and KDPP is also different and depends upon start- stop of generators.
(c) So far, in all the previous orders on ARR, Hon'ble Commission has been approving the variable cost at BDPP and KDPP based on the fuel consumption details submitted by KSEB.

Hence, KSEB proposes that, Hon'ble Commission may approve the variable cost of BDPP and KDPP based on the fuel consumption details submitted by KSEB, and pass on the changes in fuel cost above the approved level through the FPA as follows.

$$F_{(own)} = \sum_{1}^{n} (Q_{(ownr)})\,(Vc_{(app)} - Vc_{(act)})$$

where

$F_{(own)}$ - changes in energy cost for the energy from own stations.

$Q_{(ownr-}$ Quantity of energy approved from own sources.

$Vc_{(app)}$ – Approved variable cost of own stations.
$Vc_{(act)}$ – Actual variable cost of own stations.

(2) Exempting BPL category from payment of fuel surcharge

In the proposal, Hon'ble Commission has proposed to exempt the BPL from payment of fuel surcharge. But, Hon'ble Commission may kindly note the following.

(a) There are different BPL lists existing in the State. Giving concession to such a category may create practical difficulties during implementation and also financial loss to the consumers.
(b) The exact consumption of the BPL categories are difficult to estimate
(c) At present, KSEB has been exempting consumers with monthly consumption below 20 units from payment of electricity charges. Hence, exemption of payment of FPA may be limited to Non-Paying Group only (consumers with monthly consumption below 20 units). The term 'E' in the formula given in clause-7 of the draft regulation may be modified as follows.

E = Total quantity of energy generated & purchased at bus bar-approved T&D loss- consumption of NPG.

Hon'ble Commission may kindly consider above suggestions/ modification while finalizing the draft regulation on 'Fuel Price Adjustment Formula'.

Yours faithfully,

Chief Engineer (Commercial & Tariff)