

**BEFORE THE HONOURABLE KERALA STATE ELECTRICITY REGULATORY  
COMMISSION**

at its office at C.V. Raman Pillai Road, Vellayambalam. Thiruvananthapuram.

**FILING NO**            /2023

**CASE No.**

**IN THE MATTER OF:**

Filing of petition on 'Proposals to recover the additional liability incurred during period from October 2022 to December 2022 over approved level on Generation and Power Purchase due to variation in cost of fuel, from all consumers including Bulk Consumers and other Licensees through fuel surcharge.

AND

**IN THE MATTER OF:**

Kerala State Electricity Board Limited, Vidyuthi Bhavanam, Pattom,  
Thiruvananthapuram

Applicant




**Chief Engineer(Commercial & Tariff)**

Affidavit verifying the application for filing the "Proposals to recover the additional liability incurred during period from October 2022 to December 2022 over approved level on Generation and Power Purchase due to variation in cost of fuel, from all consumers including Bulk Consumers and other Licensees through fuel surcharge '.

I, Jayaraj.V , son of N.Vasudevan, aged 51 years residing at T.C 16/34 ,Lakshmi Mandiram, Thycaud P.O ,Jagathy, Thiruvananthapuram do solemnly affirm and state as follows:

I am the **Chief Engineer (Commercial & Tariff)** of the Kerala State Electricity Board Limited, Vidyuthi Bhavanam, Pattom, Thiruvananthapuram, and the **petitioner** in the above matter and I am duly authorized by the Board to make this affidavit on its behalf. I solemnly affirm at Thiruvananthapuram on this the 14th day of February 2023 that the contents of the above petition are true to my information, knowledge and belief. I believe that no part of it is false and no material has been concealed there from.

Deponent

  
**Chief Engineer (Commercial & Tariff)**  
Kerala State Electricity Board Limited,  
Vidyuthi Bhavanam, Pattom  
Thiruvananthapuram – 695 004


### VERIFICATION

I, the above named deponent, solemnly affirm at Thiruvananthapuram on this, the 14th day of February 2023 that the contents of the affidavit are true to my information, knowledge and belief, that no part of it is false and that no material has been concealed there from.

Deponent

  
**Chief Engineer(Commercial & Tariff)**  
Kerala State Electricity Board Limited  
Vidyuthi Bhavanam, Pattom  
Thiruvananthapuram – 695 004.

Solemnly affirmed and signed before me.

  
Advocate and Notary 14 2 2023

**T.N. OMANA**  
Advocate & Notary  
Thiruvananthapuram Revenue District  
Kerala State South India



**BEFORE THE HONOURABLE KERALA STATE ELECTRICITY REGULATORY  
COMMISSION**

**IN THE MATTER OF:**                   **Proposals to recover the additional liability incurred during period from October 2022 to December 2022 over approved level on Generation and Power Purchase due to variation in cost of fuel, from all consumers including Bulk Consumers and other Licensees through fuel surcharge.**

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

- I. Regulation 87 of KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021 notified as per No. 1234/Con.Engg/2021/KSERC dated 16<sup>th</sup> November 2021 (hereinafter referred to as 'Regulations 20121'), enables KSEBL to pass through the additional expenditure/savings on account of variation in actual fuel cost over approved level through fuel surcharge at the rates approved by the Hon'ble Commission. Regulation 87 (5) therein stipulates that *"Every Distribution business/licensee shall, within forty five days after the close of each quarter, file before the Commission a petition with all relevant details required for the approval of the amount of fuel surcharge to be adjusted from the consumers alongwith the proposed rate and period of such adjustment"*.
- II. This Honourable Commission, as per tariff order dated 25.06.2022, has directed KSEB Ltd to submit regularly, application for approval of fuel surcharge as per provisions of the Tariff Regulations, 2021. KSEBL is filing this petition as per the above regulations.
- III. KSEBL has power allocation from various Central Generating Stations and KSEBL has entered into long term agreements with various generators for meeting the demand of the State. The details are enclosed as **Annexure-I**.
- IV. Honorable Commission vide order dated 25.06.2022 had approved a quantum of 28024.73 MU as generation and power purchase of KSEBL for the year 2022-23; 7034.33 MU as internal hydro generation, 11190.36 MU as purchase from Central Generating Stations and 5186.22 MU as purchase through long term contracts. Honorable Commission vide MYT order dated 25.06.2022 has approved the energy schedule estimated by KSEB Ltd for the MYT period from 2022-23 to 2026-27. The present petition is prepared based on the same.
- V. Scheduling of thermal power from fifteen Central Generating Stations and IPPs were approved by this Honorable Commission vide MYT order dated 25.06.2022. Out of the

fifteen CGS three are atomic power stations and remaining twelve are thermal stations. Atomic power stations do not have a change in the cost of fuel and hence this petition does not cover those stations. This petition covers only the fuel price variation relating to sources of power approved by this Honorable Commission as mentioned above and as under regulation 87 of Regulations 2021.

- VI. It is submitted that there has been variation in energy availability than approval, from various approved generating stations. Reasons for the same are submitted below:
  - i. Change in annual maintenance schedule
  - ii. Coal Shortage
  - iii. Unscheduled outages in generating stations as well as transmission lines
  
- VII. Estimated energy availabilities of the Central Generating Stations submitted in the MYT petition (2022-27) were based on the maintenance schedules of previous years. Annual maintenance schedule of the CGS for the control period including 2022-23 were not published at the time of submission of MYT petition. There is variation in energy availability from the approval while considering the actual status. Unscheduled outages have also occurred at CGS due to technical issues and coal shortage.
  
- VIII. KSEBL has constituted a “market monitoring committee” for monitoring the power market on a daily basis. Scheduling of CGS and IPPs are being strictly monitored on a day today basis by this committee in order to ensure that the generators are not diverting power to other utilities by backing off supply to KSEBL. Websites of respective RLDCs, are made use of to ensure that the generators are abiding by the provisions of PPA/PSA. Details of station wise availability and reasons for reduction are enclosed as **Annexure-II**. Actual availability for the period October to December 2022 are indicated in the REA statements of SRPC.
  
- IX. Invoices for the power supplied are prepared based on the final REA statements published by SRPC. Tariff of the sources of purchase of power mentioned above being determined by the CERC, the charges are calculated applying the formula specified in the tariff regulations issued by CERC. Regarding variable charges, the landed cost of fuel for the month is verified with the details in Form 15. The price of fuel corresponding to the grade and quality is taken from the latest price notification of Coal India Ltd/Singareni Collieries Ltd inclusive of royalty, taxes and duties as applicable. Transportation cost by rail or any other means is taken from the latest freight charges of railways or otherwise. RLDC charges, incentive claims and the various supplementary claims are verified in line with the corresponding regulations/CERC orders. In the case of IPPs the invoices are processed as per the provisions in PPA.

- X. In addition to the variation in availability as mentioned under para VI, there is variation in the per unit variable cost also, over the approved level on account of variation in the price of primary fuel as well as secondary fuel, variation in calorific value and cost of transportation of fuel. Following points are submitted in this regard.
- i. Variation of energy charges depends on the price notified for each mine which are different from mine to mine, grade of coal, blending ratio of imported coal and domestic coal, receipt of coal from different sources, distance from the mine, mode of transport etc.
  - ii. In the case of coal-based stations the linkage of fuel is mainly from Coal India Ltd (CIL) and Singareni Collieries Ltd (SCCL). Due to shortage from linkage sources, the generating stations has to augment coal from other domestic sources and imported coal as well. Coal from Eastern Coal Fields (ECL) and SECL is expensive as compared to coal from Mahanadi coal fields (MCL) under Coal India Ltd due to the variations in grade of coal and other reasons. Price of coal from Singareni Collieries (SCCL) is based on the price notifications of Singareni Collieries Ltd from time to time whereas price of Coal India Ltd (CIL) is based on the notification dated 27.11.2020. There are frequent revisions in SCCL price notification compared to CIL. Following price revisions have been notified by SCCL subsequent to MYT petition which has contributed to increase in energy charges.
    1. SCCL price notification no.128/2021-22 dtd 31.08.2021 wef 01.09.2021.
    2. Corrigendum 1 to price notification no,128/2021-22 dtd 05.09.2021.
    3. Corrigendum 2 to price notification no,128/2021-22 dtd 14.09.2021.
    4. SCCL price notification no.129/2021-22 dtd 30.09.2021 wef 01.10.2021.
    5. SCCL price notification no.130/2021-22 dtd 30.10.2021 wef 01.11.2021
    6. Corrigendum 1 to price notification no,130/2021-22 dtd 30.11.2021.
    7. SCCL price notification no.131/2021-22 dtd 10.01.2022 wef 11.01.2022
    8. SCCL price notification no.132/2021-22 dtd 28.02.2022 wef 01.03.2022
    9. SCCL price notification no.133/2021-22 dtd 12.05.2022 wef 13.05.2022.
    10. SCCL price notification no.134/2021-22 dtd 31.05.2022 wef 01.06.2022
    11. Corrigendum 1 to price notification no,134/2021-22 dtd 04.06.2022.
    12. Corrigendum 2 to price notification no,134/2021-22 dtd 28.06.2022.
    13. Corrigendum 3 to price notification no,134/2021-22 dtd 30.07.2022.
    14. Corrigendum 4 to price notification no,134/2021-22 dtd 1.08.2022.
    15. Corrigendum 5 to price notification no,134/2021-22 dtd 27.08.2022
    16. Corrigendum 6 to price notification no,134/2021-22 dtd 31.08.2022
    17. Corrigendum 7 to price notification no,134/2021-22 dtd 05.09.2022
    18. Corrigendum 8 to price notification no,134/2021-22 dtd 28.09.2022
    19. Corrigendum 9 to price notification no,134/2021-22 dtd 03.10.2022
    20. Corrigendum 10 to price notification no,134/2021-22 dtd 31.10.2022
    21. Corrigendum 11 to price notification no,134/2021-22 dtd 04.11.2022
    22. Corrigendum 12 to price notification no,134/2021-22 dtd 14.11.2022
    23. Corrigendum 13 to price notification no,134/2021-22 dtd 30.11.2022
    24. Corrigendum 14 to price notification no,134/2021-22 dtd 02.12.2022
    25. Corrigendum 15 to price notification no,134/2021-22 dtd 31.12.2022

iii. It is respectfully submitted that the following notifications were issued by Coal India Ltd and its subsidiaries, subsequent to MYT petition of FY 2022-27, which has contributed to increase in energy charges.

- Notification dated 19.01.2022 by Bharat Coking Coal Ltd revised surface transportation charges
- Notification dated 31.01.2022 by Mahanadi Coal Ltd Ltd revised surface transportation charges
- Notification dated 14.03.2022 by Eastern Coal fields Ltd revised surface transportation charges

iv. Monthly energy charges depends upon the grade of coal, and the transportation charges which varies upon the receipt of coal from different sources. The energy charge rate calculated as per Tariff regulations is based on the following formula:

$$\text{Energy charge rate} = \left\{ \frac{(\text{SHR}-\text{SFC}*\text{CVSF}) * \text{LPPF}}{\text{CVPF}} + (\text{SFC}*\text{LPSFi}) + (\text{LC}*\text{LPL}) \right\} * 100 / (100 - \text{Aux})$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Weighted Average Gross calorific value of coal as received, in kCal per kg for coal-based stations less 85 Kcal/Kg on account of variation during storage at generating station; In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio

CVSF = Calorific value of secondary fuel, in kCal per ml;

ECR = Energy charge rate, in Rupees per kWh sent out;

SHR = Gross station heat rate, in kCal per kWh;

LPL = Weighted average landed cost of limestone in Rupees per kg;

LPPF = Weighted average landed fuel cost of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

LPSFi = Weighted Average Landed Fuel Cost of Secondary Fuel in Rs/ml during the month:

v. Energy charges depends on gross calorific value of primary and secondary fuel CVSF, and CVPF as well as landed price of primary and secondary fuel (LPPF and LPSFi). The parameters CVPF in the equation of energy charges varies depending upon the grade of fuel which in turn depends on the receipt of coal from different sources and also blending of fuel. Different grades of coal have different prices. Thus, the landed price of fuel again depends on grade of fuel, source of fuel, transportation cost (depends on distance from coal source and mode of transport), price notified for each mine which are different from mine to mine etc. The monthly variation of these parameters leads to variation in monthly energy charges. It is seen that the price of imported coal is much higher as compared to domestic coal.

vi. The reason for wide variations in energy charges for the third quarter is due to the change in blending ratio of coal owing to coal shortage. On account of shortage of domestic coal, the coal based thermal generating stations are constrained to restrict

their generation, thereby resulting in shortfall in supply of electricity. In order to address issue of depleting coal stocks and building stocks before onset of monsoon, Ministry of Power vide letter 28.04.2022 allowed blending of imported coal upto 10% of the total coal requirement. Even after the direction, MoP observed that the import of coal was not at the required level and some generating companies were not willing to import coal for blending due to clarity of compensation on account of import of coal. State Governments and SERC's were requested vide MOP vide letter dated 18.05.2022 to ensure that all generating stations under them to take immediate action for importing coal for blending.

- vii. Based on the request of Gencos and in public interest Ministry of Power, Gol, vide its letter No.23/13/2021-R&R(Pt-1) dated **18.05.2022**, issued direction to CERC to immediately allow higher amount of blending upto 30% with decision of MoP, subject to technical feasibility, without beneficiaries consultation for the period upto **31<sup>st</sup> March 2023** to maintain resource adequacy and 24x7 supply to consumers.
- viii. CERC, vide Order dated **26.07.2022**, vide order dated 26.07.2022, allowed *blending upto 20% from alternate sources of fuel supply including imported coal, subject to technical feasibility, for the period upto 31.10.2022*. The Commission also ordered that the operation of second and third provisions of Sub regulation 3 of Regulation 43 of 2019 Tariff Regulation shall be kept in abeyance.
- ix. KSEBL has been admitting the fuel price as per the order dated 26.07.2022 of CERC order and subsequent price notification of MoP.

XI. Approved and actual variable cost of approved sources are shown in **Table 1** below.

Table-1					
SI No	Source	Approved	Actual (Rs/ kWh)		
		(Rs/ kWh)	Oct-22	Nov-22	Dec-22
<b>Central Generating Stations</b>					
1	NTPC-RSTPS Stage I & II	2.78	4.823	3.834	3.355
2	NTPC-RSTPS Stage III	2.61	4.656	3.751	3.304
3	Talcher	1.87	1.973	1.546	1.616
4	Simhadri TPS Stage II	2.92	4.643	3.802	3.893
5	NLC-Stage-1	2.74	2.793	2.717	2.717
6	NLC-Stage-II	2.74	2.793	2.717	2.717
7	NLC I Expansion	2.46	2.451	2.446	2.446
8	NLC II Expansion	2.6	2.643	2.633	2.632
9	Vallur STPS	3.19	4.390	3.113	3.043
10	NTPL	3.07	4.427	4.808	4.160
11	NTPC Kudgi	3.56	5.937	5.137	4.973
12	NNTPP	2.24	2.196	2.222	2.222

Independent Power Producers					
13	RTPS	3.14	4.104	3.664	3.546
14	Mejia	2.93	3.193	2.908	3.056
15	Maithon I	2.54	2.621	2.603	2.555
16	Maithon II	2.54	2.621	2.603	2.555
17	Jindal Power Ltd-Bid I	1.33	1.330	1.330	1.350
18	BALCO	1.18	1.160	0.000	1.170

- XII. The summary of additional liability for third quarter of 2022-23 as per fuel surcharge regulations is given in **table 2** below.

Table 2 Additional liability for the third quarter 2022-23							
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)
CGS	2411.86	1958.81	1929.10	2.550	2.930	89.32	87.83
IPPs	1353.64	1243.71	1162.29	2.103	2.230	7.52	7.21
Total	3765.50	3202.51	3091.39	2.389	2.658	96.84	95.03

- XIII. It can be seen from the above table that as per the Regulations there is an additional liability of Rs 87.83 Cr as per the Regulations during the third quarter of FY 2022-23 while purchasing 1958.81 MU of energy from various Central Generating Stations approved vide order dated 25.06.2022. Further there is a net additional liability of Rs 7.21 Cr as per regulation on account of purchase of energy from various IPPs approved by Honorable Commission vide order dated 25.06.2022. Thus KSEBL is claiming Rs 95.03 Cr (87.83+7.21) as additional liability for the third quarter of Financial year 2022-23.
- XIV. Details in this regard as per the provisions of fuel surcharge formula specified in Tariff Regulations, 2021, are furnished in **Annexure III**.
- XV. It is submitted that as per the regulation 86(8) of the Tariff regulations, *“the adjustment of fuel surcharge as approved by the Commission shall be effected from the third month of subsequent quarter onwards as directed by the Honorable Commission*. For calculation purpose, KSEBL is considering the energy sales for the period of three months from March 2023 for calculating the rate of fuel surcharge recovery. This amounts to 14 paise per unit. Details of calculation are furnished in **Annexure IV**.



**PRAYER**

KSEBL humbly prays before this Hon'ble Commission that

- (a) Additional financial liability incurred by KSEBL, amounting to Rs 95.03 Cr, resulting from the variation in variable charges of power purchase from approved sources for the period from October to December 2022 as per regulation 87 of KSERC Tariff Regulations 2021 as detailed in **Annexure III & IV** to this petition may kindly be approved.
- (b) This approved additional cost may kindly be allowed to be recovered from consumers including bulk consumers and other licensees as fuel surcharge, as per the Regulation 87 of KSERC Tariff Regulations 2021, @ 14 paise per unit from 1<sup>st</sup> March 2023 onwards.

  
Chief Engineer(Commercial & Tariff)

Acc: 1. Formats I, III & IV  
2. Annexure I-IV

## Formats

**Format-1**

<b>Provisional Details of energy billed for retail sale for the third quarter of FY 2022-23</b>						
<b>Month</b>	<b>Energy billed (MU)*</b>		<b>T&amp;D loss(%)</b>		<b>Energy Input(MU)</b>	
	<b>Actual</b>	<b>Approved</b>	<b>Actual</b>	<b>Approved</b>	<b>Actual</b>	<b>Approved</b>
October	1984.58			11.22% at the end of year	2259.60	
November	2036.66				2209.28	
December	2025.63				2282.14	
Total	6046.87				6751.02	

\*KSEBL is unable to furnish the monthly energy sales corresponding to energy input of a particular month and monthly T&D loss as required by the Honorable Commission due to following constraints.

In the current billing system almost 98% of consumers are billed bimonthly and the billing is done for almost all days for LT Domestic and Commercial bimonthly consumers. Hence the energy sales details corresponding to the energy input of a particular month is not available due to this extended billing. The energy billed data for a particular month includes the energy billed data for the previous two months from the date of billing and not the energy sales against the energy input of that particular month. Hence KSEBL is unable to furnish the monthly T&D loss and energy sales against the energy input of a particular month.

Instead KSEBL is furnishing the energy billed data for the month of October, November & December 2022 in the above table and not the energy sales corresponding to energy input during the quarter. The energy input and energy billed shown is exclusive of energy wheeled by embedded open access consumers and consumption against captive generation

Format-3						
Month Wise Details of Purchase of Energy						
Source	Energy Purchase (MU) at exbus		Variable Cost (Rs/kWh)		Total variable cost (Rs.Cr)	
	Approved (A)	Actual ('B)	Approved (C)	Actual ('D)	Approved E=A*C	Actual (F=B*D)
<b>October-2022</b>						
<b>Central Generating Stations</b>						
RSTPS I & II	144.11	109.82	2.78	4.823	40.06	52.97
RSTPS III	36.18	23.30	2.61	4.656	9.44	10.85
Talcher Stage-II	253.18	260.82	1.87	1.973	47.34	51.46
Simhadri TPS Stage II	50.96	36.24	2.92	4.643	14.88	16.83
NLC Stage-I	35.87	16.60	2.74	2.793	9.84	4.64
NLC Stage-II	51.23	39.78	2.74	2.793	14.06	11.11
NLC 1 Expansion	39.42	37.29	2.46	2.451	9.70	9.14
NLC II Expansion	43.44	26.80	2.60	2.643	11.30	7.08
Vallur STPS	29.79	23.47	3.19	4.390	9.50	10.30
NTPL	43.00	34.29	3.07	4.427	13.20	15.18
Kudgi	66.31	4.63	3.56	5.937	23.61	2.75
NNTPP	19.21	20.96	2.24	2.196	4.30	4.60
<b>Total</b>	<b>812.69</b>	<b>634.01</b>			<b>207.23</b>	<b>196.90</b>
<b>Long Term contracts with generators outside the State</b>						
DVC Reghunathpur TPS	29.56	13.95	3.14	4.104	9.28	5.73
DVC Mejia TPS	59.92	37.22	2.93	3.193	17.56	11.88
Maithon Power Ltd- Contract 1	87.90	87.55	2.54	2.621	22.33	22.95
Maithon Power Ltd- Contract II	87.90	87.68	2.54	2.621	22.33	22.98
Jindal Power Ltd-Bid I	127.22	120.65	1.33	1.330	16.92	16.05
BALCO	63.61	35.07	1.18	1.160	7.51	4.07
<b>SUB TOTAL LTA</b>	<b>456.12</b>	<b>382.12</b>	<b>2.10</b>	<b>2.189</b>	<b>95.92</b>	<b>83.65</b>
<b>Total</b>	<b>1268.81</b>	<b>1016.13</b>			<b>303.15</b>	<b>280.56</b>
<b>November- 2022</b>						
<b>Central Generating Stations</b>						
RSTPS I & II	139.46	126.72	2.78	3.834	38.77	48.58
RSTPS III	35.01	36.04	2.61	3.751	9.14	13.52
Talcher Stage-II	245.01	216.60	1.87	1.546	45.82	33.49
Simhadri TPS Stage II	49.32	50.60	2.92	3.802	14.40	19.24
NLC Stage-I	34.71	21.83	2.74	2.717	9.52	5.93
NLC Stage-II	49.58	23.40	2.74	2.717	13.60	6.36
NLC 1 Expansion	38.15	38.59	2.46	2.446	9.38	9.44
NLC II Expansion	42.04	11.86	2.60	2.633	10.93	3.12
Vallur STPS	28.83	32.67	3.19	3.113	9.20	10.17
NTPL	41.62	24.72	3.07	4.808	12.78	11.89
Kudgi	64.17	42.52	3.56	5.137	22.84	21.84
NNTPP	18.59	18.36	2.24	2.222	4.16	4.08
<b>Total</b>	<b>786.48</b>	<b>643.91</b>			<b>200.55</b>	<b>187.65</b>

<b>Long Term contracts with generators outside the State</b>						
DVC Reghunathpur TPS	28.61	15.34	3.14	3.664	8.98	5.62
DVC Mejia TPS	57.99	65.59	2.93	2.908	16.99	19.07
Maithon Power Ltd- Contract 1	85.06	100.55	2.54	2.603	21.61	26.17
Maithon Power Ltd- Contract II	85.06	100.58	2.54	2.603	21.61	26.18
Jindal Power Ltd-Bid I	123.12	126.67	1.33	1.330	16.37	16.85
BALCO	61.56	0.00	1.18	0.000	7.26	0.00
<b>SUB TOTAL LTA</b>	<b>441.40</b>	<b>408.73</b>	<b>2.10</b>	<b>2.297</b>	<b>92.83</b>	<b>93.90</b>
<b>Total</b>	<b>1227.88</b>	<b>1052.64</b>			<b>293.37</b>	<b>281.55</b>
<b>December- 2022</b>						
<b>Central Generating Stations</b>						
RSTPS I & II	144.11	101.89	2.78	3.355	40.06	34.18
RSTPS III	36.18	41.46	2.61	3.304	9.44	13.70
Talcher Stage-II	253.18	251.29	1.87	1.616	47.34	40.61
Simhadri TPS Stage II	50.96	54.49	2.92	3.893	14.88	21.21
NLC Stage-I	35.87	23.41	2.74	2.717	9.84	6.36
NLC Stage-II	51.23	18.50	2.74	2.717	14.06	5.03
NLC 1 Expansion	39.42	38.13	2.46	2.446	9.70	9.33
NLC II Expansion	43.44	19.83	2.60	2.632	11.30	5.22
Vallur STPS	29.79	29.96	3.19	3.043	9.50	9.12
NTPL	43.00	47.73	3.07	4.160	13.20	19.85
Kudgi	66.31	46.39	3.56	4.973	23.61	23.07
NNTPP	19.21	7.82	2.24	2.222	4.30	1.74
<b>Total</b>	<b>812.69</b>	<b>680.89</b>			<b>207.23</b>	<b>189.42</b>
<b>Long Term contracts with generators outside the State</b>						
DVC Reghunathpur TPS	29.56	13.52	3.14	3.546	9.28	4.80
DVC Mejia TPS	59.92	66.46	2.93	3.056	17.56	20.31
Maithon Power Ltd- Contract 1	87.90	103.75	2.54	2.555	22.33	26.51
Maithon Power Ltd- Contract II	87.90	103.75	2.54	2.555	22.33	26.51
Jindal Power Ltd-Bid I	127.22	128.25	1.33	1.350	16.92	17.31
BALCO	63.61	37.12	1.18	1.170	7.51	4.34
<b>SUB TOTAL LTA</b>	<b>456.12</b>	<b>452.86</b>	<b>2.10</b>	<b>2.203</b>	<b>95.92</b>	<b>99.78</b>
<b>Total</b>	<b>1268.81</b>	<b>1133.75</b>			<b>303.15</b>	<b>289.20</b>

**Format-4**

**Sourcewise Energy Input from October 2022 to December 2022 in MU**

Sl No	Particulars	Oct-22		Nov-22		Dec-22		Total		
		Actual	KSERC order	Actual	KSERC order	Actual	KSERC order	Actual	KSERC order	Difference
		(MU)	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)
1	Hydro									
	(a) Gross Gen	766.69	553.03	601.61	469.97	563.48	509.58	1931.79	1532.58	399.21
	(b) Less Aux consumption*	5.37	2.77	4.21	2.35	3.94	2.55	13.52		13.52
	(c) Net Hydro Gen	761.33	550.26	597.40	467.62	559.54	507.03	1918.27	1524.92	393.35
2	KSEB thermal							0.00		
	(a) BDPP	0.00		0.00		0.00		0.00	0.00	0.00
	(b) KDPP	0.00		0.00		0.00		0.00	0.00	0.00
	(c) Subtotal	0.00		0.00		0.00		0.00	0.00	0.00
	(d) Less Aux consumption	0.00		0.00		0.00		0.00	0.00	0.00
	(e) Net BDPP+KDPP	0.00		0.00		0.00		0.00	0.00	0.00
3	Wind Generation(net)	0.04	0.10	0.03	0.10	0.06	0.10	0.13	0.29	-0.16
4	Solar Generation(net)	0.91	5.04	0.83	5.04	0.94	5.04	2.68	15.12	-12.44
	Total own generation(net)	762.28		598.26		560.54		1921.08	0.00	1921.08
3	CGS (Import)	877.92	984.17	874.13	952.42	914.60	945.97	2666.64	2882.56	-215.92
4	IPPs							0.00		0.00
	<b>IPP's</b>			0.00				0.00		
	RGCCPP	0.00		0.00		0.00		0.00		
	Solar	0.00		0.00		0.00		0.00		
	IREDA -SOLAR	6.35		5.61		6.40		18.36		
	THDCIL	8.59		7.82		8.76		25.17		
	Kuzhalmannam-ANERT	0.00		0.00		0.00		0.00		
	NTPC	18.41		15.56		16.54				
	CIAL	1.39		1.23		1.32				
	TOTAL SOLAR	34.75		30.21		33.02		97.97		
	WIND ENERGY	0.00		0.00		0.00		0.00		
	Agali	1.49		0.22		0.73		2.44		
	Koundikkal	0.52		0.14		0.36		1.01		
	Ramakalmedu	1.28		0.53		1.63		3.44		
	Ahalya	0.97		0.51		0.89		2.37		
	Inox	1.84		1.22		2.35		5.41		
	Kosamattom	0.09		0.02		0.08		0.19		
	TOTAL WIND	6.18		2.64		6.03		14.85		
	SMALL HYDRO - SHEP	0.00		0.00		0.00		0.00		
	Ullunkal(EDCL)	2.26		1.97		1.35		5.57		
	Iruttukanam -I (VIYYAT)	2.26		1.52		1.04		4.81		
	Iruttukanam Stage-II	1.19		1.05		0.68		2.92		
	Karikkayam (AHPL) *	4.91		4.19		2.73		11.84		

	MeenvalloM (PSHCL)	0.98		0.48		0.27		1.73		
	Pathamkayam (MREPPL)	2.00		0.69		0.34		3.03		
	Deviyar-Micro HEP	0.00		0.00		0.00		0.00		
	Anakampoyil	2.81		0.94		0.46		4.21		
	TOTAL SHEP	16.41		10.83		6.87		34.10		
	TOTAL - IPP	57.33		43.68		45.92		146.93		
5	Power purchase through traders (KSEB bus)	0.00		0.00		0.00		0.00		
6	Deviation settlement	-10.39		14.85		0.19		4.65		
7	LTA	0.00		0.00		0.00		0.00		
	Purchase From DVC RTPS	13.95	29.56	15.34	28.61	13.52	29.56	42.82		
	Purchase from DVC Meija	37.22	59.92	65.59	57.99	66.46	59.92	169.27	177.83	-8.56
	Purchase from Maithon power-1, ER	87.55	87.90	100.55	85.06	103.75	87.90	291.86	260.87	30.99
	Purchase from Maithon power-2 ,ER	87.68	87.90	100.58	85.06	103.75	87.90	292.01	260.87	31.15
	Purchase from (JPL STAGE2) -DBFOO	120.65	127.22	126.67	123.12	128.25	127.22	375.56	377.57	-2.01
	Purchase from jhabhua-SGPLNLR,TPCL DBFOO	68.99	73.15	66.50	70.79	70.60	73.15	206.09	217.10	-11.01
	Purchase from jhabhua-(PSA-2 )SGPLNLR,TPCL DBFOO	59.96	63.61	57.76	61.56	61.38	63.61	179.10	188.78	-9.69
	Purchase from (JPL STAGE2) -(PSA-2)DBFOO	90.51	95.42	95.00	92.34	96.18	95.42	281.69	283.18	-1.49
	Purchase from JITPL	68.78	63.61	63.07	61.56	69.05	63.61	200.90	188.78	12.12
	Purchase from BALCO	35.07	63.61	0.00	61.56	37.12	63.61	72.19	188.78	-116.59
	TOTAL LTA	670.36	751.91	691.06	727.66	750.07	751.91	2111.48	2231.49	-120.00
8	Purchase from exchanges	4.33		47.02		103.85		155.20		
9	Purchase from SECI	10.46		7.35		15.96		33.77		
10	PGCIL loss	53.93		59.95		72.15		186.03		
11	Total Generation and Power Purchase	2318.35		2216.39		2318.97		6853.72		
12	External sale	58.75		7.12		36.83		102.70		
13	Energy demand	2259.60		2209.28		2282.14		6751.02		

Annexure-I				
Power contracted through long Term agreements				
Allocation from Central Generating Stations				
No.	Station	IC (MW)	Allocation	Allocated Capacity to KSEBL (MW)
		MW	%	2021-22
		MW	%	MW
1	RSPTS Stage I & II	2100	11.67%	245.07
2	RSTPS Stage III	500	12.20%	61
3	TALCHER - Stage II	2000	21.35%	427
4	Simhadri Exp	1000	8.56%	85.55
5	NLC-II- Stage-1	630	10.00%	63
6	NLC-II- Stage-2	840	10.72%	90.02
7	NLC- Exp- Stage-1	420	16.25%	68.24
8	NLC - II Exp	500	16.25%	81.23
9	MAPS	440	5.23%	23.01
10	KAIGA Stg I& II	440	8.64%	38.01
11	KAIGA Stg II	440	7.95%	34.98
12	Kudamkulam Unit I	1000	14.01%	140.1
13	Kudamkulam unit II	1000	13.30%	133
14	Vallur JV with	1500	3.33%	49.95
15	NTPL(Tuticorin JV)	1000	7.25%	72.5
16	Kudgi Unit I,II & III	2400	4.66%	111.72
17	NLC new thermal	1000	3.24%	32.4
	<b>Total</b>			<b>1756.54</b>
Power contracted with IPPS through long Term contracts				
	Generator	Contracted capacity		
18	Maithon Power Ltd-Contract I	150		
19	Maithon Power Ltd-Contract I	150		
20	DVC Mejia TPS	100		
21	DVC Reghunathpur TPS	50		
22	Jindal Power Ltd -Bid I	200		
23	Jhabua Power Ltd-Bid I	115		
24	Jindal Power Ltd -Bid II	150		
25	Jhabua Power Ltd-Bid II	100		
26	Jindal India Thermal Power Ltd-Bid II	100		
27	BALCO	100		



**Annexure II Details of energy availability for the third quarter of FY-22-23**

		October		November		December		
		peak	off peak	peak	off peak	peak	off peak	
1	NTPC RSTPS Stg I & II	95.317	96.187	88.253	88.609	65.015	65.273	Unit 2 PSD from 01-12-22 to 31-12-22; Unit 3 FSD from 16-12-22 to 18-12-22; Unit 5 PSD from 01-12-22 to 31-12-22; Unit 6 FSD from 30-12-22 to 31-12-22
2	NTPC RSTPS Stage III	104.499	104.499	104.74	104.74	104.84	104.838	
3	NTPC Talcher II	100.139	100.461	76.168	76.132	86.647	86.609	
4	NTPC Simhadri Stg II	104.886	104.848	104.616	103.79	104.352	104.066	
5	NLC TPS I Expansion	90.824	92.7	97.047	96.426	91.624	92.096	
6	NLC TPS II Expansion	55.07	56.565	25.053	25.214	41.388	40.944	Unit 1 FSD from 01-10-22 to 06-10-22, 09-10-22 to 09-10-22, 10-10-22 to 18-10-22, 11-11 to 23-11; 09-12 to 12-12; Unit 2 planned from 27-10-22 to 31-12-22
8	NLC - II - Stage I	38.276	38.758	50.913	51.59	53.254	53.771	Unit 1 FSD from 03-10-22 to 03-10-22, Unit 2 FSD from 01-10-22 to 22-10-22, 25-10-22 to 25-10-22, Unit 3 PSD from 04-10-22 to 31-10-22; Unit 1 FSD from 20-11-22 to 20-11-22; Unit 3 PSD from 01-11-22 to 03-11-22, 03-11-22 to 29-11-22; Unit 1 FSD from 09-12-22 to 31-12-22; Unit 2 FSD from 06-12-22 to 09-12-22, 11-12-22 to 12-12-22, 14-12-22 to 14-12-22
9	NLC - II - Stage II	63.467	65.561	38.762	38.946	29.918	29.759	Unit 4 FSD from 01-10-22 to 05-10-22, 11-11 to 18-11; PSD from 19-11 to 31-12; Unit 5 FSD from 13-10-22 to 15-10-22, 05-11 to 31-12; Unit 6 FSD from 17-10-22 to 21-10-22, 22-10-22 to 31-10-22; 01-11 to 05-11; 12-11 to 17-11; 27-11 to 30.11; PSD from 19-12 to 31-12; Unit 7 FSD from 08-10-22 to 14-10-22
10	NNTPP	93.591	93.762	83.269	83.289	33.775	34.542	Unit 1 FSD from 04-10-22 to 05-10-22, 10-10-22 to 11-10-22, 15-10-22 to 17-10-22, 11-12 to 18-12; 22-12 to 31.12; Unit 2 FSD from 05-11-2022 to 09-11-22, 09-11-2022 to 09-11-22, 11-11-2022 to 11-11-22, 28-11-2022 to 01-12-22

11	NTECL Vallur	100.189	100.815	95.064	96.167	84.174	83.917	Unit 1 FSD from 02-11 to 3-11; 11-12-22 to 13-12-22, 13-12-22 to 13-12-22, Unit 1 PSD from 24-12-22 to 31-12-22; Unit 2 FSD on 2.11 to 4.11; FSD from 03-12-22 to 05-12-22; Unit 3 FSD from 15-12-22 to 16-12-22
12	NTPL	100.246	100.14	50.536	50.544	96.171	96.03	Unit 1 PSD from 01-11-22 to 30-11-22; Unit 1 FSD from 01-12-22 to 01-12-22; Unit 2 FSD from 13-12-22 to 16-12-22
13	Kudgi	93.731	93.768	69.5	69.501	75.221	75.163	Unit 1 RSD from 01-10-2022 to 10-10-22, 15-10-22 to 30-10-22; Unit 2 RSD from 01-10-22 to 09-11 ; Unit 3 RSD from 01-10-22 to 10-10-22, 14-10-22 to 25-10-22 and Unit 3 planned from 26-10-22 to 27-12.2022
14	DVC Mejia (100MW)							
15	DVC RTPS (50 MW)							
16	Maithon Power Ltd-PPA I							
17	Maithon Power Ltd-PPA II							
18	Jindal Power Ltd-PSA 1							
19	BALCO							WRLDC standing clearance in Oct-2022; One unit under technical outage for 30 days in November and technical outage from 19.12 onwards

## ANNEXURE III

### DETAILS OF ADDITIONAL LIABILITY

**1. Details of Power Purchases - Energy procurement from Central Generating Stations during the period October 2022 to December 2022**

<b>Table 1 - Central Generating Stations</b>							
Month	Energy purchased at ex bus			Variable cost of power Purchase at ex bus		Additional Liability	
	Approved	Actual	Admissible for FPA	Approved	Actual	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
<b>1.1 NTPC-RSTPS Stage I &amp; II</b>							
Oct-22	144.11	109.82	109.82	2.780	4.823	22.44	22.44
Nov-22	139.46	126.72	126.72	2.780	3.834	13.36	13.36
Dec-22	144.11	101.89	101.89	2.780	3.355	5.86	5.86
Total	427.69	338.43	338.43	2.780	4.011	41.65	41.65
<b>1.2 NTPC-RSTPS Stage III</b>							
Oct-22	36.18	23.30	23.30	2.61	4.656	4.77	4.77
Nov-22	35.01	36.04	35.01	2.61	3.751	4.11	3.99
Dec-22	36.18	41.46	36.18	2.61	3.304	2.88	2.51
Total	107.36	100.80	94.48	2.61	3.776	11.76	11.27
<b>1.3 NTPC Talcher-II STPS</b>							
Oct-22	253.18	260.82	253.18	1.870	1.973	2.69	2.61
Nov-22	245.01	216.60	216.60	1.870	1.546	-7.02	-7.02
Dec-22	253.18	251.29	251.29	1.870	1.616	-6.38	-6.38
Total	751.37	728.71	721.06	1.870	1.723	-10.71	-10.79
<b>1.4 NLC - TPS – II Stage 1</b>							
Oct-22	35.87	16.60	16.60	2.744	2.793	0.08	0.08
Nov-22	34.71	21.83	21.83	2.744	2.717	-0.06	-0.06
Dec-22	35.87	23.41	23.41	2.744	2.717	-0.06	-0.06
Total	106.45	61.83	61.83	2.744	2.737	-0.04	-0.04
<b>1.5 NLC-TPS-II Stage-2</b>							
Oct-22	51.23	39.78	39.78	2.744	2.793	0.20	0.20
Nov-22	49.58	23.40	23.40	2.744	2.717	-0.06	-0.06
Dec-22	51.23	18.50	18.50	2.744	2.717	-0.05	-0.05
Total	152.03	81.68	81.68	2.744	2.754	0.08	0.08

Month	Energy purchased at ex bus			Variable cost of power purchase at ex bus		Additional Liability	
	Approved	Actual	Admissible for FPA	Approved	Actual	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
<b>1.6 NLC-TPS-I Expansion</b>							
Oct-22	39.42	37.29	37.29	2.460	2.451	-0.03	-0.03
Nov-22	38.15	38.59	38.15	2.460	2.446	-0.05	-0.05
Dec-22	39.42	38.13	38.13	2.460	2.446	-0.05	-0.05
Total	116.99	114.02	113.58	2.460	2.448	-0.14	-0.14
<b>1.7 NLC-TPS-II Expansion</b>							
Oct-22	43.44	26.80	26.80	2.600	2.643	0.12	0.12
Nov-22	42.04	11.86	11.86	2.600	2.633	0.04	0.04
Dec-22	43.44	19.83	19.83	2.600	2.632	0.06	0.06
Total	128.93	58.49	58.49	2.600	2.637	0.22	0.22
<b>1.8 NTPC Simhadri TPS – Stage II</b>							
Oct-22	50.96	36.24	36.24	2.92	4.643	6.24	6.24
Nov-22	49.32	50.60	49.32	2.92	3.802	4.46	4.35
Dec-22	50.96	54.49	50.96	2.92	3.893	5.30	4.96
Total	151.24	141.33	136.52	2.92	4.053	16.01	15.55
<b>1.9 Vallur STPS</b>							
Oct-22	29.79	23.47	23.47	3.190	4.390	2.82	2.82
Nov-22	28.83	32.67	28.83	3.190	3.113	-0.25	-0.22
Dec-22	29.79	29.96	29.79	3.190	3.043	-0.44	-0.44
Total	88.40	86.10	82.08	3.190	3.437	2.12	2.16
<b>1.10 NTPL</b>							
Oct-22	43.00	34.29	34.29	3.070	4.427	4.65	4.65
Nov-22	41.62	24.72	24.72	3.070	4.808	4.30	4.30
Dec-22	43.00	47.73	43.00	3.070	4.160	5.20	4.69
Total	127.62	106.73	102.01	3.070	4.396	14.15	13.64
<b>1.11 NTPC KUDGI(Unit I,II &amp; III)</b>							
Oct-22	66.31	4.63	4.63	3.560	5.937	1.10	1.10
Nov-22	64.17	42.52	42.52	3.560	5.137	6.70	6.70
Dec-22	66.31	46.39	46.39	3.560	4.973	6.56	6.56
Total	196.78	93.53	93.53	3.560	5.095	14.36	14.36
<b>1.12 NNTPP</b>							
Oct-22	19.21	20.96	19.21	2.240	2.196	-0.09	-0.08
Nov-22	18.59	18.36	18.36	2.240	2.222	-0.03	-0.03
Dec-22	19.21	7.82	7.82	2.240	2.222	-0.01	-0.01
Total	57.01	47.15	45.39	2.240	2.210	-0.14	-0.13

**2. Details of Power Purchases - Energy procurement from Private Generators Outside the State during the period July 2022 to September 2022.**

<b>Table 2 - Private Generators Outside the State</b>							
Month	Energy purchased at ex bus			Variable cost of power Purchase at ex bus		Additional Liability	
	Approved	Actual	Admissible for FPA	Approved	Actual	Actual	Admissible
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
<b>2.1 Maithon Power Ltd (150 MW) - Contract I</b>							
Oct-22	87.90	87.55	87.55	2.540	2.621	0.71	0.71
Nov-22	85.06	100.55	85.06	2.540	2.603	0.63	0.54
Dec-22	87.90	103.75	87.90	2.540	2.555	0.16	0.13
Total	260.87	291.86	260.52	2.540	2.591	1.50	1.38
<b>2.2 Maithon Power Ltd (150 MW) - Contract II</b>							
Oct-22	87.90	87.68	87.68	2.540	2.621	0.71	0.71
Nov-22	85.06	100.58	85.06	2.540	2.603	0.63	0.54
Dec-22	87.90	103.75	87.90	2.540	2.555	0.16	0.13
Total	260.87	292.01	260.64	2.540	2.591	1.50	1.38
<b>2.3 Jindal Power Limited –Bid I (200 MW)</b>							
Oct-22	127.22	120.65	120.65	1.330	1.330	0.00	0.00
Nov-22	123.12	126.67	123.12	1.330	1.330	0.00	0.00
Dec-22	127.22	128.25	127.22	1.330	1.350	0.26	0.25
Total	377.57	375.56	370.99	1.330	1.337	0.26	0.25
<b>2.9 BALCO – BID II(100 MW)</b>							
Oct-22	63.61	35.07	35.07	1.180	1.160	-0.07	-0.07
Nov-22	61.56	0.00	0.00	1.180	0.000	0.00	0.00
Dec-22	63.61	37.12	37.12	1.180	1.170	-0.04	-0.04
Total	188.78	72.19	72.19	1.180	1.165	-0.11	-0.11
<b>2.10 DVC Mejia (100 MW)</b>							
Oct-22	59.92	37.22	37.22	2.930	3.193	0.98	0.98
Nov-22	57.99	65.59	57.99	2.930	2.908	-0.14	-0.13
Dec-22	59.92	66.46	59.92	2.930	3.056	0.84	0.75
Total	177.83	169.27	155.13	2.930	3.029	1.67	1.61
<b>2.11 DVC RTPS (50 MW)</b>							
Oct-22	29.56	13.95	13.95	3.140	4.104	1.35	1.35
Nov-22	28.61	15.34	15.34	3.140	3.664	0.80	0.80
Dec-22	29.56	13.52	13.52	3.140	3.546	0.55	0.55
Total	87.73	42.82	42.82	3.140	3.770	2.70	2.70

### 3 Summary of total additional liability for the third quarter of FY 2022-23

The summary of additional liability as per fuel surcharge regulations is given below.

Summary of additional liability for third quarter						
Source	Approved energy requirement	Actual Energy procurement	Per unit cost		Additional liability	
			Approved	Actual	Actual	Admissible
	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
<b>CGS</b>						
RSTPS I & II	427.69	338.43	2.78	4.01	41.65	41.65
RSTPS III	107.36	100.80	2.61	3.78	11.76	11.27
Talcher Stage-II	751.37	728.71	1.87	1.72	-10.71	-10.79
Simhadri TPS Stage II	151.24	141.33	2.92	4.05	16.01	15.55
NLC Stage-I	106.45	61.83	2.74	2.74	-0.04	-0.04
NLC Stage-II	152.03	81.68	2.74	2.75	0.08	0.08
NLC 1 Expansion	116.99	114.02	2.46	2.45	-0.14	-0.14
NLC II Expansion	128.93	58.49	2.60	2.64	0.22	0.22
Vallur STPS	88.40	86.10	3.19	3.44	2.12	2.16
NTPL	127.62	106.73	3.07	4.40	14.15	13.64
Kudgi	196.78	93.53	3.56	5.10	14.36	14.36
NNTPP	57.01	47.15	2.24	2.21	-0.14	-0.13
<b>Sub Total CGS</b>	<b>2411.86</b>	<b>1958.81</b>			<b>89.32</b>	<b>87.83</b>
<b>Private IPPs outside the State</b>						
DVC RTPS	87.73	42.82	3.14	3.77	2.70	2.70
DVC Mejia	177.83	169.27	2.93	3.03	1.67	1.61
Maithon Power Ltd-I, ER	260.87	291.86	2.54	2.59	1.50	1.38
Maithon Power Ltd-II, ER	260.87	292.01	2.54	2.59	1.50	1.38
Jindal Power ltd-Bid I	377.57	375.56	1.33	1.34	0.26	0.25
BALCO	188.78	72.19	1.18	1.17	-0.11	-0.11
<b>Sub Total IPPS</b>	<b>1353.64</b>	<b>1243.71</b>			<b>7.52</b>	<b>7.21</b>
<b>Total</b>	<b>3765.50</b>	<b>3202.51</b>			<b>96.84</b>	<b>95.03</b>

#### Annexure-IV

Rate of Fuel Surcharge in Paise per unit	
Particulars	Quantum
Amount of Fuel Surcharge (F) in crores	95.03
Energy billed for Retail sale to whole consumers for the for the month starting from March 2023 for three months in MU	7136.33
Energy billed for domestic consumers having monthly consumption less than 40 units and connected load below 1000 W during the third quarter in MU	100.80
Energy billed for Retail sale to consumers other than the domestic consumers with connected load less than 1000 W and monthly consumption below 40 units consumers from March 2023 for three months (E) in MU	7035.53
Rate of fuel surcharge in Paise per unit	13.51
<b>Rounded to 14.00 paise per unit</b>	